

Kathryn (Katie) Gray Burford, PhD

May 2026

kb3424@cumc.columbia.edu · kgburford@ncsu.edu

<https://katiegrayburford.github.io/site/>

EDUCATION

2020 - 2023 **Ph.D., Epidemiology**

Minors: Biostatistics, Behavioral Science; Concentration: Data Science
The University of Texas Health Science Center at Houston (UTHealth)

School of Public Health, Austin, TX

Mentor: Harold W. Kohl III

Thesis: Measuring traffic-related safety for active commuting to school

2018 - 2020 **M.S., Exercise Science**

The University of Texas at Austin, Austin, TX

Mentor: John Bartholomew

Thesis: Children's enjoyment, perceived competency, and physical activity during high-intensity interval training in physical education

2012 - 2016 **B.S., Public Health**

Minors: Pre-medicine

The University of Texas at Austin, Austin, TX

Mentor: John Bartholomew

Thesis: A qualitative study exploring user and non-user's perceptions of wearable activity trackers

ACADEMIC POSITIONS

2026 - **Research Associate**

Department of Parks, Recreation and Tourism Management

College of Natural Resources

North Carolina State University, Raleigh, NC

2025 - 2026 **Postdoctoral Research Scholar**

Department of Parks, Recreation and Tourism Management

College of Natural Resources

North Carolina State University, Raleigh, NC

Mentor: Aaron Hipp

2025 - 2026 **Postdoctoral Research Scientist**

Department of Epidemiology

Mailman School of Public Health

Columbia University Irving Medical Center, New York, NY

Mentor: Andrew Rundle

2023 - 2025 **Postdoctoral Research Fellow**

Department of Environmental Health Sciences

Mailman School of Public Health
Columbia University Irving Medical Center, New York, NY
Mentor: Andrew Rundle

HONORS & AWARDS

- 2022 James A. Baker III Transformation and Hope Endowed Scholarship
- 2022 Ronald B. Harrist Scholarship in Public Health
- 2021 International Society of Physical Activity and Health Mini-Oral Presentation Trainee Award
- 2021 Aurelia Murphy Killian Endowment in Public Health
- 2020 Fall 2020 Outstanding New Student Scholarship Award, University of Texas Health Science Center (UTHealth)
- 2012 - 2016 Big 12 Commissioner's Honor Roll
- 2014 - 2016 The University of Texas Provost Award
- 2013 - 2016 Academic All-Big 12, First Team (Cross Country, Track and Field)
- 2015 USTFCCCA All-Academic Team

PROFESSIONAL ORGANIZATIONS

Editorial Board Member

- 2025 Translational Journal of the American College of Sports Medicine

Journal Reviewer

- Journal of Transport and Health
- International Journal of Epidemiology
- Journal of Urban Health
- JMIR mHealth and uHealth
- Journal of Addiction Medicine
- American Journal of Public Health
- Travel Behaviour and Society
- Translational Journal of Behavioral Medicine

Consultive Services

- 2025 - Blue Data, LLC (owner)
Consulting services: study design and methods, study analysis, reports and publications.
Clients: Ouraring Inc., Jurē.

Memberships and Positions

- 2026 Postdoctoral Fellow, Center for Geospatial Analytics, College of Natural Resources, North Carolina State University, Raleigh, NC

- 2025 Member of the Urban Hub Work Group, Physical Activity Policy Research Network
- 2024 - Micromobility Task Force Member, Micromobility Injury Measurement Using Health-Sourced Data, New York City, New York
- 2023 - Member of Transportation Alternatives Manhattan, New York, New York
- 2023 - 2026 Fellow affiliate of the Columbia Population Research Center
- 2024 - 2025 Volunteer for Manhattan County School Bike Bus
- 2023 Member of American Public Health Association (APHA)
- 2023 - 2024 Member of the Transportation Policy & Planning Work Group, Physical Activity Policy Research Network
- 2023 - Member of the Built Environment and Health Research Group, Department of Epidemiology, Mailman School of Public Health, Columbia University
- 2022 Member of the Health Implications of Built & Social Environment Working Group, Center for Health and Environment, Education and Research, Dell Medical School
- 2022 UTHealth*Leads* Fellowship
- 2021 Member of International Society for Physical Activity and Health (ISPAH)
- 2021 - 2022 Fellow of the Equity and Resilience Workgroup for the Physical Activity Policy Research Network (PAPREN)
- 2021 - 2022 UTHealth Peer MentorSHIP: Students Helping to Inspire Progress program as a Peer Mentor for 2021 - 2022.
- 2021 - 2022 Social Chair for the Student Advisory Board, UTHealth School of Public Health in Austin
- 2020 - 2023 Member of the Equity and Resilience Work Group, Physical Activity Policy Research Network
- 2020 - 2022 Bike Austin Board Member, Austin, Texas
- 2020 - 2023 Member of the Physical Activity Workgroup, UTHealth School of Public Health in Austin
- 2019 Member of American College of Sports Medicine (ACSM)
- 2012 - 2016 NCAA Division I Student-Athlete, University of Texas Women's Cross Country/Track and Field Teams

FELLOWSHIPS AND GRANT SUPPORT

Awarded

- 2025 - 2026 **Multi-level and multi-generational approaches, Unifying Novel Interventions, and Training for health EquitY**

Funding Agency: National Institute on Minority Health and Health Disparities; Center to Improve Chronic disease Outcomes through
Grant number: P50 MD017341
Funding: \$49,995 (direct) from original grant, \$25,000 (direct) re-instated
Role: Principal investigator
Note: On March 10, 2025 I received a “stop-work order” from the federal government. On September 9, 2025 the grant was re-instated.

2023 - 2025 **T32 program for Advanced Training in Environmental Health and Data Science: Molecules to Populations**

Funding Agency: National Institute of Environmental Health Sciences
Grant number: 5T32ES007322-21
Miller, G., Factor-Litvak, P., Perzanowski, M. (PIs)
Role: T32 post-doctoral trainee
Note: On March 13, 2025 this training grant was terminated by the federal government

2025 **Micromobility N.Y.C. A project designed to investigate all micromobility device incidents**

Funding Agency: The New York State Governor’s Traffic Safety Committee
Grant number: HS1-2025-NYU00074-(031)
Funding: \$99,867 (direct)
Role: Consultant

Pending

2025 **Examining built environment factors to prevent alcohol-related bicyclist injuries**

Funding Agency: National Institute on Alcohol Abuse and Alcoholism
Grant number: 1K99AA032332-01A1
Funding: \$334,000 (direct)
Role: Principal investigator
Re-submission: March 2025
Impact score: 34

EDUCATIONAL CONTRIBUTIONS

Direct Teaching

- 2023 Teaching assistant - Basic concepts of systematic review and meta-analysis for epidemiological studies
The University of Texas Health Science Center at Houston School of Public Health, Austin, TX
- 2021 Teaching assistant - Physical Activity and Health: Epidemiology and Mechanisms

- The University of Texas Health Science Center at Houston School of Public Health, Austin, TX
- 2019 Teaching assistant - Maymester: Sport, Society, and The International Olympic Movement
The University of Texas at Austin, Lausanne, Switzerland
- 2019 Teaching assistant - UGS: Physical Activity and Public Health
The University of Texas at Austin, Austin, TX
- 2019 Teaching assistant - Physical Activity and Public Health
The University of Texas at Austin, Austin, TX
- 2019 Teaching assistant - Sports Psychology
The University of Texas at Austin, Austin, TX
- 2018 Teaching assistant - Exercise Physiology
The University of Texas at Austin, Austin, TX

Professional Education

- 2025 Invited Expert Consensus Workshop. Developing a Theoretical Framework to Evaluate Urban Green and Blue Space Interventions. The University of Manchester. Manchester, UK.
- 2023 - 2025 Advanced GIS Methods in Epidemiology. T32 program for Advanced Training in Environmental Health and Data Science: Molecules to Populations. Mailman School of Public Health. New York, NY.
- 2022 Data Science Certificate. The University of Texas Health Science Center at Houston School of Public Health. Austin, TX.
- 2021 Introduction to GIS. Summer Statistics Institute. Department Of Statistics and Data Sciences. The University of Texas at Austin. Austin, TX.

PUBLICATIONS

H-Index – Scopus 7, Google Scholar 10

^aDenotes co-first authorship

Peer-reviewed Research Publications (25 total, 12 first author)

1. Itzkowitz, N.G, Roberts, L.E., Li, G., Rundle, A.G., Pressley, J.C., **Burford, K. G.**, Zadey, S., Whalen, A.M., Bushover, B., Morrison, C.N. Road traffic crashes after implementation of the Congestion Relief Zone in New York City. (Accepted, 2026). *American Journal of Epidemiology*.
2. ^aZhang, Y., **Burford, K.**, Perez, A., Lanza, K., Salvo, D., Baker, B.A., Hoelscher, D.M. Poor Agreement between Teacher Perceived and Objective Measures of Weather Conditions for School-Based Physical Activity Research. *Preventive Medicine Reports*. (2025). DOI: <https://doi.org/10.1016/j.pmedr.2025.103328>.
3. **Burford K.G.**, Neckerman K. M., Quinn J. W., Bader M. D. M., Lovasi G. S., Mooney S. J., Itzkowitz N. G., Kinsey D., Rundle A. G. "Where Do Older Pedestrians Experience a Risk of Being Killed in a Motor Vehicle Crash?," *Journal of the American Geriatrics Society* (2025): 1–11.
DOI: <https://doi.org/10.1111/jgs.70198>

4. **Burford K.G.**, Lo A.X., Quinn J.W., Crowe R.P., Just A.C., Kondo M.C., Beard J.R., Rundle A.G. Tree Canopy Cover and Injurious Pedestrian Falls: A Location-Based Case-Control Study. *American Journal of Epidemiology*. (2025). DOI: [10.1093/aje/kwaf231](https://doi.org/10.1093/aje/kwaf231).
5. **Burford, K.G.**, Salvo, D., Kohl, H. W., Ganzar, L.A., Bauer, Cici X., Resendiz, E., Zhang, Y. & Hoelscher. D. M. (2025). Examination of Traffic Safety in Neighborhoods Associated With Active Commuting to School in Austin, Texas. *Journal of Physical Activity and Health*. DOI: <https://doi.org/10.1123/jpah.2025-0010>
6. Gao, X., Horbal, S.R., **Burford, K.G.**, Bidulescu, A. Alcohol use mediates the association between sexual dating violence victimization and attempted suicide among U.S. high school students. (2025). *American Journal of Preventive Medicine*. DOI: [10.1016/j.amepre.2025.107663](https://doi.org/10.1016/j.amepre.2025.107663)
7. Lanza, K., Allison, B., Chen, B., Wilson, P.S., Hunt, E.T., **Burford, K.G.**, Zhang, Y., Ganzar, LA, Keitt, T.H. Ambient environmental exposures while cycling on a vegetated trail versus the road. (2025). *Urban Climate*. DOI: [10.1016/j.uclim.2025.102429](https://doi.org/10.1016/j.uclim.2025.102429)
8. Itzkowitz, N.G., **Burford, K.**, Crowe, R. P., Wang, H. E., Lo. A. X., Rundle, A. G. Prevalence of indications of alcohol and drug use among patients treated for injurious falls by Emergency Medical Services in the USA. (2025). *Injury Prevention*. Epub ahead of print. DOI: [10.1136/ip-2024-045447](https://doi.org/10.1136/ip-2024-045447)
 - The lead author is a Doctoral student whom I mentored on this paper.
9. **Burford, K.G.**, Itzkowitz, N.G., Rundle, A.G., DiMaggio, C., Mooney, S.J. The Burden of Injuries Associated With E-Bikes, Powered Scooters, Hoverboards, and Bicycles in the United States: 2019–2022. (2024). *American Journal of Public Health*, 114(2). DOI: [10.2105/AJPH.2024.307820](https://doi.org/10.2105/AJPH.2024.307820)
10. **Burford, K.G.**, Itzkowitz N.G., Ortega A.G., Teitler J.O., Rundle A.G. Use of Generative AI to Identify Helmet Status Among Patients With Micromobility-Related Injuries From Unstructured Clinical Notes. (2024). *JAMA Network Open*, 7(8). DOI: [10.1001/jamanetworkopen.2024.25981](https://doi.org/10.1001/jamanetworkopen.2024.25981)
11. **Burford, K.G.**, Itzkowitz, N.G., Crowe, R.P., Wang, H.E., Lo, A.X., Rundle, A.G. Clinical trauma severity of indoor and outdoor injurious falls requiring emergency medical service response. (2024). *Injury Epidemiology*, 11(36). DOI: [10.1186/s40621-024-00517-1](https://doi.org/10.1186/s40621-024-00517-1)
12. **Burford, K.G.**, Rundle, A.G., Frangos. S., Pfaff. A., Wall, S., Adeyemi, O., DiMaggio, C. Comparing alcohol involvement among injured pedalcycle and motorcycle riders across three national public-use datasets. (2024). *Traffic Injury Prevention*, 25(8). DOI: [10.1080/15389588.2024.2364358](https://doi.org/10.1080/15389588.2024.2364358)
13. Knell, G., **Burford, K.**, Calise, T., Dooley, E. E., Ferrerira Des Moraes, A.C., Ganzar, L.A., Han, H., Heredia, N., Jauregui, A., Johnson, A., Lanza, K., Nehme, E., Nicksic, H., Oluyomi, A., Porter, A., Varela., A. R., Robertson, M., Salvo, D., Walker, T., Zhang, Y. (2024). The Legacy of Dr. Harold W. (Bill) Kohl III From the

- Perspective of His Mentees. *Journal of Physical Activity and Public Health*, 21(3). DOI: [10.1123/jpah.2024-0074](https://doi.org/10.1123/jpah.2024-0074)
14. Ganzar, L.A., **Burford, K.**, Salvo, D., Spoon, C., Sallis, J., Hoelscher, D.M. (2024). Development, Scoring, and Reliability for the Micro-scale Audit of Pedestrian Streetscapes for Safe Routes to School (MAPS-SRTS) Instrument. *BMC Public Health*, 24(722). DOI: [10.1186/s12889-024-18202-9](https://doi.org/10.1186/s12889-024-18202-9)
 15. Ganzar, L.A., **Burford, K.**, Zhang, Y., Gressett, A., Kohl, H.W., III, Hoelscher, D.M. (2023). Associations of Walking and Biking to School Policies and Student Active Commuting to School. *Journal of Physical Activity & Health*, 20(7). DOI: [10.1123/jpah.2022-0376](https://doi.org/10.1123/jpah.2022-0376)
 16. Ferrerira Des Moraes, A.C., **Burford, K.**, Medeiros-Oliveria, V.C., Schaan, B.D., Bloch, K., Baiocchi de Carvalho, K.M., Curea, F.V., Nascimento-Ferreira, M.V. (2023). Association between sleep time and pro- anti-inflammatory biomarkers is mediated by abdominal obesity among adolescents. *Journal of Physical Activity & Health*, 20(10). DOI: [10.1123/jpah.2022-0468](https://doi.org/10.1123/jpah.2022-0468)
 17. Bartholomew, J.B., Clutton, J., **Burford, K.**, Aadland, E., Resaland, G.K., Jowers, E., Errisuiz, E. Individual- and Environmental- Level Predictors of Recess: Findings from the I-CAN! Study. (2022). *Translational Journal of the American College of Sports Medicine*, 7(4). DOI: [10.1249/tjx.0000000000000212](https://doi.org/10.1249/tjx.0000000000000212)
 18. Ganzar, L.A., Salvo, D., **Burford, K.**, Zhang, Y., Kohl, H.W., III, Hoelscher, D.M. (2022). Longitudinal Changes in Objectively-Measured Physical Activity and Sedentary Time Among School-Age Children in Central Texas, US During the COVID-19 Pandemic. *International Journal of Behavioral Nutrition and Physical Activity*, 19(56). DOI: [10.1186/s12966-022-01299-9](https://doi.org/10.1186/s12966-022-01299-9)
 19. Lanza, K., **Burford, K.**, Ganzar, LA. (2022). Who travels where: Behavior of pedestrians and micromobility users on transportation infrastructure. *Journal of Transport Geography*. DOI: [10.1016/j.jtrangeo.2021.103269](https://doi.org/10.1016/j.jtrangeo.2021.103269)
 20. **Burford, K.**, Ganzar, L.A., Lanza, K., Kohl, H.W., III, Hoelscher, D.M. School-Level Economic Disparities in Police-Reported Crimes and Active Commuting to School. (2021). *International Journal of Environmental Research and Public Health*, 18(20). DOI: [10.3390/ijerph182010885](https://doi.org/10.3390/ijerph182010885)
 21. **Burford, K.**, Golaszewski, N. M., Bartholomew, J.B. “I shy away from them because they are very identifiable”: A qualitative study exploring user and non-user’s perceptions of wearable activity trackers. (2021). *Digital Health*. DOI: [10.1177/205520762111054922](https://doi.org/10.1177/205520762111054922)
 22. **Burford, K.**, Gillepsie, K., Bartholomew, J.B., Jowers, E. Children’s Enjoyment, Perceived Competency, and Physical Activity During High-Intensity Interval Training in Physical Education. (2021). *Research Quarterly for Exercise and Sport*, 93(4):835-844. DOI: [10.1080/02701367.2021.1925207](https://doi.org/10.1080/02701367.2021.1925207)
 23. Errisuiz, V.L., Dooley, E.E., **Burford, K.**, Johnson, A.M., Jowers E., Bartholomew, J.B. Quality of Process Impacts Fourth Grade Students’ Participation in Physically

Active Academic Lessons. (2021). *Prevention Science*, 22(7).
DOI: [10.1007/s11121-021-01233-8](https://doi.org/10.1007/s11121-021-01233-8)

24. ^a**Burford, K.**, Dooley, E., Lanza, K., & Knell, G. Associations of Urbanicity and Sociodemographic Characteristics with Protective Health Behaviors and Reasons for Leaving the Home During COVID-19. (2020). *Health Psychology Bulletin*. DOI:[10.5334/hpb.24](https://doi.org/10.5334/hpb.24)
25. Knell, G., Robertson, M. C., Dooley, E. E., **Burford, K.**, & Mendez, K. S. Health Behavior Changes During COVID-19 Pandemic and Subsequent “Stay-at-Home” Orders. (2020). *International Journal of Environmental Research and Public Health*, 17(7). DOI: [10.3390/ijerph17176268](https://doi.org/10.3390/ijerph17176268)

Invited Oral Presentations (first author only)

Burford K.G., Neckerman K. M., Quinn J. W., Bader M. D. M., Lovasi G. S., Mooney S. J., Itzkowitz N. G., Kinsey D., Rundle A. G. Where Do Older Pedestrians Experience a Risk of Being Killed in a Motor Vehicle Crash? April 12-15, 2026. *Society for Advancement of Violence and Injury Research*. Providence, RI, USA.

Burford, K., Lo, A., Quinn, J., Crowe, R., Just, A., Kondo, M., Beard, J., Rundle, A. The Effect of Tree Canopy Cover in Determining Where Pedestrian Falls Occur. April 6-9, 2025. *Society for Advancement of Violence and Injury Research*. New York, NY, USA.

Burford, K., Ganzar, L.A., Salvo, D., Spoon, C., Sallis, J., Hoelscher, D.M. Methods for developing and assessing reliability of a micro-scale, built environment audit tool for research and evaluation of active commuting to school. March 17, 2025. *Active Living Conference*. Manhattan, KS, USA.

Burford, K., Salvo, D., Kohl, H.W. III, Ganzar, L.A., Bauer, C.X., Resendiz, E., Zhang, Y., Hoelscher, D.M. Examination of Neighborhood and Perceived Traffic-Related Safety Factors Associated with Active Commuting to School in a Large Urban City. March 17, 2025. *Active Living Conference*. Manhattan, KS, USA.

Burford, K., Salvo, D., Kohl, H.W. III, Ganzar, L.A., Bauer, C.X., Hoelscher, D.M. Moderating Effects of Sociodemographic Context on Objective and Perceived Traffic-Related Safety and Active Commuting to School. November 16, 2024. *American Public Health Association*. Atlanta, GA, USA. (could not present due to illness).

Burford, K., Zhang, Y., Weng, O., Ganzar, L.A., Hoelscher, D.M., Salvo, D. Inequities in active travel infrastructure coverage across school neighborhoods in Central Texas. March 2023. *Active Living Conference*. Bethesda, MD, USA.

Burford, K., Ganzar, L.A., Salvo, D., Zhang, Y., Kohl, H.W., III, Hoelscher, D.M. Longitudinal changes in objectively-measured physical activity and sedentary time among school-age children in Central Texas, US during the COVID-19 pandemic. September 2022. *The Digital Physical Activity and Diet (dPAD) Collaborative*. Houston, TX, USA.

Burford, K., Zhang, Y., Bartholomew, J.B. Gender differences in enjoyment for types of physical activity in children. *International Society for Physical Activity and Health (ISPAH) Congress*. Online. October 2021.

Burford, K., Ganzar, LA., Lanza, K. Associations of Reported Crime and Children's Active Commuting to School: The Safe TRavel Environments Evaluation in Texas Schools Study. *Active Living Conference*. A Virtual Learning and Engagement Event, United States. Online. April 2021.

Other Media Contributions

The following articles were associated with:

Burford, K.G., Itzkowitz, N.G., Rundle, A.G., DiMaggio, C., Mooney, S.J. The Burden of Injuries Associated With E-Bikes, Powered Scooters, Hoverboards, and Bicycles in the United States: 2019–2022. (2024). *American Journal of Public Health*, 114(2). DOI: [10.2105/AJPH.2024.307820](https://doi.org/10.2105/AJPH.2024.307820)

- StreetsBlog NYC. (2026). [That Widely Misrepresented E-Mobility Study Actually Reveals Need For Safer Streets, Not Hysteria](#)
- Boston Globe. (2024). [Bruises, broken bones, and concussions: Gen-Xers and young Boomers have the fastest growing rates of e-bike injuries.](#)
- Yahoo News. (2024). [E-bike and scooter injuries are up 293%.](#)
- U.S. News. (2024). [U.S. E-Bike and Scooter Injuries are Soaring.](#)
- Forbes. (2024). [E-Bike and E-Scooters Injuries Surged in Recent Years, New Study Shows.](#)
- 3eravoz. (2024). [Las lesiones por bicicletas eléctricas y scooters en EE.UU. están aumentando.](#)

Burford, K.G., Itzkowitz N.G., Ortega A.G., Teitler J.O., Rundle A.G. Use of Generative AI to Identify Helmet Status Among Patients With Micromobility-Related Injuries From Unstructured Clinical Notes. (2024). *JAMA Network Open*, 7(8). DOI: [10.1001/jamanetworkopen.2024.25981](https://doi.org/10.1001/jamanetworkopen.2024.25981)

- IT BREW. (2024). [For healthcare LLMs, 'unhelmeted' does not compute.](#)
- Politico. (2024). [The Lab.](#)

INVITED PRESENTATIONS

Oral Presentations

National

1. **Burford, K.** Reclaiming Streets for Students: The Open Streets for Schools Program. May 15, 2026. Portland State University Transportation Seminar. Portland, OR, USA. [Recording link](#).
2. **Burford, K.** Mind the Data Gap: How Crash Reporting Fails Bicyclists & Pedestrians. March 26, 2026. National Bike Summit. League of American Bicyclists. Washington, DC, USA.

3. **Burford, K.**, Data Challenges in Geospatial Measures of Parks and Ways Forward. Geospatial Forum. Department of Parks, Recreation, and Tourism Management. North Carolina State University. January 29, 2026. [Recording link](#).
4. **Burford, K.**, Hipp, A. State of the Science January 2026: Natural Experiments – Context, Emerging Methods, and Translation. Physical Activity Policy Research and Evaluation Network. January 28, 2026.
5. **Burford, K.** Epidemiology, Urban Health, and Injury Research. Guest Lecture for PRT 706: Quantitative Inquiry for Healthy People & Places. Department of Parks, Recreation, and Tourism Management. North Carolina State University. Raleigh, North Carolina. September 23, 2025.
6. **Burford, K.** Epidemiology and Urban Health Research. St. Edward's University. Austin, Texas. April 24, 2025.
7. **Burford, K.** Intro to Epidemiology and Application within Urban Health and Injury Research. Bryn Mawr College. Bryn Mawr, Pennsylvania. April 16, 2025.
8. **Burford, K.** Examining the “Unit of Analysis” in Physical Activity and Injury Research. Center for Transportation Research at the University of Texas at Austin. Austin, TX, USA. October 18, 2023.

Local

1. **Burford, K.** Comparing alcohol involvement among injured pedalcycle and motorcycle riders across three national public-use datasets. Seventh Annual Vision Zero Research on the Road Symposium. New York, NY, USA. November 13, 2024.