

## Kathryn Gray Burford, PhD

kb3424@cumc.columbia.edu

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

### EDUCATION

---

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

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

### RESEARCH EXPERIENCE

---

2020 - 2023 **Graduate Research Assistant**

Michael & Susan Dell Center for Healthy Living

The University of Texas Health Science Center at Houston, Austin, TX

Project: Evaluating the Effects of Municipal Funding of Safe Routes to School Infrastructure on Child Physical Activity: A Natural Experiment

Grant number: NICHD R01HD097669. Hoelscher, D. (PI)

2018 - 2020 **Graduate Research Assistant**

Exercise & Sports Psychology Lab

The Department of Kinesiology and Health Education

2014 - 2016 **Undergraduate Research Assistant**

Exercise & Sports Psychology Lab

The Department of Kinesiology and Health Education

Project: Building the Evidence Base for Physically Active Lessons in Elementary Schools.

Grant number: NICHD R01HD070741. Bartholomew, J. (PI)

## GRANTS

---

### Current

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

2025 - 2026 **Developing a community-engaged neighborhood bikeability index for examining bicycle equity and disparities in chronic conditions in New York City**

Funding Agency: Center to Improve Chronic disease Outcomes through Multi-level and multi-generational approaches, Unifying Novel Interventions, and Training for health EquitY; National Institute on Minority Health and Health Disparities

Grant number: P50 MD017341

Funding: \$49,995 (direct)

Role: Principal investigator

Note: On March 10, 2025 received “stop-work order” from the federal government

### Submitted

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

### Not Funded

2024 **Examining built environment factors to prevent alcohol-related bicyclist injuries**

Funding Agency: National Institute on Alcohol Abuse and Alcoholism

Grant number: 1K99AA032332-01

Funding: \$303,558 (direct)

Role: Principal investigator

Submission: June 2024

## FELLOWSHIPS

---

2023 - 2025 Fellow affiliate of the Columbia Population Research Center

- 2022 UTHHealthLeads Fellowship
- 2021 - 2022 Fellow of the Equity and Resilience Workgroup for the Physical Activity Policy Research Network (PAPREN)

## 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

## ADDITIONAL TRAINING

---

- 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, 10032
- 2022 Data Science Certificate. The University of Texas Health Science Center at Houston School of Public Health, Austin, TX, 2022
- 2021 Introduction to GIS. Summer Statistics Institute. Department Of Statistics and Data Sciences. The University of Texas at Austin, Austin, TX, 2021

## PUBLICATIONS

---

### H-Index – Scopus 4, Google Scholar 8

*\*Denotes co-first authorship*

### Published

1. 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)
2. 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.

3. **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)
4. **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)
5. **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)
6. **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)
7. 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)
8. 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)
9. 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)
10. 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)
11. 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)
12. 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)
13. Lanza, K., **Burford, K.**, Ganzar, L.A. (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)
  14. **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)
  15. **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: [10.1177/20552076211054922](https://doi.org/10.1177/20552076211054922)
  16. **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)
  17. 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)
  18. **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)
  19. 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)

#### Under Review, In Revisions, Accepted

1. **Burford, K.**, Salvo, D., Kohl, H.W. III, Bauer, C.X., Resendiz, E., Zhang, Y., Hoelscher, D.M. Examination of Traffic Safety Factors Associated with Active Commuting to School Among Children Residing in Austin, Texas. (in revisions, *Journal of Physical Activity & Health*).
2. 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. (in revisions, *American Journal of Preventive Medicine*).
3. Itzkowitz, N., Roberts, L., Guohua, Li., Rundle, A., Pressley, J., **Burford, K.**, Zadey, S., Bushover, B., Morrison, C. Road traffic injuries and fatalities after implementation of the Congestion Relief Zone in New York City: A Difference-in-Difference approach. (under review, *JAMA Network Open*)

4. Zhou, W., **Burford, K.**, deGrauw, X., Kushang, P., Itzkowitz, N., Rundle, A., Mooney, S. Towards Automatic Analysis of Clinical Notes for Injuries Related to Bicycles and Other Micromobility Devices Using Natural Language Processing. (under review, Injury Prevention).
5. **Burford, K.**, Lo, A., Quinn, J., Crowe, R., Just, A., Kondo, M., Beard, J., Rundle, A. Tree Canopy Cover and Injurious Pedestrian Falls: A Location-Based Case-Control Study. (under review, American Journal of Epidemiology).

### **In Preparation**

1. Lo, A. X., **Burford, K.**, Crowe, R. P., Wang, H. E., Beard, J, Rundle, A. G. Volume of U.S. Pedestrians Injured from Falls Requiring Trauma Center Care Exceeds that of Pedestrians Injured by Motor Vehicles.
2. **Burford, K.**, Dogbo, S., Botello, S., Grogan, H., Varela, C., Mooney, S., Rundle A. Assessment of Urban Trees for Linkage with Health Outcomes: Reliability of a Google Street View Audit Tool.
3. **Burford, K.**, Lo, A., Quinn, J., Crowe, R., Beard, J., Rundle, A. Identifying built environment factors associated with older adult pedestrian injuries: A location-based case-control study.
4. \*Zhang, Y., **Burford, K.**, Perez, A., Lanza, K., Salvo, D., Baker, B.A., Hoelscher, D.M. Measuring weather in active living research: Agreement between objectively measured and teacher's perceived weather conditions from the National Safe Routes to School Tally.
5. **Burford, K.**, Salvo, D., Kohl, H.W. III, Bauer, C.X., Resendiz, E., Zhang, Y., Hoelscher, D.M. Assessing the relationship between objectively assessed macro- and micro-level neighborhood traffic safety features and active commuting to school in a US city.

### **PROFESSIONAL PRESENTATIONS**

---

#### **Invited Talks**

**Burford, K.** Epidemiology and Urban Health Research. St. Edward's University. April 24, 2025. Austin, Texas. (Virtual).

**Burford, K.** Intro to Epidemiology and Application within Urban Health and Injury Research. Bryn Mawr College. Bryn Mawr, Pennsylvania. April 16, 2025. (Virtual).

**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. November 13, 2024. New York, NY, USA.

**Burford, K.** Examining the "Unit of Analysis" in Physical Activity and Injury Research. Center for Transportation Research at the University of Texas at Austin. October 18, 2023. Austin, TX, USA.

#### **Oral Presentations (first author only)**

**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 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, L.A., 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.

## TEACHING EXPERIENCE

---

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 SERVICE**

---

### **Ad-Hoc Peer Review**

2025	Journal of Urban Health
2025	JMIR mHealth and uHealth
2024	Journal of Addiction Medicine
2024	American Journal of Public Health
2023	Travel Behaviour and Society
2021	Translational Journal of Behavioral Medicine

### **Other Service Activities**

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 - 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
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

2012 - 2016 NCAA Division I Student-Athlete, University of Texas Women's Cross Country/Track and Field Teams

## MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

---

2023 American Public Health Association (APHA)

2021 International Society for Physical Activity and Health (ISPAH)

2019 American College of Sports Medicine (ACSM)

## MEDIA INTERVIEWS

---

**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)

- Boston Globe. (2024). [Bruises, broken bones, and concussions: Gen-Xers and young Boomers have the fastest growing rates of e-bike injuries.](#)
- IT BREW. (2024). [For healthcare LLMs, 'unhelmeted' does not compute.](#)
- 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.](#)