

Drew Walker, MS, CHES

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EDUCATION

PhD	Behavioral, Social, and Health Education Sciences, Rollins School of Public Health, Emory University. Doctoral Candidate, began Fall 2020, expected graduation Dec 2024
MS	Health Education and Behavior, University of Florida. 2019
CHES	Certified Health Education Specialist. 2019
BS	Family, Youth, and Community Sciences, University of Florida. 2015

PROFESSIONAL EXPERIENCE

Data Scientist | September 2020-Present

Streetlight at UF Health

Gainesville, FL

- Developed process and outcome-related metrics, clinical decision support, and daily reporting tools to assist hospital-based palliative volunteering program with insights to assist in clinical care delivery and facilitate recruitment into program intervention components and research studies
- Designed experiments to model change in program patient reach (patients visited per day) by assessing updates to patient census data features on patient visitation trends over time and patient time-until-recruitment rates
- Developed multilevel models to assess impact of virtual events on patient commenting rates within an online health community
- Implemented factor analysis to assess program evaluation survey item grouping structures and associations with self-reported quality of life
- Created machine-learning models to aid program implementation, including random forest classification to aid in categorizing patients into major project teams from staff diagnosis notes to effectively identify patients for disease-specific team activities and resources
- Created patient volunteer visitation chart record reporting process via RMarkdown, compiling electronic patient charts from REDCap and patient commenting engagement data on a private virtual peer-support *Discord* server
- Developed volunteer tracking and written chart transcription protocols to guide program volunteers and research interns
- Designed and implemented research studies to assess patient perceptions of program support and utilization of services

- Developed and conducted a social network analysis framework to link future patient reported outcomes with program-level structural network data and visitation trends

Data Scientist, Owner | February 2023 - Present

Walker Data Science Consulting, LLC

Atlanta, GA

- Conducted exploratory analytics, multivariate regression analyses, and developed interactive geospatial data visualizations of survey data for for CommonlyWell, a substance use recovery support analytics and research support organization, utilized in a report to key stakeholders at the State of Indiana Department of Mental Health and Addiction

Assistant Director | September 2015-July 2020

Streetlight at UF Health

Gainesville, FL

- Wrote grants to secure over \$300,000 in funding for program sustainability and pilot projects through proposal writing and program presentations
- Developed palliative care program patient outcome evaluation database systems and data collection/reporting tools using *R*, *REDCap*, *ResVault*, *Excel*, and *Qualtrics*.
- Developed and founded the *Streetlight Gaming League*, a novel virtual social support network intervention for Streetlight patients and volunteers
- Created novel program evaluation analysis tools allowing *Streetlight* program staff to assess daily patient comment trends and frequencies surrounding community events in *Streetlight Gaming League Discord* server
- Selected, trained, educated, and supervised over 200 volunteers through 10 2-year cohorts of new volunteers in palliative care peer support program for chronic and terminally ill teens and young adults
- Created program volunteer and staff education materials on topics of trauma and resilience, palliative care, social support theories and frameworks, virtual communities, cystic fibrosis, cancer, organ transplantation, sickle cell, mental health, and thanatology
- Provided and developed psychosocial support and resources for patients
- Established partnership with UF Counseling and Wellness Center to provide free specialized counseling services to *Streetlight* volunteers
- Provided and developed bereavement support services for families of patients and for *Streetlight* program volunteers
- Developed and implemented program process and outcome evaluation studies, collected data, led patient recruitment and follow-up
- Wrote protocols and coordinated with UF IRB for approval and revision process for *Streetlight* patient outcomes study, social network analysis study, Streetlight Gaming League Study
- Developed program manual materials and protocol documentation, organized collaboration on efforts with UF's Public Health Social and Behavioral Sciences department to conduct *Streetlight* program evaluation

Project Director, Founder | June 2018-July 2020

Streetlight Gaming League

Streetlight at UF Health

Gainesville, FL

- Founded and directed the *Streetlight Gaming League*, novel virtual peer support network intervention for hospitalized adolescent and young adult palliative care patients utilizing a staff moderated *Discord* chat server and in-patient communities on *Xbox Live* and *PlayStation Network*.
- Developed program manualization and evaluation plan, including writing a web-scraping *R* script used daily to evaluate program development and changes in patient and volunteer engagement in *Streetlight Gaming League Discord* server
- Developed program planning and evaluation materials utilizing PRECEDE/PROCEED model
- Secured \$13,561 for funding of project to fund installation of high-speed internet ports in patient rooms to facilitate *Streetlight Gaming League* participation in pediatric hematology/oncology and cardiac intensive care units through grant proposals from Child Life Technology Fund and UF Pediatric IT Department
- Trained, educated and supervised over 75 volunteers from *Streetlight* on methods in *Streetlight Gaming League* patient recruitment, community engagement, event planning, and utilization of virtual methods of social support
- Recruited over 170 patients to the *Streetlight Gaming League* since launch in June 2018
- Developed virtual patient events and programming to facilitate patient socialization and self-expression, including: *Gaming League Creativity Challenge*, *Gaming League Virtual DnD Campaign Series*, and *Gaming League Summer Games*, *The Random Fact Challenge*, *Fortnite Madness*, a summer-long event that encouraged patients to share in-game and real-life achievements to win “Victory Points”, which they were able to use to purchase 3D printed prizes made in collaboration with UF Health Science Libraries
- Collaborated with PhD student in UF Public Health Social and Behavioral Sciences Department to develop a *Streetlight Gaming League* program evaluation dissertation project
- Developed procedures and protocols to recruit volunteer for first virtual hospital volunteer role through *Streetlight Gaming League Virtual Dungeons and Dragons*

ONGOING RESEARCH

Research Fellow | July 2022 to Present

National Institute of Health

Rollins School of Public Health, Emory University

T32 Training Grant: *Training in Advanced Data Analytics and Computational Sciences*

to End Drug-Related Harms, PIs: Hannah LF Cooper, PhD , Lance A Waller, PhD

Atlanta, GA

Dissertation title: *Using natural language processing to detect stigmatizing provider language and evaluate associations with opioid analgesic pain management outcomes*

Graduate Research work | PI: Abeed Sarker, PhD

- Developed natural language processing analytic pipeline to identify experiences of stigma and bias by people taking medications for opioid use disorder on subreddit internet forums by utilizing word embeddings models to expand existing lexicons of biased and stigmatizing terms to use with people who use drugs, and validating subsequent searched subreddit internet forum posts through random qualitative analysis.

SERVICE

Doctoral Student Representative | Elected January 2022- Present
Behavioral, Social, and Health Education Sciences Department
Rollins School of Public Health
Emory University

Curriculum Committee Member | August 2020 – August 2021
Behavioral, Social, and Health Education Sciences Department EDI Workgroup
Rollins School of Public Health
Emory University

Abstract Reviewer | April 2020
American Public Health Association
Health Informatics Information Technology Member Section
Annual Meeting 2020

GRANTS & AWARDS

June 2022- **Training in Advanced Data Analytics Predoctoral Fellowship**
May 2024 National Institute of Drug Abuse Training Grant T32DA0505552; PI:
Cooper and Waller

Jan 2022 **Children’s Miracle Network Clinical Infrastructure Grant** to support
program staff positions and continued research activities. Marchi, E.M.,
Walker, A. University of Florida, College of Medicine. \$93,644 requested.

Apr 2021 **Children’s Miracle Network Clinical Infrastructure Grant** to support program
impact evaluation studies, program staff positions, and dissemination of
research. University of Florida, College of Medicine. Funded \$76,025.

Sep 2020 **The 2020 Health+ Sickle Cell Disease Healthathon Promising
Technology-Enabled Solution Award Winner. Walker, A.**, Coder, V. Awarded
for developing novel intervention: [The SickleStrong Network](#) : An Automated
Texting Support Intervention to Connect Transitioning Adult SC Patients to
Helpful Peers, Providers, and Better ER Experience. HHS Office of the Chief
Technology Officer and Howard University. Awarded Social Media Spotlight from
HHS CTO, Howard University, and Curated Venture Capital Showcase from
Healthbox.

Jun 2020 **Children’s Miracle Network Clinical Infrastructure Grant** to support creation
of novel Streetlight program evaluation research studies and fund program staff
positions. University of Florida, College of Medicine. Funded \$140,000.

Jun 2019 **Children’s Miracle Network Research Grant** to fund materials for study: *Music
for Delirium Management in the Pediatric ICU*. University of Florida, College of
Medicine. Funded \$2,000

Apr 2019 **University of Florida Superior Accomplishment Award Winner for
University-Wide and for College of Medicine Division 5 Categories**, for staff

and faculty members who contribute outstanding and meritorious work. For role in the Streetlight program and for the successful development of the *Streetlight Gaming League* at UF Health Shands Children's Hospital. Selected as one of 8 winners from over 300 nominees throughout the university. Awarded total of \$2,200

- Apr 2019 **Children's Miracle Network Student Research Grant** to fund tuition related to the completion of my thesis, *Volunteer-Based Social Support Structures in a Palliative Care Peer Support Program: A Social Network Analysis*. University of Florida, College of Medicine. Funded \$2,000
- Apr 2019 **Children's Miracle Network Infrastructure Grant** to support continuation of Streetlight program evaluation research and fund program staff positions. University of Florida, College of Medicine. Funded \$90,718.00
- Aug 2018 **Alicia Rose Foundation Victorious for Teens Grant** to support Streetlight program staff positions, program inventory, and cost of materials for Streetlight program milestone event celebrations. Funded \$7,000
- Apr 2018 **Children's Miracle Network Infrastructure Grant** to support continuation of Streetlight program evaluation research and fund program staff positions. University of Florida, College of Medicine. Funded \$94,000
- Apr 2017 **Children's Miracle Network Infrastructure Grant** to support launch of Streetlight program evaluation research and fund program staff positions. University of Florida, College of Medicine. Funded \$77,000
- Dec 2016 **Florida Farm Bureau Women's Fund** to support cost of materials for Streetlight program milestone event celebrations for adolescent and young adult palliative care patients. Florida Farm Bureau. Funded \$1,500

TEACHING

Courses

- Spring 2022 Teaching Associate and Lecturer, Quantitative Data Analysis (BSHES 532, Rollins School of Public Health, Emory University)
- Fall 2021 Teaching Assistant and Lecturer, Socio-behavioral Measurement (BSHES 542, Rollins School of Public Health, Emory University)

PUBLICATIONS

Walker, A., LoParco, C., Rossheim, ME, Livingston MD. Trends in Delta-8 THC discussions on Twitter: 2020-2021. *The American Journal of Drug and Alcohol Abuse*. 2022; Revise and Resubmit.

Rujimora, J. Swygert, A., **Walker, A.**, McNiece, Z., Yoon, E., Machado, M., Myers, K., Richardson, E., Lenes, E., Hebert, L., Marchi, E., McColl, Z., Lagmay, J., Puig, A. "It becomes a family I'm a part of...we get to carry each other." Themes from qualitative interviews of patients

enrolled in an inpatient palliative care peer support program for adolescents and young adults. *Journal of Palliative Medicine*. 2022; Revise and Resubmit.

Walker, A. Spencer, RA, Lemon, E., Woods-Jaeger, B., Komro, K., Livingston, MD. The impact of Temporary Assistance for Needy Families benefits requirements and sanctions on material hardship, mental health, and parental aggravation. *Maternal and Child Health*. Revise and resubmit.

Bremmer, W., Yang, Y., **Walker, A.**, Bonn, M., Sarker, A., Love, J., Perrone, J. Barriers to Opioid Use Disorder Treatment: A Comparison of Self-Reported Information from Social Media with Barriers Found in Literature. *Frontiers in Public Health, section Substance Use Disorders and Behavioral Addictions*. 2023; In press.

LeBeau, K., Collins, S., Zori, G., **Walker, D.**, Marchi, E., Pomeranz, J. L., & Hart, M. (2023). Evaluating a novel hospital-based online health community to address palliative and psychosocial care factors for chronically ill adolescent and young adult patients. *Palliative & Supportive Care*, 1–12. <https://doi.org/10.1017/S1478951523000147>

Ash, M. J., Livingston, M. D., Komro, K., Spencer, R. A., **Walker, A.**, & Woods-Jaeger, B. (2023). The Impact of Increased Minimum Wage on Child Neglect Varies by Developmental Age of Child. *Journal of Interpersonal Violence*. <https://doi.org/10.1177/08862605221150458>

Walker, A. L., Swygert, A., Marchi, E., Lebeau, K., Haardörfer, R., & Livingston, M. D. (2022). Growth curve modeling of virtual events and online engagement in a palliative care peer support online health community for adolescents and young adults. *Journal of the American Medical Informatics Association*. <https://doi.org/10.1093/jamia/ocac252>

Walker, A. L., Rujimora, J., Swygert, A., McNiece, Z., Yoon, E., Machado, M., Myers, K., Richardson, E., Lenés, E., Hebert, L., Marchi, E., Arthurson-McColl, Z., Lagmay, J., & Puig, A. (2022). A Novel Palliative Care Peer Support Program for Adolescents and Young Adults: Survey and Factor Analytic Study. *Journal of Palliative Medicine*. <https://doi.org/10.1089/jpm.2022.0299>

LoParco, C. R., Olsson, S. E., Greene, K. M., Livingston, M. D., Henry, D., Trangenstein, P. J., **Walker, A.**, & Rossheim, M. E. (2022). How are retailers describing Delta-8 THC? A mixed-methods study in Fort Worth, Texas. *Journal of Studies on Alcohol and Drugs*, jsad.22-00287. <https://doi.org/10.15288/jsad.22-00287>

LoParco, C. R., **Walker, A.**, Livingston, M. D., Khoshhal, B., Gonzalez-Pons, K. M., Soule, E., Treffers, R., & Rossheim, M. E. (2022). A national assessment of on-premise drinking establishments near public universities: Drink prices, drink specials, indoor tobacco use, and state-level alcohol laws. *Alcoholism: Clinical and Experimental Research*, 46(11), 2068–2076. <https://doi.org/10.1111/acer.14937>

Walker, A. L., Marchi, E., Puig, A., Slayton, W., Dodd, V., McVay, M. A., & Livingston, M. D. (2022). Volunteer-Based Social Support Structures and Program Exposure Outcomes in an Adolescent Young Adult Palliative Care Peer Support Program. *Journal of Palliative Medicine*. <https://doi.org/10.1089/jpm.2021.0426>

Komro, K., Kominsky, T., Skinner, J., Livingston, M., Livingston, B., Avance, K., Lincoln, A., Barry, C., **Walker, A.**, Pettigrew, D., Merlo, L., Cooper, H., Wagenaar, A. Study protocol for a cluster randomized trial of a school, family, and community intervention for preventing drug misuse among older adolescents in the Cherokee Nation. *Trials*. 2022; 23(1):175. <https://doi:10.1186/s13063-022-06096-0>

Livingston, M. D., **Walker, A.**, Cannell, M. B., & Rossheim, M. E. (2022). Popularity of Delta-8 THC on the Internet Across US States, 2021. *American Journal of Public Health*, 112(2), 296–299. <https://doi.org/10.2105/AJPH.2021.306586>

Livingston MD, Woods-Jaeger B, Spencer RA, Lemon E, **Walker A**, Komro KA. Association of State Minimum Wage Increases with Child Maltreatment. *Journal of Interpersonal Violence*. Published online December 4, 2021:08862605211056727. <http://doi:10.1177/08862605211056727>

Rossheim, M. E., Livingston, M. D., **Walker, A.**, Reid, N. E., Liu, L., & Mazer-Amirshahi, M. (2021). Supersized alcopop related calls in the National Poison Data System, 2010–2019. *Drug and Alcohol Dependence*, 222, 108657. <https://doi.org/10.1016/j.drugalcdep.2021.108657>

Walker, A. (2019). Volunteer-Based Social Support Structures in a Palliative Care Peer Support Program: A Social Network Analysis. University of Florida. Thesis.

PRESENTATIONS

Walker, A. Love, J., Perrone, J., Sarker, A. (April 1, 2023). Using an expanded lexicon to identify bias, stigma and discrimination experiences related to medications for opioid use disorder in social media communities. Poster Presentation, American College of Medical Toxicology Annual Scientific Meeting. San Diego, CA.

LoParco, C. R., **Walker, D.**, Livingston, M. D., Trangenstein, P., Khoshhal, B., Gonzalez-Pons, K., Thombs, D., & Rossheim, M. E. (March 2022). Drink prices, drink specials, and tobacco policies in a national sample of on-premise drinking establishments. Poster presented at The University of North Texas Health Science Center (UNTHSC) Annual Research Appreciation Day (RAD), Fort Worth, Texas.

LoParco, C., **Walker, A.**, McDonald, K.K., Pathak, S. S., Eggleston, J., Olsson, S., Yockey, R. A., Lunningham, J., Kong, A. Y., Henry, D., Rossheim, M. E. Characteristics of Delta-8 THC retailers in a large metropolitan city. University of North Texas Health Science Center Research Appreciation Day, 2022. Abstract submission.

LoParco, C.R., **Walker, D.**, Rossheim, M.E., Livingston, M.D., Trangenstein, P., Khoshhal, B., Gonzalez-Pons, K., & Thombs, D. A National Assessment of On-Premise Drinking Establishments: Drink Prices, Drink Specials, and Tobacco Policies. Poster Presentation by Cassidy LoParco at the 2022 American Academy of Health Behavior (AAHB) Meeting in Key Largo, FL, March 2022.

LoParco, C.R., McDonald, K., Rossheim, M.E., Trangenstein, P., **Walker, D.**, Livingston, M.D., Yockey, R.A., & Thombs, D. Associations Between Retail Sales of Delta-8 THC and Four Loko

in Fort Worth, Texas. Poster Presentation by Cassidy LoParco at the 2022 American Academy of Health Behavior (AAHB) Meeting in Key Largo, FL, March 2022.

Rossheim, M.E., LoParco, C.R., **Walker, A.**, Livingston, M.D., Olsson, S., McDonald, K.K., Yockey, R.A., Lunningham, J., Kong, A., & Henry, D. Delta-8 THC Retail Sales in Fort Worth, Texas. Poster Presentation by Matthew Rossheim at the 2022 American Academy of Health Behavior (AAHB) Meeting in Key Largo, FL, March, 2022.

Walker, D. Interviewed with author and speaker Jane McGonigal for an Institute of the Future project to develop a report to *EA Games* on recommendations from diverse gaming practitioners to focus on developing games and game research using human-centered, accessibility, and prosocial strategies. June 23rd, 2020. Zoom interview.

Walker, D. The Streetlight Gaming League: A virtual peer support community for designated palliative teen and young adult patients. Primary Care Innovations Conference. March 6th, 2020. Gainesville, FL.

Walker I, Munoz-Pareja J, **Walker D**, and Kerrigan M. Music for Delirium Management in the Pediatric Intensive Care Unit (PICU). Abstract for American Public Health Association 2019 Annual Meeting and Expo. November 5th 2019. Philadelphia, PA.

Walker D . Social and Behavioral Sciences Fall Seminar: Presentation on the Streetlight Gaming League Intervention for University of Florida College of Public Health Department of Social Behavioral Sciences. September 17th, 2019. Gainesville, FL.

Walker D. Social and Behavioral Sciences Summer Seminar: Presentation on the Streetlight Gaming League Intervention. University of Florida College of Public Health Department of Social Behavioral Sciences. May 30th, 2019. Gainesville, FL.

Kerrigan M, McGetrick M, Walker I, **Walker D**, and Munoz-Pareja J. Music for Delirium Management in the Pediatric Critical Care Unit. ICHP Pediatrics Research Day. University of Florida, College of Medicine, Gainesville, FL. February 7th, 2019.

Burdsall K, Walker I, **Walker D**, Munoz-Pareja J, and Kerrigan M. Music for Delirium Management in the Pediatric Intensive Care Unit. UF Fall Undergraduate Research Symposium. October 23rd, 2018. Gainesville, FL.

LANGUAGES

Conversational in Spanish, utilized in work to support Spanish-speaking patients and explain Streetlight services. Not certified in medical translation.

SKILLS

Data Science and Management Skills | R, Python, SAS, SQL, AWS, Git/GitHub, SPSS, Access, Excel, REDCap, EPIC, OnCore

- Created automated methods of updating and quality-checking database of patient information between program staff documentation, *Discord* server webscraping, and REDCap API for Streetlight and program research project using REDCap and R

- Implemented and evaluated random forest classification model that is updated daily by program staff and utilized to expand the program's ability to categorize patients into major disease populations
- Created a *Spotify* and *Last.fm* API data collection program in R for Music for Delirium Management in the University of Florida Pediatric Intensive Care Unit, linking detailed time-series music listening analysis to health outcomes. Developed collection and analysis methods into R package and extended capabilities to allow for total lyric natural language processing and using SQL to transfer music history to AWS
- Created a .json web-scraping program in R used daily by *Streetlight* program to assess volunteer and patient engagement as number of comments, voice activity, and active users in the *Discord* servers and channels of the *Streetlight Gaming League*, data collection methods adopted by developers of *Discord* bot *Mee6*
- Created infrastructure for *Streetlight* database and transitioned *Streetlight* volunteer charting systems from paper to electronic for reporting, managerial insights, and research project development
- Developed Shiny application in R allowing data exploration for difference-in-difference analysis on state-level opioid-related deaths and minimum wage increases from 2000-2015.
- Developed webscraping application using R and Python with AWS Alexa to access Georgia Department of Health COVID-19 data and vaccination clinic site web traffic data
- Maintained patient registration database using *EPIC* patient EHR system and *OnCore* clinical research management system
- Applied egocentric social network analysis in R for *Streetlight* volunteer patient support structures

Video Editing | Adobe Premier Pro and YouTube

- Created the *Streetlight Gaming League* YouTube Channel, featuring educational videos for patients on how to use the *Streetlight Gaming League Discord* server to access virtual peer support community
- Created *Streetlight* program promotional videos and patient legacy projects, ranging from minute-long program promotional videos to 30-minute long patient legacy videos incorporating footage from patients, families, and staff
- Created video utilized by UF Health Physical Therapy training program of a motivational patient progress montage displaying exercises performed with ECMO machine and staff support

Trained in QPR (Question, Persuade, Refer)

- Completed multiple sessions of peer-based suicide prevention training
- Incorporated training sessions into *Streetlight* program volunteer training curriculum through establishing partnership with UF's Counseling and Wellness Center

Presentation & Public Speaking

- Presented *Streetlight* program and *Streetlight Gaming League* at University of Florida's Public Health Department of Social and Behavioral Sciences Seminar May 2019, September 2019.
- Experience in presenting program training, interventions and research with healthcare professionals, students, and volunteers