

CURRICULUM VITAE

Brian Guinn

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EDUCATION

- 2015 – 2018 **Doctor of Philosophy in Epidemiology (PhD)**
University of Louisville – School of Public Health and Information
Sciences, Louisville, KY – USA
Dissertation Title: LEAD AND CRIME: AN ECOLOGICAL STUDY
BETWEEN LEAD CONTAMINATED TOPSOIL AND VIOLENT CRIME
- 2013 - 2015 **Masters of Public Health, Epidemiology (MPH)**
University of Louisville – School of Public Health and Information
Sciences, Louisville, KY - USA
- 1997 - 2001 **Bachelor of Science in Nursing (BSN)**
Bellarmine University, Louisville, KY - USA

PROFESSIONAL EXPERIENCE AND EMPLOYMENT

Academic Employment

- 10/1/2020 - Present **Director - Master of Public Health Program (School-Wide Program)**
University of Louisville – School of Public Health and Information
Sciences
- Maintain compliance with the Council for Education in Public Health (CEPH), the accrediting agency for the MPH program
 - Complete annual Southeastern Association of Colleges (SAC's) report
 - Complete the MPH - Annual Program Review
 - Alteration of policies and procedures, when necessary, regarding the MPH Program, advise students across all concentrations when applicable.

- 7/1/2020 - Present **Assistant Professor – Tenure Track**
 University of Louisville – School of Public Health and Information Sciences, Department of Epidemiology & Population Health
- Instructor undergraduate/graduate public health program
- 1/1/2019 - 6/30/2020 **Postdoctoral Fellowship**
 University of Louisville – School of Public Health and Information Sciences, Department of Epidemiology & Population Health
 Faculty Mentor: Dr. Kathy B. Baumgartner
- Instructor undergraduate/graduate public health program
 - Helped manage the E-Detect Pilot Study:
 - Developed REDCap database
 - Screened, enrolled, and interviewed study participants
 - Trained graduate students in data entry
 - Analyzed study data
- 01/2017 - 12/2018 **Graduate Teaching Assistant**
 University of Louisville – School of Public Health and Information Sciences, Department of Epidemiology & Population Health
 Faculty Mentor: Dr. Kathy B. Baumgartner
- Created original lecture content for graduate students enrolled in *Introduction to Epidemiology*, and *Epidemiological Methods I*
 - Assisted with design and development of examinations, quizzes, homework, and in-class assignments
 - Assisted with mapping the Council of Education Public Health (CEPH) Competencies to class assessments
 - Responsible for grading examinations, quizzes, homework, and in-class assignments
 - Tutored students one-on-one, as needed
- 2013 - 2017 **Clinical Research Coordinator**
 University of Louisville, Division of Infectious Diseases, Clinical Translational Research Support Unit
- Principle Investigator: Dr. Julio Ramirez
- Quality control team member for Pfizer UAD and HAPPI studies
 - Provided support and guidance for university faculty in the development of research questionnaires/data collection forms
 - Developed REDCap modules for data capture for university faculty
 - Created maps as needed using ArcGIS and SaTScan Software

Non-Academic Employment

2008 - 2013

Journey Level Rating Veterans Service Representative (RVSR) - U.S. Department of Veterans Affairs

- Adjudicated claims for disability compensation and/or pension
- Adjudicated Dependency Indemnity Compensation claims
- Specialized team member working with a small group to adjudicate contaminated water claims made by veterans who were stationed at Camp Lejeune
- Cross trained to evaluate claims of military sexual assault, Traumatic Brain Injury, Post-Traumatic Stress Disorder, and Gulf War Illness
- Obtained *Sensitive 6* clearance

2006 - 2008

Registered Nurse Baptist Hospital East, Cardiac Catheterization Lab

- Assisted cardiologists with diagnostic and urgent cardiac catheterizations, percutaneous coronary interventions, balloon pump and pacemaker/ICD implantations
- Performed Tilt-Table studies, assisted with trans-esophageal echocardiograms, and assisted with electrophysiology studies/ablations
- Responded to cardiopulmonary arrest throughout the hospital as needed
- On call 108 hours a month for after-hour emergencies

2001 - 2006

Registered Nurse Baptist Hospital East, Transitional Care Unit

- Responsible for maintaining continuous surveillance of patient cardiopulmonary status, administering medications, monitoring pertinent lab findings and informing physicians as needed
- Mentored new nurses during their training period and educated student nurses during their clinical rounds
- Relief charge nurse responsibilities

5/2001 – 9/2001

Registered Nurse Caritas Peace Center – Psychiatric Hospital – 4 Lourdes Hall

- Responsible for maintaining a safe milieu for all inpatients and staff
- Responsible administering medications, monitoring vital signs, addressing medical needs, and communicating with physicians as needed

- Code Team member responsible for responding to medical emergencies or physical altercations throughout the hospital

HONORS AND AWARDS

2022	University of Louisville – “Top 3” Faculty Favorite Award
2020 – 2022	Student Champion Award
2019 – Present	University of Louisville – Faculty Favorite
2015	Delta Omega – based on academic performance
2015	Phi Kappa Phi – based on academic performance
2013	Financial award based on academic performance – University of Louisville School of Public Health and Information Sciences
2011	Production Award – U.S. Department of Veterans Affairs
1997 & 2001	Academic All-Conference – NCAA, GLVC Conference
1997	Leadership Scholarship – Bellarmine University

PROFESSIONAL ASSOCIATIONS

Peer reviewer for the following:

2021 - Present	Jones & Bartlett Learning – Academic Textbook
2019 - Present	American Journal of Public Health
2019 - Present	Preventive Medicine
2019 - Present	PeerJ

TEACHING & MENTORING ACTIVITIES

Teaching Activities

2021 – Present	PHPH 679 – Public Health Practice Experience 3. (Semesters Taught: Spring 2021, 2022, 2023. Scheduled to teach in Spring 2023).
2021 – Present	PHEP 341 – Epidemiology for Public Health, (Semester Taught: Fall 2021-2022. Scheduled to teach in Fall 2023).
2021 – Present	PHEP 200 – Disease Detectives – Substantially changed this course to align with the Cardinal Core curriculum requirements. Following these changes, this course successfully transitioned into a Cardinal Core course beginning Spring 2023 (Social & Behavioral Sciences). (Semesters Taught: Fall 2021, Spring 2023. Scheduled to teach in Spring 2024). <u>Special Note:</u> This course has been scheduled to align with Central High School students seeking dual credit. The first cohort of high school students (n=33) were enrolled in Spring 2023.
2019 – Present	PHEP 501 – Introduction to Epidemiology. (Semesters Taught: Fall 2019, 2020, 2021, 2022 Scheduled to teach in Fall 2023).
2021 – Spring	PHUN 101 – Introduction to Public Health. (Semester Taught: Spring 2021).
2020 – 2021	PHPH 550 – Disease Detectives; I developed every aspect of this course, which is now designated PHEP 200 as noted above as a Cardinal Core course. (Semesters Taught: Summer 2020 and Fall 2020)
2019 – 2020	PHPH 431 – Issues in Public Health I. (Semesters Taught: Summer 2019, 2020).
2019 – 2020	PHEP 441 – Epidemiology for Public Health; this course is now designated PHEP 341 as noted above. (Semesters Taught: Fall 2019, 2020)

Mentoring Activities

2022	Summer Research Opportunity Program (SROP) through the Center for Engaged Learning and Office of Undergraduate Research and Creative Activity, Office of the Provost. Faculty Mentor for 10-week program: Chase
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- Herrmann – Undergraduate Student (rising senior). *Childhood Lead Poisoning in Jefferson County, Kentucky: A Retrospective Analysis*
- 2021 – 2023 Dissertation Committee Member: Kendria Kelly-Taylor – PhD Program. Epidemiology & Population Health, SPHIS, UofL. *Differences in Birth Outcomes Between Foreign-born and US-born Black Women*. (Dissertation Chair – Anne Wallis, PhD).
- 2020 – 2022 Dissertation Committee Member: Lindsey Wood – PhD Program, July 2022. Epidemiology & Population Health, SPHIS, UofL. *Environmental Noise Exposure and its Association with Elementary Standardized Testing Scores and Adult Mental Ill-Health in Jefferson County, Kentucky*. (Dissertation Chair – Natalie Dupre, PhD).
- 2020 – 2021 Senior Thesis – Faculty Mentor: Sarah Draud – BS Program. Undergraduate Public Health Program. *The Female Orgasm Gap: A Public Health Disparity*

RESEARCH ACTIVITIES

2022 – Present

- Funding Organization: **Humana – Health Equity and Innovation HUB**
- Principle Investigator: Brian Guinn, PhD
- Begin Date: 7/1/2022
- End Date: 6/30/2024
- Title of Grant: 2022 Health Equity Innovation HUB – Empowering Our Communities and Advancing Health
- Total Cost: \$91,592
- Direct Cost: \$70,373
- Role on the Project: As the Principal Investigator my role on the project is to manage and direct all research activities, which includes the following:
 1. Investigate the spatial and racial/ethnic disparities of childhood lead poisoning in Louisville, KY.
 2. Identify key risk factors associated with racial/ethnic disparities of childhood lead poisoning that are amendable to primary prevention strategies and/or lead abatement/remediation activities.
 3. Act upon the results of this study to reduce the rate of childhood lead poisoning in Jefferson County, KY, especially among communities or color likely disproportionately burdened by environmental lead exposure.
 4. Hire (for pay) and train a student at UofL to collect field samples and conduct data entry.
- Percent Effort: 10%

- **Brief Description:** Collect 264 topsoil and 265 paint samples from abandoned properties owned by Louisville Metro. Evaluate the lead content in these samples via ICP-MS; evaluate the geospatial distribution of the burden of environmental lead; and compare this distribution to that for Elevated Blood Lead Levels in Jefferson County through statistical modelling. This information will be used by LMPHW to request additional grant dollars earmarked for environmental lead abatement.

2022 – Present

- **Funding Organization:** **U.S. Department of Housing and Urban Development (HUD)**
- **Principle Investigator:** Brian Guinn, PhD (Sub-Contract)
- **Begin Date:** 8/1/2022
- **End Date:** 2/1/2025
- **Title of Contract:** Lead-Based Paint Hazard Control Grant Program (FR-6500-N-13)
- **Total Cost:** \$70,000
- **Direct Cost:** \$63,637
- **Role on the Project:** Create and manage a REDCap database for LMPHW's *Lead Risk Assessments*. Hire (for pay) and train a student at UofL to conduct data entry. Analyze and interpret data for appropriate epidemiological reports on a quarterly basis that evaluates the Lead Risk Assessments, including geospatial analyses in addition to descriptive statistics.
- **Percent Effort:** 10%
- **Brief Description:** Design of the REDCap database will allow for the input of thousands of paper Lead Risk Assessments held by LMPHW that have not been assessed and analyzed. Final analysis and report will be used by LMPHW to request additional grant dollars earmarked for environmental lead abatement.

ADMINISTRATIVE & SERVICE ACTIVITIES

Intramural Activities

2020 – Present	Director – Masters of Public Health program
2023 – Present	Director – Graduate Certificate in Public Health Training
2023 – Present	DELPHI – Blackboard Advisory Committee
2023 – Spring	DELPHI – Dean’s Forum on Excellence: Improving Engagement and Belongingness
2021 – Spring	Deans’ Forum on Educational Excellence
2018 – Fall	Decanal Review Committee Student Representative for the School of Public Health and Information Sciences

Extramural Activities

2022 - Present	Facilitator for the Department of Public Advocacy – Providing support and guidance for a capital punishment appeal returned to the Commonwealth of Kentucky by the U.S. Supreme Court
2022	Fellowship with the Bluegrass Leadership Academy – in Partnership with the Council on Post-Secondary Education
2021-2022	Worked with Councilwoman Cassie Chambers Armstrong concerning a proposed ordinance aimed at removing environmental lead hazards from rental properties within Jefferson County, Kentucky – Passed into law December 2022
2021 – Present	Working with State Representative Josie Raymond concerning a proposed state law aimed at requiring environmental lead testing prior to the sale of any residential property in the Commonwealth of Kentucky
2021 - Present	Lead Free Louisville Community – Founding member – We are a group of working professionals who work together to address environmental lead issues in Jefferson County, Kentucky. We have been actively supporting Councilwoman Cassie Chambers Armstrong proposed lead ordinance.
2021 - Present	Ready 4 K (R4K) Lead Free Alliance (Metro United Way) - We are a group of working professionals who work together to address environmental lead issues in Jefferson County, Kentucky as they specifically pertain to the pediatric population.

2021 - 2022

CDC Fellowship: Cohort 10, HHS Region 4 - National Leadership Academy for the Public's Health (NLAPH). Selected based on application submitted through UofL, LMPHW, IDEAS xLab, and Louisville Metro Government – Office of Housing. Interactions and scheduled meetings have continued with CDC administration and other selected fellows engaged in environmental lead work.

PUBLICATIONS

Peer Reviewed Journals

11. **Brian E. Guinn**, Kathy B. Baumgartner, Stephanie D. Boone, Jeremy Gaskins, Haifeng Zhang, and Kristina M. Zierold. Association Between Topsoil Lead Concentrations and the Risk of Violent Crime. *Environmental Justice*; Accepted: December 17, 2022
10. Wiemken TL, Carrico RM, Furmanek SP, **Guinn BE**, Mattingly WA, Peyrani P, Ramirez JA. The impact of socioeconomic position on the incidence, severity, and clinical outcomes of hospitalized patients with community-acquired pneumonia. *Public Health Reports*. May/June 2020; 135(3): 364-371; PMID: 32228396
9. Wiemken TL, Furmanek SP, Mattingly WA, Wright MO, Persaud AK, **Guinn BE**, et al. Methods for computational disease surveillance in infection prevention and control: Statistical process control versus Twitter's anomaly and breakout detection algorithms. *American journal of infection control*. 2018;46(2):124-32; PMID: 28916373
8. El-Kersh K, Jalil B, McClave SA, Cavallazzi R, Guardiola J, Guilkey K, Persaud AK, Furmanek SP, **Guinn BE**, Wiemken TL, Alhariri BC, Kellie SP, Saad M. Enteral nutrition as stress ulcer prophylaxis in critically ill patients: A randomized controlled exploratory study. *Journal of critical care*. 2018;43:108-13; PMID: 28865339
7. Ramirez JA, Wiemken TL, Peyrani P, Arnold FW, Kelley R, Mattingly WA, Nakamatsu R, Pena S, **Guinn BE**, Furmanek SP, Persaud AK, Raghuram A, Fernandez F, Beavin L, Bosson R, Fernandez-Botran R, Cavallazzi R, Bordon J, Valdivieso C, Schulte J, Carrico RM; University of Louisville Pneumonia Study Group. Adults Hospitalized With Pneumonia in the United States: Incidence, Epidemiology, and Mortality. *Clinical infectious diseases: an official publication of the Infectious Diseases Society of America*. **2017**;65(11):1806-12; PMID: 29020164
6. Wiemken TL, Furmanek SP, Carrico RM, Mattingly WA, Persaud AK, **Guinn BE**, et al. Process control charts in infection prevention: Make it simple to make it happen. *American journal of infection control*. 2017;45(3):216-21; PMID: 27876163
5. Faryar KA, Freeman CL, Persaud AK, Furmanek SP, **Guinn BE**, Mattingly WA, et al. The Effects of Kentucky's Comprehensive Opioid Legislation on Patients Presenting with Prescription Opioid or Heroin Abuse to One Urban Emergency Department. *The Journal of emergency medicine*. **2017**;53(6):805-14; PMID: 29102093

4. Burkes R, Pfister G, **Guinn B**, Cavallazzi R. Opioid overdose leading to intensive care unit admission: Epidemiology and outcomes. *Journal of critical care*. 2017;37:261; PMID: 27876483
3. Gregory J Pfister, Robert M Burkes, **Brian Guinn**, Jacqueline Steele, Robert R Kelley, Timothy L Wiemken, Mohamed Saad, Julio Ramirez, Rodrigo Cavallazzi. Opioid overdose leading to intensive care unit admission: Epidemiology and outcomes. *Journal of critical care*. 2016; 35:29-32; PMID: 27481733
2. Mattingly WA, Kelley RR, Wiemken TL, Chariker JH, Peyrani P, **Guinn BE**, et al. Real-Time Enrollment Dashboard For Multisite Clinical Trials. *Contemporary clinical trials communications*. 2015;1:17-21; PMID: 26878068
1. Wiemken TL, Kelley RR, Carrico RM, Binford LE, **Guinn BE**, Mattingly WA, et al. Efficacy of a novel skin antiseptic against carbapenem-resistant Enterobacteriaceae. *American journal of infection control*. 2015;43(4):380-2; PMID: 25660077

PRESENTATIONS

Professional Presentations

14. 5/18/2023 Guest lecturer: Atherton High School – Biomedical Program: What is Epidemiology?
13. 4/2/2023 Guest lecturer: Bellarmine University Science Program. *Controversies in Public Health*
12. 3/24/2023 Invited speaker: Kentucky Health Occupations Students of America (HOSA) State Leadership Conference. *What is Public Health?*
11. 2/27/2023 Guest presenter: University Alabama Birmingham – Public Health Faculty Seminar. *Childhood Lead Poisoning*
10. 12/8/2022 Guest speaker: Waggener High School – Health Science Program. *What is Public Health?*
9. 6/15/2022 Invited speaker: Metro Council's Community Affairs, Health, Housing and Education committee. *The Burden of Environmental Lead Hazards in Jefferson County, KY.*
8. 5/14/2022 Invited speaker: Play Cousins Collective – A House of Love. *Environmental Lead Hazards in our Community*
7. 5/10/2022 Keynote speaker: J.M. Atherton High School PLTW Biomedical Class of 2022 – White Coat Ceremony. *The Next Four Years.*

6. 4/12/2022 Invited speaker: Press conference hosted by Councilwoman Cassie Chambers-Armstrong's concerning a proposed lead abatement ordinance
5. 1/18/2022 Guest presenter: St. Xavier High School Medical Club. *What is Public Health?*
4. 12/16/2021 Guest presenter: J.M. Atherton High School PLTW Biomedical Club. *What is Public Health?*
3. 3/14/2017 Guest presenter: Kentucky Hospital Association – *Critically Thinking about Quality Control Measures Utilized by HIIN*
2. 8/6/2016 Guest presenter: University of Louisville – Division of Infectious Diseases. *Understanding Measures of Association*
1. 5/20/2016 Guest presenter: Western Kentucky Chapter APIC. *An Introduction into Descriptive and Inferential Statistics*

Peer Reviewed Poster Publications

- 3 2023 Rebecca Hollenbach, **Brian Guinn**; Reducing Health Inequities of Lead Poisoning Through a Pre-1978 Rental Housing Lead Registry; American Public Health Association 2023 Annual Meeting; Abstract ID: 536901; Program Area: Law.
- 2 6/15/2022 Lindsey A. Wood, Jeremy Gaskins, Kira C. Taylor, **Brian Guinn**, Ray Yeager, Natalie C. DuPre; The Association between Environmental Noise and Prevalence of Mental Ill-Health was Modified by Neighborhood Income and Race in Jefferson County, Kentucky; Surveillance, Epidemiology, and End Results (SEER) 2022 Annual Meeting in Chicago IL; June 15-17, 2022.
1. 4/21/2022 Lindsey A. Wood, Jeremy Gaskins, Kira C. Taylor, **Brian Guinn**, Ray Yeager, Natalie C. DuPre; Modification of the Relationship between Neighborhood Environmental Noise and Prevalence of Mental Ill-Health by Income and Race in Louisville, Kentucky; Kentucky Public Health Association Annual Conference in Bowling Green, KY; April 20-22, 2022.

Non-Peer Reviewed Poster Publications

7. 8/2022 C Herrmann, **B Guinn**. The Burden of Elevated Blood Lead Levels Among the Pediatric Population in Jefferson County, Kentucky: A Retrospective Analysis. SROP Summer Conference, University of Louisville

6. 9/2013 **B Guinn**, T Wiemken, R Kelley, L Binford, F Arnold, R Carrico, P Peyrani, K Buckner, C Ackerman, J Ramirez. Levels of Air Pollution in Jefferson County Kentucky are Associated with Increased Risk for Lower Respiratory Tract Infection Hospitalization. Research Louisville. 2013.
5. 9/2013 R Rivera, **B Guinn**, T Wiemken, R. Kelley, M Ahmed, J Gonzalez, J Lanceta, V Salunkhe, L Binford, J Ramirez. Impact of Economic Factors on the Incidence of Hospitalization for Lower Respiratory Tract Infection in Jefferson County. Research Louisville. 2013.
4. 9/2013 J Lanceta, **B Guinn**, T Wiemken, R Kelley, V Salunkhe, S Pena, L Rodriguez, L Binford, C Ackerman, J Ramirez. Patients Hospitalized with Lower Respiratory Tract Infections in Jefferson County: The Impact of Census Tract Level Demographic Characteristics. Research Louisville. 2013.
3. 9/2013 K Buckner, R Kelley, L Binford, **B Guinn**, J. Gonzalez, C Ackerman, P Peyrani, R Carrico, J Ramirez, T Wiemken. The Economic Burden of Hospitalization due to Pneumonia in Acute Care Hospitals in Jefferson County. Research Louisville. 2013.
2. 9/2013 Pfister GJ, Burkes RM, **Guinn B**, Steele J, Kelley RR, Wiemken TL, Sadd M, Ramirez J, Cavallazzi R. Opioid Overdose Leading to Intensive Care Unit Admission: Epidemiology and outcomes. *Journal of Critical Care*. 2013.
1. 9/2013 W Mattingly, R Kelley, K Buckner, **B Guinn**, L Binford, J Lanceta, J Ramirez. Development of Applications to Facilitate Clinical Research: The Pneumonia in Jefferson County Research App. Research Louisville. 2013.

CERTIFICATION AND LICENSURE

2001 - Present	Registered Nurse, Kentucky
2001 - 2017	Basic Cardiac Life Support
2009-2013	Certified Sensitive 6 Clearance, U.S. Department of Veterans Affairs
2008-2013	Certified Journey Level Rating Specialist, U.S. Department of Veterans Affairs
2006-2008	Certified in Balloon-Pump Management

2006-2008 Certified in Hemodynamic Monitoring
2001-2008 Advanced Cardiac Life Support

OTHER ACTIVITIES

2009 Medical Response Team Leader – U.S. Department of Veterans Affairs
 Regional Office 327

2006 - 2008 Workplace Safety Team Leader – Cardiac Catheterization Lab – Baptist
 Hospital East

2001 Southern Middle School - Volunteer physical education teacher/mentor

2001 “Kids Café” volunteer mentor – Helped K-8 participants with
 homework during study hour, and organized after school activities