

Madison E. Merzke

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Innovative data scientist with over three years experience in public health injury data. Particularly passionate about process improvement, automation, data visualization, mentoring, and writing.

Education

2023 (IP) **Master of Applied Statistics**, *University of Kentucky*, Lexington, KY.

2019 **Bachelor of Public Health (BPH)**, *University of Kentucky*, Lexington, KY.

Professional Experience

2018 - **Data Management Analyst**, *Kentucky Injury Prevention and Research Center*, Lexington, KY.
present

- Promoted from Student Abstractor (Dec 2018 to Oct 2019) to Data Coordinator Senior (Nov 2019 to Apr 2021), and then Data Management Analyst (May 2021 to present day)
- Managed complex and competing deliverables of overlapping CDC awards including the collection, abstraction, management, and reporting of various statewide injury data sources: death certificate, hospital discharge, law enforcement, coroner investigation, medical examiner/autopsy, and toxicology reports
- Liaised with data providers at the state and local level via email, phone, and travel to their offices and meetings
- Consulted with CDC to debug SAS and R codes for quarterly reporting of statewide hospital discharge overdose data, prompting revision of nationally-deployed CDC analysis and reporting codes
- Designed infographics disseminating state injury statistics, data requests for research and government stakeholders, and an interactive online dashboard displaying statewide and county-specific overdose mortality and morbidity data
- Automated multiple processes, including the output of individualized data request letters and case request lists for every county in Kentucky, as well as weekly emails reporting on data quality, completeness, progress towards deadlines, and potential areas for improvement
- Programmed data linkages in R within and between hospital, death, and EMS data extracts
- Trained and supported two teams of statewide data abstractors, focusing on collaborative learning and fostering a pleasant, productive work environment
- Improved data collection of LGBTQ decedents in death databases via REDCap variable updates and improved education of data providers and abstractors

2018 - **Administrative and Project Assistant (Part-Time)**, *Dr. Lawrence Prybil*,
present *University of Kentucky College of Public Health*, Lexington, KY.

- Managed office contacts, document storage and organization, and literature review research

- 2016 - 2019 **Nursing and Office Assistant**, *Mack & Poole Pediatrics*, Lexington, KY.
- Welcomed patients and families, measured vitals, and documented symptoms
 - Distributed educational materials and OTC medications
 - Coordinated patient/family appointments, including managing wait times, restocking supplies and refreshments, and cleaning exam rooms
 - Collected samples and ran basic laboratory tests with appropriate PPE
 - Maintained charts and medical records, patient correspondence, and vaccine documentation

Professional & Research Presentations

- 2021 Presented to and trained Kentucky regional epidemiologists on updated statewide drug overdose county profiles online dashboard via Zoom. See <https://kiprc.uky.edu/programs/overdo-data-action/county-profiles> and <https://kiprc.uky.edu/news/kiprc-unveils-new-interactive-dashboard-drug-overdose-county-profiles>.
- 2020 Presentation on Kentucky Suicide Data Sharing with Dr. Ashley Bush and Beck Whipple, State Suicide Prevention Coordinator, at the Suicide Prevention Resource Center's Community of Practice meeting via Zoom.
- 2018 Merzke, M., Bunting, A., Mark, K.P., & Moore, S. (2018). Oral presentation as research assistant for the University of Kentucky's Sexual Health Promotion Lab: A Qualitative Thematic Analysis of Feelings of Bi-Erasure in Long-Term Mixed Sex Relationships. Annual meeting of the Canadian Sex Research Forum, Toronto, Canada.

Technical Skills

- Expert R/RStudio Server (data cleaning and management, QA/QC, text mining of scanned primary data sources, analysis, probabilistic linkage, creation of interactive dashboards, automation of processes and reporting), REDCap with API to R via REDCapR, Zoom, Microsoft Office 365: Teams, Outlook, OneDrive, Word, Excel, and PowerPoint.
- Proficient SAS/SAS EG, ICD-10-CM codes, Microsoft Power Automate and Power BI, Adobe Illustrator and Acrobat.
- Intermediate Tableau, SQL, Python.

Awards

- 2015 - 2019 Patterson Scholar. Awarded four year undergraduate scholarship within Lewis Honors College at the University of Kentucky (UK).
- 2017 - 2018 UK Research Travel Grants/Scholarships. Awarded travel grants/scholarships to present at academic conferences in 2017 and 2018 by both UK Undergraduate Research and UK College of Public Health (CPH).
- 2016 - 2018 Dean's List. Awarded Spring 2016, Spring 2017, Spring 2018, and Fall 2018 within UK CPH.