

# Curriculum Vitae

## Kristen McQuerry, PhD

### Education

- 2016 Ph.D. in Statistics  
University of Kentucky  
Dissertation: *Statistical Methods for Handling Intentional Inaccurate Responders*, Director by Heather M Bush
- 2012 M.S. in Statistics  
University of Kentucky
- 2005 M.A. in Secondary Math Education  
University of Kentucky
- 2004 B.A. in Secondary Math Education  
University of Kentucky  
Minor: Theatre

### Professional Experience

**Jul-2023 – Present**                      **University of Kentucky**                      **Lexington, KY**  
*Associate Professor, Research Title Series*

- Collaborate with teams of researchers and execute statistical analyses.
- Provide interpretation of data and reporting of results.
- Provide protocol review and input such as sample size calculations and statistical methodology for moderate to high complexity studies.
- Provide support, input and leadership to programming resources, specifically in SAS.
- Provided mentorship and advice to junior staff and graduate students in completing analyses with complex statistical methods, as well as, in consultations with investigators.
- Implement structures to promote reproducibility with SAS code.

**Sep-2018 – Jul-2023**                      **Allucent**                      **Lexington, KY**  
*Biostatistician II, Senior Biostatistician I, Senior Biostatistician II, Principal Statistician*

- Lead projects, communicate with clients and leads of other functional areas, set analysis execution timelines and milestones to achieve timely and quality deliverables.
- Review and provide guidance on data management plans, project database structures, case report forms, edit checks, and other relevant and associated DM and vendor documents.
- Author statistical analysis plans.
- Created detailed programming specifications for analysis files, tables, figures and listings.
- Provide support, input and leadership to programming resources during display production.
- Conduct statistical analyses, including programming of targeted outputs.
- Implement quality control consistency checks on selected analysis relevant items within the clinical database, as well as inferential tables, figures, and listings to ensure final report production quality

**Sep-2017 – Sep-2018**                      **University of Kentucky**                      **Lexington, KY**  
*Assistant Professor of Collaborative Statistics*

- Collaborated with teams of researchers to achieve analysis objectives, contributing to study design and statistical analysis planning.
- Assisted faculty with sample size calculation tables and descriptions, as well as data analysis plans for pilot studies and grant proposals in areas of basic science and medical research.
- Conducted a variety of statistical analyses, such as, parametric, nonparametric, survival.
- Trained statistics graduate students in SAS and R programming languages to create reproducible statistical analyses and reports from code.
- Provided mentorship and advice to statistics graduate student in completing analyses with complex statistical methods, as well as, in consultations with investigators.

**Apr-2016 – Sep-2018**                      **University of Kentucky**                      **Lexington, KY**  
*Applied Statistics Lab Director*

- Assisted with study design and data analysis for investigators from numerous fields of study.
- Consulted with graduate students, residents, fellows, staff, and faculty and used a variety of study designs and statistical methods
- Created statistical code that produced demographics tables and statistical analyses results tables along with interpretations of the results.
- Trained statistics graduate students in consulting.
- Oversaw statistical work of 20 statistics research assistants and staff.

**Oct-2013 –Mar-2016**                      **University of Kentucky**                      **Lexington, KY**  
*Applied Statistics Lab Project Manager*

- Created analysis datasets for collaborative projects with investigators across campus.
- Perform statistical analyses for observational studies and designed experiments.
- Wrote and reviewed statistical methods and results sections of manuscripts.
- Using SAS, cleaned database and completed statistical analyses for multi-year, multi-collaborator retrospective study looking at the effects of smoking on birth outcomes for pregnant women.
- Delegated projects to research assistants and staff.

**Aug-2009 – Sep-2013**                      **University of Kentucky**                      **Lexington, KY**  
*Research & Teaching Assistant*

- Assisted with study design, statistical analysis, SAS programming, reviewing and writing publications for projects in the College of Agriculture, Food, and Environment.
- Using SAS, cleaned data collected from surveys during years 2006-2009 for the Kentucky Women's Health Registry, as well as all other studies (observational and designed experiments) requiring data cleaning to create an analysis dataset.
- Created an electronic database capture in REDCap for a TENS study.
- Primary instructor for undergraduate statistics courses.

**Aug-2005 – Jul-2009**                      **Tates Creek High School**                      **Lexington, KY**  
*Secondary Math Education Teacher*

- Planned course materials and instructed students in Probability and Statistics, Algebra I and II, Geometry, IB Math Studies.
- Worked with student from 9<sup>th</sup> – 12<sup>th</sup> grade.
- Managed classrooms of up to size 37.

## **Therapeutic Experience/ Clinical Trial Experience**

Contributed to studies focusing on the following indications and therapies:

- Oncology (2), specifically:
  - Phase III study with renal cell carcinoma cancer
  - Phase Ia study with relapsed or refractory adult acute myeloid leukemia
- Delivery System (4), specifically:
  - Phase I (3)
  - Phase II
- Peanut Allergy
- Neuromuscular Disorders
- Neurological Disorders
- Healthy Volunteer
- Pediatrics
- Rare Disease
- Bayesian Dose Escalation Designs

## **Teaching**

BST 635 Databases and SAS Programming (Spring 2023)

Graduate course covering data management and variable manipulation, reporting techniques, macros, basic graphs, and ODS, and elementary statistical analysis.

BST 693 (STA 693, CPH 608) Biostatistical (Statistical) Consulting (Fall 2016, Spring/Fall 2017, Spring 2018)

Graduate course covering creating reproducible statistical code and results, dealing with issues that arise in biostatistical and statistical consulting, including how to become better problem solvers and how to express results both orally and in writing.

STA 200 Statistics: A force in Human Judgement (Summer 2010, Spring 2011)

Introductory undergraduate course in concepts of sampling variability, inference, experimental design, displaying and interpreting data.

STA 291 Statistical Methods (Fall 2010)

Introductory undergraduate course in concepts of calculating basic test statistics, inference, experimental design, and interpreting data.

Secondary Math Education Teacher, Tates Creek High School, Lexington, KY (Fall 2005 - Spring 2009)

Instructed students in Probability and Statistics, Algebra I, Part 2, Geometry, Advance Algebra II, Algebra I, Advance Geometry, IB Math Studies.

## Guest Lectures and Workshops

- Allucent Lunch and Learn "Bayesian Dose Escalation Designs using East Bayes" (2021)
- MED 815, Introduction to Clinical Research (2018)
- ASL Programming Workshops "Introduction to SAS", "Introductory Programming Techniques" (Fall 2017)
- CDS660, Oral Biology for Postgraduate Dental Students (Fall 2016, Fall 2017)
- ICR Summer Workshop "Introduction to Data Analysis" (2017)
- QIPSR Programming Festival "Intro to SAS." (Fall 2016)
- UK Radiology Seminar Series "Statistical Methods Used in Radiology Research" (2016)
- UK Plant and Soil Sciences Seminar Series "Using the Applied Statistics Laboratory and an Introduction to Experimental Design" (2013)

## Honors and Awards

- ASA Biometrics Section - Developing the next Generation of Biostatisticians (2017)
- College of Arts & Sciences Certificate for Outstanding Teaching, UK (2011)
- R.L Anderson Prize for Best Teaching Assistant, UK Statistics Department (2011)
- Otis A. Singletary Fellowship for Graduate Study in Education, UK (2004)

## Presentations and Posters

- **McQuerry, K.J.** (2017). "Sharing Our Stories." Women in Statistics and Data Science 2017. San Diego, CA.
- **McQuerry, K.J.**; Nowacki, A., Raska, P. (2017). "Using Videos for Teaching and Assessing Collaborative Skills." Joint Statistical Meetings 2017. Baltimore, MD.
- King, J.D.; Jacobs, C.A.; **McQuerry, K.J.**; Kraus, V.B.; Lattermann, C. (2017). "Proteomic Response Following Acute Anterior Cruciate Ligament Injury: Implications for Post-Traumatic Osteoarthritis." ORS 2017 Annual Meeting. San Diego, CA.
- Song, K.D.; Lee, J.T.; **McQuerry, K.J.**; Ayoob, A. (2016). "Correlation with Splenic Intervention and Radiologic Description of of Splenic Injuries." Annual Meeting of American Society of Emergency Radiology. San Francisco, CA.
- Song, K.D.; Lee, J.T.; **McQuerry, K.J.**; Villasante-Tezanos, A.G.; Ayoob, A. (2016). "Splenic Trauma: Sending the Right Message" Annual Meeting of Society of Abdominal Radiology. Waikoloa, Hawaii.
- Jaromczyk, J.W.; Moore, N.; **McQuerry, K.J.** (2014). "Why What and How to publish in the Journal of the Kentucky Academy of Science." Centennial Meeting of the Kentucky Academy of Science. Lexington, KY.
- Wadsworth, B.A.; Sterrett, A.E.; Wood, C.L.; **McQuerry, K.J.**; Clark, J.D.; Ray, D.L.; Bewley, J.M. (2013). "Characterization of lying time, milk yield, and rumination time with different freestall bases." Abstract 278. American Dairy Science Association Annual Meeting. Indianapolis, IN.
- Sterrett, A.E.; Wood, C.L.; **McQuerry, K.J.**; Bewley, J.M., (2012). "Potential utility of a parlor-based individual quarter milking system." Page 23 in Proceedings of the 38th of the International Committee for Animal Recording (ICAR) Session. Cork, Ireland.

## Professional Affiliations

- American Statistical Association Member 2010 – Present
- ASA Kentucky Chapter Member 2010 – Present
- ASA Biopharmaceutical Section Member 2020 - Present
- ASA Statistical Consulting Section Member 2010 – Present
- ASA Teaching of Statistics in the Health Sciences Member 2015 – 2020
- ASA Biometrics Section Member 2016 – Present
- American Statistical Association Member 2010 – Present

## Publications

Garrett, K. S., Embertson, R. M., Hopper, S. A., Woodie, J. B., & **McQuerry, K. J.** (2022). Preoperative computed tomographic evaluation of neonatal foals with rib fractures. *Veterinary Surgery*.

Thomas, J. M., Kern, P. A., Bush, H. M., **McQuerry, K. J.**, Black, W. S., Clasey, J. L., & Pendergast, J. S. (2020). Circadian rhythm phase shifts caused by timed exercise vary with chronotype. *JCI insight*.

Becker, K. A., Uerschels, A. K., Goins, L., Doolen, S., **McQuerry, K. J.**, Bielawski, J., ... & Spassieva, S. D. (2020). Role of 1-Deoxysphingolipids in docetaxel neurotoxicity. *Journal of Neurochemistry*.

Hickman, D., Zhang, J., **McQuerry, K.**, & Lee, J. (2020). Should radiologists care about kV? Phantom and clinical study of effects of kV on hemoperitoneum HU in the setting of splenic injuries. *Emergency Radiology*, 27(2), 135-140.

Gustafson, A., Jilcott Pitts, S. B., **McQuerry, K.**, Babtunde, O., & Mullins, J. (2019). A Mentor-Led Text-Messaging Intervention Increases Intake of Fruits and Vegetables and Goal Setting for Healthier Dietary Consumption among Rural Adolescents in Kentucky and North Carolina, 2017. *Nutrients*, 11(3), 593.

Duncan, M.J., Farlow, H., Tirumalaraju, C., Yun, D.H., Wang, C., Howard, J.A., Sanden, M.N., O'Hara, B.F., **McQuerry, K.J.** and Bachstetter, A.D. "Effects of the dual orexin receptor antagonist DORA-22 on sleep in 5XFAD mice." *Alzheimer's & Dementia: Translational Research & Clinical Interventions*, 5, 2019, pp.70-80.

Srinivasan, A., Chavan, N., O'Brien, J., Shook, L., **McQuerry, K.**, Su, L., & Critchfield, A. "Improved neonatal outcomes in a comprehensive perinatal opioid treatment program: a composite analysis." *American Journal of Obstetrics and Gynecology*, 2019, 220(1).

Smalls, B. L.; Aroh, A.; **McQuerry, K.J.**; Adegboyega, A.; Schoenberg, N.; Hatcher, J. "Social Support and Breast Cancer Screening in Rural Appalachia." *Psycho-Oncology*, 2018.

Lawlor, M. L., Shook, L. A., **McQuerry, K.**, Srinivasan, A., Johnson, Q. B., Chavan, N. R., & Critchfield, A. S. "Care-by-parent model as a tool for reduction of neonatal opioid withdrawal syndrome in neonates exposed to buprenorphine maintenance therapy in-utero." *The Journal of Maternal-Fetal & Neonatal Medicine*, 1-5, 2018.

Smallwood, P. T., Williams, C. M., **McQuerry, K. J.**, & Critchfield, A. S. "Maternal and Neonatal Outcomes

Following Methadone Taper for Opiate Detoxification [24f]." *Obstetrics & Gynecology*, 131, 2018, 70S.

Todd, R., Martin, J., & **McQuerry, K.J.** "Use of a Mobile Diary App to Influence Narrative Feedback on Medical Student Evaluations." *Obstetrics & Gynecology*, 132, 2018, 52S.

Lawlor, M., **McQuerry, K. J.**, Tan, J., Williams, C. M., Hansen, W., & Critchfield, A. S. "Postoperative Opioid Use After Cesarean Delivery [15n]." *Obstetrics & Gynecology*, 131, 2018, 156S.

Lababidi, S., **McQuerry, K. J.**, Duan, R., Johnson, M. S., Fredericks, T., & Baldwin, L. "Incidence and Characteristics of Cervical Cancer in Elderly Women [3q]." *Obstetrics & Gynecology*, 131, 2018, 184S-185S.

Cook, I., Marcum, M., Xu, Y., Qi, Y., **McQuerry, K.J.**, & DeSimone, C. "Improvement in CREOG Scores Through Focused Review Sessions." *Obstetrics & Gynecology*, 132, 2018, 40S.

Elzinga, S. E.; Rohleder, B.; Schanbacher, B.; **McQuerry, K.J.**; Barker, V. D.; Adams, A. A. "Metabolic and inflammatory responses to the common sweetener stevioside and a glycemic challenge in horses with equine metabolic syndrome." *Domestic Animal Endocrinology*, 60, 2017, 1-8.

Chavan, N.; **McQuerry, K.J.**; Hansen, W. "784: Intrahepatic cholestasis of pregnancy (icp) with bile acid (ba) level < 40 umol/l: where do we go from here?." *American Journal of Obstetrics & Gynecology*, 216(1), 2017, S452.

Lawlor, M.; **McQuerry, K.J.**; Chavan, N.; Shook, L.; Critchfield, A. "Care-by-Parent as a Tool for Reduction in Neonatal Opioid Withdrawal Syndrome [37H]." *Obstetrics & Gynecology*, 129, 2017, 92S.  
Stafford, R. L.; Strong, M.; **McQuerry, K.J.**; Chavan, N. "624: Diabetes in pregnancy: does type of prenatal care provider affect pregnancy outcomes?." *American Journal of Obstetrics & Gynecology*, 216(1), 2017, S365.

Yu, X.; Chavan, N. R.; **McQuerry, K.J.**; Hansen, W. "Optimal Delivery Timing for Intrahepatic Cholestasis of Pregnancy (ICP)[36D]." *Obstetrics & Gynecology*, 129, 2017, 51S

Jones, B. W.; Stone, A. E.; Wood, C. L.; **McQuerry, K.J.**; Clark, J. D.; Ray, D. L.; Bewley, J. M. "Case Study: Characterization of milk yield, lying and rumination behavior, gait, cleanliness, and lesions between 2 different freestall bases." *The Professional Animal Scientist*, 33(1), 2017, 140-149.

Squires, E. L.; Loomis, P. L.; Scofield, D.; Baumber-Skaife, J.; Barbacini, S.; **McQuerry, K.J.**; Ball, B. A. "Factors Affecting Embryo Recovery: Retrospective Study based on Commercial Embryo Transfer." *Journal of Equine Veterinary Science* 41 (2016): 61.

Dolecheck, K.; Silvia, W.; Heersche, G.; Wood, C.L.; **McQuerry, K.J.**; Bewley, J.M. "A comparison of timed artificial insemination and automated activity monitoring with hormone intervention in 3 commercial dairy herds." *Journal of Dairy Science* 99(2), 2016, pp. 1506-1514.

Janes, J. G.; Garrett, K. S.; **McQuerry, K.J.**; Waddell, S.; Voor, M. J.; Reed, S. M.; Williams, N. M.; MacLeod, J. N. "Cervical Vertebral Lesions in Equine Stenotic Myelopathy." *Veterinary pathology*, 2015: 0300985815593127.

Ashford, K.; O'Brien, J.; **McQuerry, K.J.**; Barnett, J.; McCubbin, A.; Ferguson, J.; Ebersole, J. "499: Cytokine concentrations and their association with preterm birth: comparison between serum and cervicovaginal measurements." *American Journal of Obstetrics & Gynecology*, 212(1), 2015, S252.

Ashford, K.; O'Brien, J.; Barnett, J.; McCubbin, A.; **McQuerry, K.J.**; Curry, T. "500: Tobacco use alters pregnancy biomarkers reflecting tissue function." *American Journal of Obstetrics & Gynecology*, 212(1), 2015, S252.

Chavan, N.; Ashford, K.; **McQuerry, K.J.**; McCubbin, A.; Barnett, J.; O'Brien, J. "569: Smoking cessation in pregnancy: impact on the bio-inflammatory milieu." *American Journal of Obstetrics & Gynecology*, 212(1), 2015, S285.

Chavan, N.; Ashford, K.; **McQuerry, K.J.**; McCubbin, A.; Barnett, J.; O'Brien, J. "749: Weight gain in excess of IOM recommendations: the relationship to preterm birth and systemic inflammatory profile." *American Journal of Obstetrics & Gynecology*, 212(1), 2015, S365.

Chavan, N.; Ashford, K.; Meints, L.; **McQuerry, K.J.**; McCubbin, A.; Barnett, J.; O'Brien, J. "750: Changes in inflammatory cytokines with sleep disturbances in pregnancy." *American Journal of Obstetrics & Gynecology*. 212(1), 2015, S365.

O'Brien, J.; Ashford, K.; Barnett, J.; McCubbin, A.; **McQuerry, K.J.**; Stromberg, A. "812: The relationship of second trimester serum progesterone, cytokine levels, and pregnancy outcome." *American Journal of Obstetrics & Gynecology*, 212(1), 2015, S391.

Janes, J. G.; Garrett, K. S.; **McQuerry, K.J.**; Pease, A. P.; Williams, N. M.; Reed, S. M.; MacLeod, J. N. "Comparison of magnetic resonance imaging with standing cervical radiographs for evaluation of vertebral canal stenosis in equine cervical stenotic myelopathy." *Equine Veterinary Journal* 46.6, 2014, pp. 681-686.

Kalmar, J. J.; Ball, B. A.; Troedsson, M. H. T.; **McQuerry, K.J.**; Baumber-Skaife, J.; Loomis, P. R.; Squires, E. L. "Effect of number of mounts and pre-freeze concentration on stallion seminal parameters." *Journal of Equine Veterinary Science*, 34(1), 2014, p. 30.

Black, R.A.; Taraba, J.L.; Day, G.B.; Damasceno, F.A.; Wood, C.L.; **McQuerry, K.J.**; Bewley, J.M. "The relationship between compost bedded pack performance, management, and bacterial counts." *Journal of Dairy Science* 97(5), 2014, pp. 2669-2679.

Smith, A.C.; Wood, C.L.; **McQuerry, K.J.**; Bewley, J.M. "Effect of a Tea Tree Oil and Organic Acid Footbath Solution on Digital Dermatitis in Dairy Cows." *Journal of Dairy Science* 97(4), 2014, pp. 4041-4046.

Janes, J.G.; Garrett, K.S.; **McQuerry, K.J.**; Pease, A.P.; Williams, N.M.; Reed, S.M.; and McLeod, J.N. "Comparison of MRI to standing cervical radiographs for evaluation of vertebral canal stenosis in equine Cervical Stenotic Myelopathy." *Equine Veterinary Journal*, 46(6), 2013, pp. 681-686.

Liang, D.; Wood, C.L.; **McQuerry, K.J.**; Ray, D.L.; Clark, J.M.; Bewley, J.M. "Influence of breed, milk production, season, and ambient temperature on dairy cow reticulorumem temperature." *Journal of Dairy Science* 96(8), 2013, pp. 5072-5081.

Sterrett, A.E.; Wood, C.L.; **McQuerry, K.J.**; Bewley, J.M. "Changes in teat-end hyperkeratosis after installation of an individual quarter pulsation milking system." *Journal of Dairy Science* 96(6), 2013, pp. 4041-4046.