Kate Colvin

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EDUCATION

Columbia University **Aug. 2024 – May 2029**
Ph.D. Biostatistics
Selected Coursework: Biostatistical Methods, Probability, Randomized Clinical Trials, Data Science

University of California, Berkeley – GPA: 3.75/4.0 **Aug. 2020 – May 2024**
B.A. Statistics, B.A. Public Health
Selected Coursework: Linear Modeling, Time Series, Causal Inference, Statistics for Public Health, Epidemiology

WORK EXPERIENCE

Research Fellow, Biostatistics | Memorial Sloan Kettering Cancer Ctr. | Dr. Lillian Boe **June 2023 – Aug. 2023**

- Researched under a principal biostatistician as a participant of the Quantitative Sciences Undergraduate Research Experience (QSURE) program, hosted by the Department of Epidemiology and Biostatistics.
- Developed regression models with breast cancer patient data to determine the impact of differences between mastectomy weight and flap weight on long-term patient satisfaction and surgical complication rates.
- Applied multivariate imputation by chained equations to account for missing patient data and obtain pooled variable coefficient estimates for all covariates.

Undergraduate Researcher, Biostatistics | UC Berkeley | Prof. Justin Remais **Jan. 2022 – May 2023**

- Analyzed coccidioidomycosis (Valley Fever) public health data to investigate the impact of environmental factors on the timing of seasonal outbreaks throughout California.
- Generated multiple linear regression and distributed lag nonlinear models in R to identify the best environmental predictors of timing (start, peak, end, duration) of Valley Fever outbreaks.

Research Fellow, Biostatistics | University of Michigan | Prof. Bhramar Mukherjee **June 2022 – July 2022**

- Developed quantitative research skills through workshops and a research project through the NIH Summer Institute in Biostatistics program.
- Applied variations of the SIR compartmental model (SEIR, eSIR) to predict the spread of SARS-CoV2 in Brazil, using the R EpiEstim package to optimize model parameters (https://tinyurl.com/CovBrazil).

Research Assistant, Public Health | UC Merced | Prof. Paul Brown **June 2021 – Aug. 2021**

- Analyzed interviews to assess healthcare access for farmworkers in the California Central Valley.
- Qualitatively coded transcripts to identify key factors impacting the health of agricultural communities.

PUBLICATIONS

M. Kim, B. Ali, F.D. Graziano, **K.A. Colvin**, L.A. Boe, J.A. Nelson, J. Disa. "Ideal Mastectomy to Free Flap Weight Ratio for Immediate Autologous Breast Reconstruction." *Journal of Surgical Oncology.* 2024 Apr 18. doi.org/10.1002/jso.27647

S.K. Camponuri, J.R. Head, P.A. Collender, A.K. Weaver, A.K. Heaney, **K.A. Colvin**, G. Sondermeyer-Cooksey, A. Yu, S. Jain, D. Vugia, J.V. Remais. "Timing of coccidioidomycosis risk is associated with regional climate in California." [submitted]

J.R. Head, S.K. Camponuri, A.K. Weaver, L. Montoya, E. Lee, M. Radosevich, I. Jones, R. Wagner, A. Bhattachan, G. Campbell, N. Keeney, P.A. Collender, A.K. Heaney, **K.A. Colvin**, W.T. Bean, J. Taylor, and J.V. Remais. "Small mammals and their burrows shape the distribution of Coccidioides in soils: evidence from a long-term ecological experiment in the Carrizo Plain National Monument, California, USA." [submitted]

LEADERSHIP & PROJECTS

President | Student Association for Applied Statistics (SAAS) | UC Berkeley **May 2022 – May 2023**

- Coordinated the operations of all committees, including selecting committee directors and advisors, allocating the budget (~$40k), and leading the evaluation of 350+ applicants for ~20 new member positions every semester.
- Negotiated contracts and product delivery for 7 data science client projects with a total revenue of $50k.
- Oversaw the semesterly Berkeley EECS and Research Symposium, showcasing ~12 student-led research projects in collaboration with other data science focused clubs on campus.

SKILLS & INTERESTS

- R, R Tidyverse, Python, Pandas, NumPy, Scikit-learn, SQL, Dedoose
- Clinical trials and experimental design, Causal inference, Cancer epidemiology