



**Arnold School of
Public Health**
UNIVERSITY OF SOUTH CAROLINA

Summer 2023 Newsletter

The purpose of our Global Health Newsletter is to disseminate the global health research, education, and outreach of our faculty, staff, students, and alumni.

Faculty Spotlight

*Alex McLain, PhD, Associate Professor, Department of
Epidemiology and Biostatistics*



Tell us a bit about yourself, your career, and how it led you to USC.

I actually got my PhD from the Statistics Department at USC. Upon graduating I went to the Statistics Department at NC State for an NSF VIGRE postdoctoral fellowship, then joined the Division of Epidemiology Statistics and Prevention

Research (DESPR) in the NICHD at NIH. At NIH I really changed from a statistician to a biostatistician (which isn't a huge change). After 3 years at NIH, I returned to USC in the Department of Epidemiology and Biostatistics.

How would you describe your current global health research?

I work with Dr. Ed Frongillo on monitoring global malnutrition rates (specifically stunting and overweight prevalence). This research uses data from the Joint Malnutrition Estimates (JME) working group. The data are from surveys and give the prevalence and (sometimes) the estimated standard error, sample size, survey type (e.g., DHS, SMART), age range, and other characteristics. The difficult part of this project is integrating data that can come from very different types of survey's. For example, most surveys are for 0 – 5-year-olds but some can be missing 0 – 6 months, some will only have male or female, and others will report male and female separately. Once we can integrate the data together we perform our statistical analysis, which will take into account various aspects of the data. For example, one survey may have 20,000 kids while another has 100. Obviously we want our model to “pay attention” to the one with a larger sample size. We do this by having data-driven weights in our model that will give higher weight to surveys that have larger sample size.

What other global health activities are you involved in?

Other projects I've worked on have focused on explaining studies that use complicated statistical techniques. Some of the most

impactful research of the 21st Century uses masses of data with complex statistical techniques to provide insight into public health. For example, the Global Burden of Disease study provides awareness into the areas of global health in need. However, the sophisticated statistical methods for each outcome are nearly impossible for a non-statisticians to understand and take 1000's of pages of supplementary material to explain. Consequently, an understanding of how the data lead to the results is inaccessible to subject matter experts, limiting their ability to critique important model assumptions. As a result, accessible explanations of complex statistical procedures is greatly needed to increase transparency in big data public health research.

What advice would you give to current students interested in your field?

The most difficult aspects of a global health statistical analysis are incorporating the correlation/dependence across space and time. Both longitudinal analysis and spatial analysis are key areas to get familiar with. Also, you are often integrating data from different sources, which creates a lot of missing data and a need for intense data cleaning. Being a good programmer in some language (I use R) is important. Knowing multiple languages is useful, but you should have one you specialize in.

Any additional thoughts you would like to share.

Working on global health has been the most rewarding work I've done as a statistician, and very impactful to public health. Also, my work in global health has introduced me to collaborators all over the globe. Working with such an international community is very exciting and rewarding!

[**More Information on Dr. McLain's Work**](#)

Student Spotlight

Tanzir Shuvo, MS, Department of Health Service, Policy and Management



What degree are you currently pursuing at USC?

I am currently pursuing a Ph.D. in Health Services Policy and Management at USC.

Tell us a little bit about your current research and what you do in the field of global health.

My dissertation research focuses on vaccination timeliness, which aims to estimate the immunization coverage and timelines for different EPI vaccines in three South Asian Countries, Bangladesh, India and Pakistan. The study also aims to investigate the correlates of timely vaccination. The results of this study will inform policymakers about the timeliness scenario and potential bottlenecks which need to be addressed to improve the effectiveness of their immunization programs. Apart from my Dissertation, I am currently working as a Senior Research Investigator at icddr, a renowned international research organization from Bangladesh. Here, I am involved in multiple surveillance activities including hospital-based Influenza Surveillance. Apart from informing about the influenza burden, our surveillance team informs World Health Organization about different types and subtypes of Influenza. These data are considered while developing Influenza Vaccine for the upcoming season.

How has your time at USC prepared you for your future career path?

During my time at USC, I have improved as a researcher with more in depth knowledge on research methodology, different analysis techniques and policy development. However, I want to emphasize

my experience with diverse group of faculties and fellow students, who have helped me to improve my communication and networking skills which is helping me tremendously in my current career path.

What do you recommend to current students at USC that are interested in global health?

My suggestion for the current students is to focus on improving communication skills in addition to technical skills, which will be vital in the field of Global health. I am really grateful to the USC community for developing me as a better professional and a better human being.

Highlighting Global Health Work at USC

As we continue to build our semester newsletters, it would be helpful to get your suggestions on individuals (faculty, staff, students, or alumni) that we should highlight. If you know of anyone at or affiliated with USC who is currently doing global health work that you recommend we reach out to, please email emkenney@email.sc.edu.

Global Health Events



THE ARNOLD SCHOOL OF PUBLIC HEALTH GLOBAL HEALTH INITIATIVE

PRESENTS

COMMERCIAL DETERMINANTS OF HEALTH: FRAMEWORKS FOR UNDERSTANDING INDUSTRY ACTIVITY, ADVOCACY EFFORTS AND THE DEVELOPMENT OF TOBACCO AND NUTRITION LABELING POLICIES IN THE AMERICAS

Dr. Eric Crosbie, PhD, MA

Assistant Graduate Director of Social and Behavioral
Sciences, School of Public Health and Health Administration and Policy
University of Nevada Reno

APRIL 28, 2023 | 2:00-3:00PM | DISC 140

Zoom link:



 Arnold School of
Public Health

Dr. Eric Crosbie is a political scientist who examines commercial determinants of health and public health policy. His research focuses on non-communicable diseases (NCDs) and examines how commercial industries (tobacco, food and beverage, alcohol, pharmaceutical and fossil fuel) are a key driver of the NCD epidemic and how they influence public health regulations. In this talk, Dr. Crosbie discusses the importance of the commercial determinants of health as a framework to understand the development and evolution of tobacco and nutrition labeling policies in the Americas. The findings presented highlight important lessons on policy diffusion and offer insights into industry activity, advocacy efforts and packaging and labeling policies moving forward.

INTERNATIONAL STUDENT AND GLOBAL HEALTH FORUM: PRESENTERS NEEDED



Each year, the ASPH enrolls around 100 international students who have diverse backgrounds, varied experiences, and come from a variety of countries. We want to hear from you! We are seeking international students who will volunteer to make 15–20-minute presentations on any aspect of public health improvements or challenges related to their home country.

If interested, please contact Victoria Adebisi (vadebisi@email.sc.edu).

Each year, the ASPH enrolls around 100 international students who have diverse backgrounds, varied experiences, and come from a variety of countries. The International Student and Global Health Forum is a place for students to present their international interests and expertise in global health.

We want to hear from you! We are seeking international students who will volunteer to make 15–20-minute presentations on any aspect of the public health improvements or challenges of their home country. Please email Victoria Adebisi (vadebiyi@email.sc.edu) if you are interested in presenting. Also, join the Global Health Student listserv for updates on events, opportunities, and more.

Join the Student Listserv



[Group Care Global](#)'s mission is to promote group health care for mothers, infants, partners, and their families to improve maternal and child health and well-being. The organization consults with international partners to integrate group care and its evaluation into their health system. [Dr. Deborah Billings](#) serves as Senior Advisor for Group Care Global. There are opportunities for students to get involved, so please contact Dr. Billings for more information.

Recent Publications

Aghaei A, Sakhaei A, Khalilimeybodi A, **Qiao S, Li X**. Impact of Mass Media on HIV/AIDS Stigma Reduction: A Systematic Review and Meta-analysis. AIDS Behav.

Published online April 12, 2023. doi:10.1007/s10461-023-04057-5

Alnakhi W, Balushi AA, Mohammed H, **Natafji N**, et al. Patient Experience of Using Telehealth Services during COVID-19 in Dubai Health Authority: A cross Sectional Electronic Survey. Popul Med. 2023;5(Supplement). doi:10.18332/popmed/163983

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doi:10.1016/j.socscimed.2023.116031

Blake CE, Monterrosa EC, **Rampalli KK, Frongillo EA**, et al. Basic human values drive food choice decision-making in different food environments of Kenya and Tanzania. Appetite. 2023;188:106620. doi:10.1016/j.appet.2023.106620

Bueno Ferreira L, Nunes dos Santos T, Cosenza G, **Hebert JR**, et al. The Association of the Inflammatory Index of the Maternal Diet with the Type of Delivery, Maternal Nutritional Status, and the Lipid Profile of Human Milk. Breastfeeding Medicine. 2023;18(4):291-299. doi:10.1089/bfm.2022.0182

Choi SW, Sreeja SR, Le TD, **Shivappa N, Hebert JR**, Kim MK. Association between inflammatory potential of diet and periodontitis disease risks: Results from a Korean population-based cohort study. J Clin Periodontol. Published online April 21, 2023.

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Cunningham K, Pandey Rana P, Rahman MM, Sen Gupta A, Manandhar S, **Frongillo EA**. Text messages to improve child diets: Formative research findings and protocol of a randomised controlled trial in Nepal. Matern Child Nutr. Published online March 1, 2023:e13490. doi:10.1111/mcn.13490

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Elbassuoni S, **Ghattas H**, Ati JE, et al. Capturing children food exposure using wearable cameras and deep learning. PLOS Digital Health. 2023;2(3):e0000211.

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Fuente D, Mulwa R, Cook J. Out of Sight Out of Mind: Household Perceptions of 'Fair' Water Prices in Nairobi, Kenya. Water Resources Research 59, no. 3 (2023): e2022WR033374. <https://doi.org/10.1029/2022WR033374>

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from the ROLO study. AJOG Global Reports. Published online April 24, 2023:100214. doi:10.1016/j.xagr.2023.100214

Grasham CF, Hoque SF, Korzenevica M, **Fuente D**, Goyol K, Verstraete L, Mueze K, Tsadik M, Zeleke G, Charles K. 2022. Equitable Urban Water Security: Beyond Connections on Premises. Environmental Research: Infrastructure and Sustainability. 4:045011. <https://doi.org/10.1088/2634-4505/ac9c8d>

Ho FK, Wirth MD, Parra-Soto S, **Hebert JR**, et al. Dose-response associations of dietary inflammatory potential with health outcomes: A prospective cohort study of 198,265 UK Biobank participants. Current Problems in Cardiology. Published online April 29, 2023:101774. doi:10.1016/j.cpcardiol.2023.101774

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- Sims ST, Kerksick CM, Smith-Ryan AE, **Hirsch KR, Arent SM**, et al. International society of sports nutrition position stand: nutritional concerns of the female athlete. *Journal of the International Society of Sports Nutrition*. 2023;20(1):2204066. doi:10.1080/15502783.2023.2204066
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