

2025 Summer Public Health Scholars Program

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E. Andrew Balas, MD, PhD

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Research interests

I am interested in identifying the productivity pathways leading to innovative research discoveries and reproducible results in life sciences. Our research on research studies focus on the evolution of most successful biomedical scientists and fast growing research institutions. To address the problem of research deficiencies, our projects also explore root causes of non-reproducibility and practice variation in research laboratories. Our lab members use techniques such as big data analysis, meta studies, programmed curation, experimental development, and knowledge engineering. The ultimate goal of these studies is to elevate the effectiveness of biomedical research in responding to societal needs and improving public health.

List of Potential Projects:

- Better introduction of new clinical laboratory and therapeutic technologies: There are many new and powerful laboratory methods and treatments. The introduction is poorly understood and we need to learn from best practices. How can we introduce more beneficial innovations and much faster
- Making clinical trials of new laboratory methods more successful: There are 75 new clinical trials published every day, most of them are wasted. Results often turn out to be non reproducible or uninformative (50-89). How can we prevent errors and make clinical trials more useful
- Content and curriculum development for teaching the methods of reproducibility: In the current research, a very large ratio of preclinical and clinical studies are non-reproducible. Research talent and scholar development programs need to respond to this crisis but unsure about the sources of errors and non-reproducibility. What needs to be covered in training for reproducible research

Summer Scholar Expectations:

Scholars are expected to participate in following activities and to meet once weekly to discuss the progress of assigned work: literature review, analysis of secondary data sets, poster presentation of results of data analyses, contribution to manuscript preparation for publication

Recent Publications:

- **Aubert, C., Balas, E. A., Townsend, T., Sleeper, N., & Tran, C. J. (2022). Data Integration** for the Study of Outstanding Productivity in Biomedical Research. *Procedia Computer Science*, 211, 196-200.
- **Mansour, N. M., Balas, E. A., ang, F. M., & Vernon, M. M. (2020). Prevalence and Prevention of Reproducibility Deficiencies in Life Sciences Research: Large-Scale Meta-Analyses.** *Medical Science Monitor: International Medical Journal of Experimental and Clinical Research*, 26,e922016-l.
- **Balas, E. A., & Chapman, W.W. (2018). Road Map for Diffusion of Innovation In Health Care.** *Health Affairs*, 37(2), 198-204.
- **Vernon, M. M., Balas, E. A., & Momani, S. (2018). Are university rankings useful to improve research A systematic review.** *PloS one*, 13(3), e0193762.



Nicholas Colgrove, PhD
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Education Background: Ph.D. in Philosophy (Specialization in Bioethics)

Research Interests:

- 1) Reproductive ethics. (What is the moral or legal status of abortion, IVF, etc.?)
 - a. Moral and legal status of emerging assisted reproductive technologies. (How should “artificial womb” technologies be developed and used? What about CRISPR? etc.)
- 2) The role of religion in healthcare. (Does religion have a place in healthcare? Why or why not? How should stakeholders’ religious views affect clinical practice?)
- 3) Virtue and normativity. (What makes someone a *good* clinician? How should patients be treated? What is the goal of healthcare, public health initiatives, etc.?)
- 4) **The impact of epistemic vices (or other epistemic flaws) on public health.**

Epistemic vices—such as closed-mindedness and intellectual arrogance—can actively contribute to public health crises by fostering misinformation, distrust in institutions, and resistance to evidence based interventions. Epistemic vice among those who work *within* public health organizations may have the same effect (and may give some credence to claims that public health organizations are unreliable or untrustworthy). Relatedly, conspiracy theories may have some correlation with epistemic vice (and can undermine public trust in healthcare systems, distort risk perception, and lead to harmful health behaviors). Research that I will be working on during spring and summer 2025 examines the relationship between epistemic vice, conspiracy theories, and public trust, with a focus on what it means for institutions to be *worthy* of trust. During this time, I will also be guest editing a special issue of *The Journal of Medicine and Philosophy*’s on conspiracy theories in healthcare. This set of topics should be especially interesting to any graduate students who like to think about epistemology, misinformation, and public health.

Expectation for Summer Scholar:

First, find an area of interest in one of the four categories above (as it relates to public health). Project proposals in category 4 may be given priority. Second, review the most recent, relevant literature to identify an ethical issue that needs addressed. Third, work together on one or more coauthored manuscripts to address that issue.

Some Publications:

- “Intrauterine Death and Preterm Delivery: What Does Philosophy Have to Offer?” *The Journal of Medicine and Philosophy* 48(3), 2023: 195-208.
<https://doi.org/10.1093/jmp/jhad016>
- “If You Love the Forest, then Don’t Kill the Trees: Health Care and a Place for the Particular.” *The Journal of Medicine and Philosophy* 46(3), 2021: 255–71.
<https://doi.org/10.1093/jmp/jhab003>

- “Defining ‘Abortion’: A Call for Clarity.” *Theoretical Medicine and Bioethics* (forthcoming).
<https://philpapers.org/archive/COLDAA-18.pdf>

Special Issue at *Journal of Medicine & Philosophy*:

“Conspiracy Theories, Conspiracy Theorists, and Healthcare.” In progress.
<https://philevents.org/event/show/125794>



Biplab Datta, PhD
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Research Interest:

Psychosocial factors; socioeconomic determinants of health; non-communicable diseases

List of Potential Projects:

1. Intra-household disparity in health insurance coverage in the United States

Expectation for Summer Scholar:

The student will contribute to literature review, data curation, and writing.

Recent Publications:

1. **Datta, B. K.**, Fazlul, I., Khan, M. M. (2024), "[Long COVID and financial hardship: A disaggregated analysis at income and education levels](#)", *Health Services Research*, <https://doi.org/10.1111/1475-6773.14413>.
2. **Datta, B. K.**, Jaremski, J. E., Ansa, B. E., Odhiambo, L. A., Clary, C., Islam, K. M., Johnson, J. A. (2024). "[A Survival Analysis of Rural-Urban Disparities in COVID-19 Vaccination Uptake in the United States](#)", *American Journal of Health Promotion*, <https://doi.org/10.1177/08901171241300136>.
3. **Datta, B. K.**, Coughlin, S. S., Moore, J. X., Chen, J. (2024). "[Medical financial hardship in the Southern United States: the struggle continues across generations pre-and post-the Affordable Care Act](#)", *Research in Health Services & Regions.*, 3(1):13. <https://doi.org/10.1007/s43999-024-00049-7>.
4. **Datta, B. K.**, Phillips, S. (2024). "[Long COVID and the Higher Risk of Food Insecurity Among Participants and Nonparticipants of Food Assistance Programs in the United States](#)", *Journal of the Academy of Nutrition and Dietetics*, <https://doi.org/10.1016/j.jand.2024.07.171>.



K Moniral Islam, MBBS/MD, MPH, PhD

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Research Interest

Dr. Islam is a Professor of Epidemiology at the SPH of Augusta University.

His current research foci are patient-centered outcomes research in cancer, infectious diseases, and interventions program evaluation. He is particularly interested in clinical epidemiology, including early detection, diagnosis, treatment, and disease outcomes. The CDC and the Patient-Centered Outcomes Institute (PCORI) and other National funding agencies funded him as the Principal Investigator to conduct patient-centered outcomes research. He has several ongoing collaborative research projects in the nation and international settings. Currently, he has actively funded research to increase colorectal cancer in rural Georgia. Dr. Islam has concluded a STI study which is to assess the Prevalence of Under-Reporting Sexually Transmitted Infections in Augusta, Georgia, and a CDC-funded project to improve colorectal cancer screening in Georgia.

Dr. Islam developed and taught several graduate courses during his tenure as faculty. The relevant classes that he taught are Epidemiology Methods, Infectious Disease Epidemiology, and Research Methods. He also the lead instructor of the Public Health Module for medical students at the Medical College of Georgia.

Some Publications:

- 1) Kurbanliyazova, G., Joncevska, M., Kalon, S., Kalmambetova, G., Mohr, T., Toktogonova, A.,... , **Islam, K.M.**, Luelmo, Fabio. (2017). Results from GeneXpert MTB/RIF Implementation in Kyrgyzstan. *The International Journal of Tuberculosis and Lung Disease*. 21 (3):333-337
- 2) **Islam, K.M.**, Jiang, X., Anggondowati, T., Lin, G., & Ganti, A. K. (2015). Comorbidity and Survival in Lung Cancer Patients. *Cancer Epidemiol Biomarkers Prev*; 24 (7): 1079-85. Doi 10.1158/1055-9965.EPI-15-0036.
- 3) **Islam, K.M.** and Wen, J. (2015). Prostate Cancer Patients' Refusal of Cancer-Directed Surgery: A Statewide Analysis. *Prostate Cancer*. 829439. doi: 10.1155/2015/829439.
- 4) Simonsen, K. A., Shaikh, R. A., Earley, M., Foxall, M., Boyle, C., **Islam, K.M.**, . . . Margalit, R. (2015). Rapid HIV Screening in an Urban Jail: How testing at exit with linkage to community care can address perceived barriers. *J Primary Prevent*. DOI 10.1007/s10935-015-0408-1.
- 5) **Islam, K.M.**, Opoku, S., Apenteng, B., Fetrick, A., Ryan, J.E., Copur, M., . . . Ganti, A.K. (2015). Coping With an Advanced Stage Lung Cancer Diagnosis: Patients, Caregivers, and Providers Perspectives. *J Cancer Educ*. 2015 Apr 23. PMID 25900672.



Lorriane Odhiambo, PhD, MPH
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Research Interests:

- I. COPD
- II. HPV among college students

List of Potential Projects:

- Reasons for not receiving the HPV Vaccine (**subject to change**)
 - This project is part of a larger study that investigated the uptake of the HPV vaccine among college students. This part of the project will be an analysis of open-ended responses provided to the question 'what is the main reason you did not want to get this vaccine?' The data was collected in 2017 using an online survey sent to students (undergraduates and graduates) attending a public university in the Midwest. The dataset includes 563 respondents who responded to the question above and provided a reason for lack of HPV vaccine uptake.

Expectations of Summer Scholar:

This is an opportunity for a student to learn some qualitative data analysis. This will be a manual analysis (in excel) conducted by at least two or more people independently (student and myself) then meet to review for consensus on themes that emerged. A student who can or is willing to learn how to conduct basic descriptive analysis (SPSS, SAS, R, etc.) would be ideal so they can also summarize the demographic characteristics of the sample. The main deliverable for this project is a manuscript submitted and hopefully published by the end of 2024. The detailed timeline will be determined during the first meeting with the student.

Published Articles:

- I. **Odhiambo, L. A.**, Anaba, E., Stephens, P. C., Cheruvu, V. K., & Zullo, M. D. (2023). Community-Based Approach to Assess Obstructive Respiratory Diseases and Risk in Urban African American Churches. *Journal of Immigrant and Minority Health*, 25(2), 389-397. <https://doi.org/10.1007/s10903-022-01405-w>
- II. Casey, M., **Odhiambo, L.**, Aggarwal, N., Shoukier, M., Islam, K. M., & Cortes, J. (2023). Representation of the population in need for pivotal clinical trials in lymphomas. *Blood*, 142(9), 846-855. <https://doi.org/10.1182/blood.2023020052>
- III. Datta, B. K., Jaremski, J. E., Ansa, B. E., **Odhiambo, L. A.**, Islam, K. M. M., & Johnson, J. A. (2023). Role of Perceived Social Support in COVID-19 Vaccine Uptake Among U.S. Adults. *AJPM Focus*, 2(3), Article 100104. <https://doi.org/10.1016/j.focus.2023.100104>

- IV. Maloney, M. E., Miranda-Galvis, M., Juarez, B. S., Mamouni, K., **Odhiambo, L.**, Ibrahim, S., Islam, K. M. M., Markowitz, R. B., Desai, K., Rabinovitz, H., Buchanan, K., Patten, D., Davis, L. S., & Cortes, J. E. (2023). Teledermatology for skin cancer screening in rural Georgia utilizing teledermoscopy and distance learning: An ongoing report. *JAAD International*, 11, 140-142. <https://doi.org/10.1016/j.jdin.2023.02.010>
- V. **Odhiambo, L. A.**, Marion, A. J., Callihan, T. R., Harmatz, A. E., Yala, J. A., Bundy, K., & Zullo, M. D. (2023). The Effectiveness of the DeskCycle in Reducing Sedentary Behavior Among Female Office Workers. *Journal of occupational and environmental medicine*, 65(8), E538-E544. <https://doi.org/10.1097/JOM.0000000000002882>
- VI. Casey, M., **Odhiambo, L.**, Aggarwal, N., Shoukier, M., Garner, J., Islam, K. M., & Cortes, J. E. (2022). Are Pivotal Clinical Trials for Drugs Approved for Leukemias and Multiple Myeloma Representative of the Population at Risk? *Journal of Clinical Oncology*, 40(32), 3719-3729. <https://doi.org/10.1200/JCO.22.00504>
- VII. Tsai, M. H., Moore, J. X., **Odhiambo, L. A.**, Andrzejak, S. E., & Tingen, M. S. (Accepted/In press). Colorectal cancer screening utilization among breast, cervical, prostate, skin, and lung cancer survivors. *Journal of Cancer Survivorship*. <https://doi.org/10.1007/s11764-022-01258-0>



Ashwini Pandey, PhD, MS
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Research Interests:

- Child maltreatment and youth resiliency
- Biobehavioral and stress outcomes and trajectories among youth victims
- Physiological responses to evidence-based trauma treatments

Expectations for Summer Scholar:

The summer student is expected to develop an abstract on the qualitative literature that will be submitted for national presentation. The student will be expected to create results tables that will be used towards manuscript submission in Fall 2024. The student may be asked to assist with the development of items that will be tested in the child marriage measure.

Trauma-Informed Care in Pediatric Primary Care Settings (pending)

Project Aims:

1. To understand attitudes and practices in Trauma-Informed Care within outpatient pediatric primary care settings

Expectations of Summer Scholar: To assist with development of survey and qualitative interview guides to be used in data collection. The summer scholar may also collect and analyze survey data among pediatric providers.

Select Publications:

1. **Tiwari, A.**, Recinos, M.* , Garner, J. Self-Brown, Durbha, S.* , Momin, R.* , Emery, V., O'Hara, K., Perry, L.* , Stewart, R., & Wekerle, C. (2023). Reviewing the Use and Effects of Technology in Evidence-Based Programs for Child Maltreatment- A Scoping Review. *Frontiers in Digital Health*.5. 10.3389/fdgth.2023.1224582
2. **Tiwari, A.****, Datta, B.K.** , Haider, M.H., & Jahan, M. (2023). The Role of Child Marriage and Marital Disruptions on Hypertension in Women- A Nationally Representative Study from India. *SSM: Population Health*. 22,101409. <https://doi.org/10.1016/j.ssmph.2023.101409>.
3. Garner, J.* , Self-Brown, S., Emery, V., Wootten, K.* , **Tiwari, A.** (2023). COVID-19 and Child Maltreatment Risk Factors: A Year in Review (*Trauma, Violence, & Abuse*).1-17. <https://doi.org/10.1177/15248380231158609>
4. Datta, B. K., Haider, M. R., **Tiwari, A.**, & Jahan, M. (2022). The risk of hypertension among child brides and adolescent mothers at age 20 s, 30 s, and 40 s: Evidence from India. *Journal of Human Hypertension*, 1-8. <https://doi.org/10.1038/s41371-022-00730-9>



Lauren von Klinggraeff PhD, MPH
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Research Interests

Dr. von Klinggraeff's (Dr. vK) research aims to ensure all children have the opportunity to grow up healthy. Her work focuses on developing and implementing effective, equitable, and scalable interventions that improve children's cardiovascular health. Specifically, she examines the relationship between access to out-of-school programming (e.g., afterschool care, summer day camp), how this influences engagement in health-promoting behaviors (e.g., physical activity and quality sleep), and its subsequent effects on weight and cardiovascular health.

Potential Projects

Project Title: Systematic Review and Meta-analysis on the Impact of Afterschool Programs on Physical Activity, Sleep, and Cardiovascular Health in Childhood

Project Description: Afterschool care is childcare for elementary-aged children (6- 12 years), that is provided at the end of the school day and includes free play and homework time. Afterschool care is a simple, routine way to integrate physical activity into a child's day. In fact, data supports that children who attend afterschool care engage in more moderate-to-vigorous physical activity and have improved cardiorespiratory fitness, body composition, and cholesterol values - all improvements in cardiovascular risk factors. However, the last comprehensive reviews of afterschool care's impact on daily physical activity and cardiovascular outcomes were published over ten years ago. Since then, the field has seen a consistent increase in the use of wearable physical activity trackers in research and an increased awareness of seasonal fluctuation in children's cardiovascular health. Given these changes, an updated review is needed to provide a current and comprehensive account of the impacts of afterschool care on children's health.

Public Health Scholar Role: Learn how to conduct a systematic review including developing a search strategy, identifying eligible articles, extracting relevant data, and summarizing findings in an oral presentation. Learn about afterschool programs, seasonal variations in child cardiovascular health, and measuring physical activity and sleep in free-living populations.

Project Title: Developing Afterschool Rx 2.0

Our research group is currently developing a health program, Afterschool Rx, that "prescribes" free afterschool care to increase children's physical activity and address hypertension and/or obesity. In collaboration with a regional healthcare system and five afterschool program sites in Greenville, SC, we demonstrated the initial feasibility of Afterschool Rx in a single-arm proof-of-concept study. While the program was successful at recruiting and retaining children with elevated CVD risk from low-income families, additional development is necessary to optimize the intervention's viability for additional testing. We have interviewed clinical care providers, afterschool program administrators and parents to understand

their experiences with Afterschool Rx and how it can be improved but have not yet analyzed this qualitative data.

Public Health Scholar Role: Learn to code and synthesize qualitative data from qualitative focus groups and interviews and summarize findings in an oral presentation. Learn about the role of preliminary studies in health program development.

Select Publications/Presentations

- von Klinggraeff, L., Edge, A., Burkart, S., Brazendale, K., Stoepker, P., Summer Day Camps as Health Interventions: Expanding Capacity for Impact. Accepted for presentation at the International Society for Behavioral Nutrition and Physical Activity 2025.
- von Klinggraeff L, Parker H, Patel I, Smith M, Coughlin S, Davis C, Estabrooks P, Harris RA, Vernon M, Beets MW, Lane A, Garimella S, Armstrong B. Afterschool Rx: A Feasibility Study of a Community-Based Prescription for Reducing Cardiovascular Risk. Accepted for presentation at the 2025 American Heart Association Epi Lifestyle Conference.
- Pfladderer CD, Burkart S, Dugger R, Parker H, von Klinggraeff L, Okely AD, Weaver RG, Beets MW. What does it mean to use the mean? The impact of different data handling strategies on the proportion of children classified as meeting 24-hr movement guidelines and associations with overweight and obesity. JASSB (2024) doi.org/10.1101/2023.09.22.23295801
- Weaver RG, White III JW, Finnegan O, Armstrong B, Beets MW, Adams EL, Burkart S, Dugger R, Parker H, von Klinggraeff L, Bastyr M, Zhu X, Bandeira AS, Reesor-Oyer L, Pfladderer CD, Moreno JP. Understanding Accelerated Summer BMI Gain by Tracking Changes in Children's Height, Weight, and BMI Throughout the Year. Childhood Obesity. 2023. DOI:10.1089/chi.2023.0029.



Hongyan "Nathan" Xu, PhD

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Research Interest:

- I. Genetics of Human Diseases
- II. Genomics
- III. Machine Learning and Artificial Intelligence

List of Potential Projects:

1. Analysis of Whole Genome Sequencing data from All of Us project
2. Identifying variables contributing to human diseases
3. Disease risk modeling and prediction

Expectation for Summer Scholar:

Scholars are expected to participate in following activities and to meet once weekly to discuss the progress of assigned work:

- I. Literature review
- II. Analysis of secondary data sets
- III. Poster presentation of results of data analyses
- IV. Manuscript preparation for publication

Recent Publications:

- Levkowitz E, Gibson R, **Xu H**, Zhang LF, Eskine K, Buck B, Bruno M, Seeyave D. Optimizing Triage: Assessing Shock Index, Pediatric Age-Adjusted as an Adjunct to Improve Emergency Severity Index Mistrriage. *Pediatric Emergency Care*. 2024 Dec 6:10-97.
- Beatty C, Estes A, **Xu H**, Liu Y. Exploring New Links Among Keratoconus, Hormonal Factors, and Medications: Insights From a Case–Control Study Utilizing the All of Us Database. *Translational Vision Science & Technology*. 2024 Nov 4;13(11):18.
- Wei Q, Huang J, Livingston MJ, Wang S, Dong G, **Xu H**, Zhou J, Dong Z. Pseudogene GSTM3P1 derived long non-coding RNA promotes ischemic acute kidney injury by target directed microRNA degradation of kidney-protective mir-668. *Kidney International*. 2024 Oct 1;106(4):640-57.
- Vaz J, Piver R, Brzezinska B, Suhner J, Sareddy S, Vuppala P, Vernon M, **Xu H**, Rungruang B, Johnson M, Higgins RV. Nutrition's checkpoint inhibition: The impact of nutrition on immunotherapy outcomes. *Gynecologic Oncology*. 2024 Oct 1;189:129-36.
- Le B, **Xu H**, Weaver FM, Huo Z, Avidano R, Hurlburt P, Morgan S, Carbone L. Association of Calcium and Vitamin D Supplements with Fractures in Persons with a Traumatic SCI. *Topics in Spinal Cord Injury Rehabilitation*. 2024 Feb 1;30(1):98-112.