PREETIKA BANERJEE

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PhD student in Health Economics and Outcomes Research with experience in health economics, healthcare utilization and expenditures, decision analytic modeling, cost-effectiveness analysis, and health policy research. Current work focuses on aging, infectious diseases, treatment patterns, and downstream healthcare outcomes using nationally representative and other applied health data sources.

EDUCATION

PhD Health Economics and Outcomes Research Sep 2024- Present
University of Washington School of Pharmacy, Seattle, WA, USA
Advisor: Kyu Lee, BS, MS, PhD
Relevant Coursework: Biostatistics, Epidemiological Methods, Economic Evaluation in Healthcare, Survival Analysis

Master of Science in Public Health (MSPH) Global Disease Epidemiology and Control May 2020
Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, USA
Advisor: Alain Labrique, MS, MHS, PhD
Relevant Coursework: Health Survey Research Methods, Statistical Methods, Infectious Disease Dynamics
Certificates: Vaccine Science and Policy Certificate; Evaluation of International Health Programs Certificate
Thesis: Caregiver Perceptions of Vaccination in Low-and-Middle-Income Countries Within the Social Ecological Model: Systematic Review of Published Literature.

Bachelor of Engineering in Biotechnology
PES Institute of Technology, Bangalore, India Sep 2017
Advisor(s): Roshan Makam, PhD, MS, and Prem K. Mony, MD, MSc

ADDITIONAL TRAININGS AND CERTIFICATIONS

- Claims Data Bootcamp: MarketScan Analysis- - University of Washington (2024)
- Intensive Course in Fundamentals of Implementation Science in Global Health - University of Washington (2022)
- A coalition based SMART approach to public health advocacy - Johns Hopkins University (2022)
- Power and Sample Size for the design of epidemiological studies - Johns Hopkins University (2022)
- Disease costing in low- and middle-income countries - Johns Hopkins University (2021)
- Demographic methods for public health - Johns Hopkins University (2020)

WORK EXPERIENCE

CURTA, INC. – Remote Nov 2025 – Present
Research Associate
• Contributed to Health Economics and Outcomes Research (HEOR) projects, including economic modeling and evaluation studies.
• Supported development, implementation, and refinement of health economic models to assess the value of healthcare interventions.
• Collaborated with multidisciplinary teams to analyze data and generate evidence for research and client deliverables.
• Assisted with interpretation of model outputs and preparation of technical documentation and summaries.
• Managed multiple concurrent projects in a fully remote, part-time research role.

UNIVERSITY OF WASHINGTON, SCHOOL OF PHARMACY – Seattle, WA Oct 2025- Present
Teaching Assistant, Certificate in Health Economics & Outcomes Research
• Supported instruction and program delivery for a graduate-level certificate in Health Economics & Outcomes Research.
• Managed student communications, tracked academic progress, and provided individualized feedback on coursework and assignments.
• Reviewed and provided structured feedback on draft and final capstone projects in collaboration with faculty.
• Assisted faculty with curriculum updates, Canvas course management, and PowerPoint content revisions.
• Coordinated virtual sessions and meetings, troubleshooting technical issues to ensure smooth course delivery.

ENTITYRISK – Remote June 2025 – Sept 2025
Data Science and Engineering Intern
• Designed and implemented cost-effectiveness models (cohort and microsimulation) to evaluate health interventions for biopharmaceutical clients using Python.
• Developed a reusable Python package incorporating advanced methods, including Generalized Risk-Adjusted Cost-Effectiveness (GRACE).
• Conducted internal validation through automated testing and peer code review to ensure model reliability and transparency.
• Produced interactive, client-ready reports and technical documentation detailing modeling assumptions, methods, and results.

UNIVERSITY OF WASHINGTON, DEPARTMENT OF GLOBAL HEALTH – Seattle, WA Oct 2024 – June 2025
Academic Student Employee
• Led economic evaluation of the SAIA-MH intervention through data preparation, management, and analysis.
• Developed Markov models and estimated Disability-Adjusted Life Years (DALYs) to assess intervention impact.
• Conducted cost-effectiveness analyses using observational research designs and economic modeling techniques.
• Utilized large healthcare datasets with emphasis on real-time data integration and quality control.
• Prepared and analyzed survey research data to inform effectiveness and budget impact analyses.

DIGITAL TRANSFORMATIONS FOR HEALTH LAB – Remote Aug 2024 – Sep 2024
Research Fellow
• Conducted a scoping review of longitudinal studies examining relationships between digital technologies and health outcomes among young people (<25 years).
• Assessed impacts of both everyday digital technology use (e.g., internet, social media, gaming) and digital health tools (e.g., wearables, health apps, telemedicine).
• Developed a systematic search methodology identifying 275 relevant longitudinal studies from an initial pool of 452 publications.

FRED HUTCHINSON CANCER CENTER – Seattle, WA July 2022 – Dec 2024
Data Coordinator Lead
Pharmacy PrEP Cluster Randomized Controlled Trial (Kenya)
• Led data management and analytic activities for a 4-arm cRCT involving 4,000+ participants across 60 pharmacies in Kenya.
• Oversaw data collection, quality assurance, and coordination across U.S.- and Kenya-based research teams.
• Developed computational algorithms to assess intervention effects using clinical trial data and multisource EHRs.
• Delivered regular analytic reports to monitor study progress and ensure compliance with IRB and study protocols.
Pharmacy PrEP Pilot Extension
• Designed and implemented data organization, quality checks, and statistical analyses for 1,000+ PrEP and PEP clients across 12 private pharmacies.
• Conducted micro-costing analyses to evaluate service affordability and willingness-to-pay.
• Analyzed PrEP initiation, PrEP-to-PEP transitions, and continuation outcomes.

JOHNS HOPKINS INTERNATIONAL VACCINE ACCESS CENTER – Baltimore, MD March 2021 – July 2022
Research Associate (Junior Faculty)
Global Advocacy for PCV (GAP) Project
• Managed a global advocacy initiative aimed at accelerating pneumococcal conjugate vaccine (PCV) introduction in LMICs.
• Led archetype analyses of disease burden and vaccine financing models across 33 countries to assess readiness for PCV introduction.
Maternal and Child Health Utilization Equity Study (MATCHES)
• Conceptualized and managed a study assessing COVID-19 impacts on equity in maternal and child health service utilization in India.
• Oversaw regulatory approvals, contracts, budgets, and staff training.

• Monitored data collection and analyzed survey data from 800+ mothers.
• Evaluated equity using composite unfairness indices and generated coverage, efficiency, and equity metrics.

ITAD Oct 2021 – Dec 2021
Research Consultant
• Conducted key informant interviews with immunization managers and child health specialists to inform Gavi's theory of change for reaching zero-dose children.
• Synthesized qualitative findings on barriers and system challenges in fragile and conflict-affected settings, with a focus on Afghanistan and Pakistan.
• Generated actionable insights to support global immunization strategy and program design.

JOHNS HOPKINS INTERNATIONAL VACCINE ACCESS CENTER – Baltimore, MD June 2020 – March 2021
Research Data Analyst / Project Coordinator
Community Health Worker–Led Intervention for Vaccine Information and Confidence (CIVIC)
• Developed data collection tools to support community-based interventions promoting vaccine uptake and confidence.
Maternal and Child Health Center, India (MCHI)
• Managed survey development, dissemination, and analysis for three large online surveys of pediatric providers, healthcare workers, and public health experts.
• Analyzed COVID-19–related impacts on maternal and child health service delivery and research priorities in India.

WORLD HEALTH ORGANIZATION, SOUTHEAST ASIA REGIONAL OFFICE Sept 2019 – Nov 2019
Consultant
- Developed and maintained national-level data repositories for population-based surveys supporting noncommunicable disease (NCD) surveillance.
- Monitored and curated regional statistical databases to improve data accessibility for hypertension, diabetes, and cholesterol indicators across Southeast Asia.
- Reviewed national NCD policies and produced analytic reports summarizing disease prevalence, trends, and care gaps.
- Delivered data-driven recommendations to strengthen NCD prevention and treatment strategies in Nepal, Bangladesh, and Bhutan.

JOHNS HOPKINS INTERNATIONAL VACCINE ACCESS CENTER Sept 2019 – Nov 2019
Global Health Field Placement
- Selected for a competitive field placement focused on applied epidemiology in a low- and middle-income country setting.
- Supported establishment of surveillance networks to monitor pneumonia prevalence in India.
- Collected and analyzed clinical and epidemiologic data to inform vaccine rollout policies and program prioritization.
- Monitored program performance indicators and assessed gaps impacting progress toward childhood pneumonia mortality reduction targets.

SKILLS

Research: Cost-effectiveness analysis, decision analytic modeling, economic evaluation, healthcare utilization analysis, longitudinal data analysis, survey data analysis, systematic and scoping reviews, biostatistics, data visualization
Software/Online Platforms: R, Python, Stata, SAS, SQL, REDCap, Snowflake, Qualtrics, Dedoose, CommCare, GitHub

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PUBLICATIONS

1. **Banerjee P**, Holly L. Everyday Digital Technology Use and Youth Health: Scoping Review of Longitudinal Studies. JMIR Public Health Surveill 2026;12:e85094. URL: https://publichealth.jmir.org/2026/1/e85094
   DOI: 10.2196/85094
2. Kareithi T, D Roche S, Omollo V, Ong'wen PA, Kiptinness C, Otieno P, Juma L, Malen RC, Harkey K, Anyona MO, Curran K, **Banerjee P**, Gichuru E, Asewe M, Yu K, Pintye J, Mugambi M, Shah PD, Sharma M, Meisner A, Were D, Ngure K, Bukusi EA, Ortblad KF. Testing different models of pharmacy-based HIV pre- and post-exposure prophylaxis initiation and management in Kenya: protocol for a cluster-randomized controlled trial. *Trials* 27, 95 (2026). https://doi.org/10.1186/s13063-025-09384-7.
3. Ekwunife OI, Kuo AP, **Banerjee P**, Zhang S, Kiptinness C, Omollo V, Chen Y, Roche SD, Odoyo J, Bukusi E, Ngure K, Sharma M, Ortblad KF. Understanding the cost of pharmacy-delivered HIV pre- and post-exposure prophylaxis service delivery in Kenya: findings from pilot studies. BMC Health Serv Res. 2025 Nov 26;25(1):1536. doi: 10.1186/s12913-025-13681-x. PMID: 41299640; PMCID: PMC12659100.
4. Gupta M, Das A, Sengupta P, Majhi J, Afnan Z, Safvan K, **Banerjee P**, Kaur N, Rajeev T, Pocius S, Acharjee A, Mehta K, Agarwal S, Shet A. Disrespectful Maternity Care During the COVID-19 Pandemic: A Retrospective Cross-Sectional Study in Chandigarh and Kalyani, West Bengal, India. Birth. 2026 Jun;53(2):258-266. doi: 10.1111/birt.70017. Epub 2025 Sep 1. PMID: 40888377.
5. **P. Banerjee** and L. Holly, "Digital Technologies and Youth Health: Insights from a Comprehensive Scoping Review," 2025 10th International Digital Public Health Conference (DPH), Funchal, Portugal, 2025, pp. 1-10, doi: 10.1109/DPH66411.2025.11198052.
6. Majhi J, Sengupta P, **Banerjee P,** Biswas A, Mehta K, Shet A, Nagrale NV. Health belief model-based predictors and perceptions of COVID-19 vaccination amongst frontline health workers. Bioinformation. 2025 Jun 30;21(6):1404-1415. doi: 10.6026/973206300211404. PMID: 40978600; PMCID: PMC12449528.
7. Sengupta P, Majhi J, Mehta K, Rajeev T, **Banerjee P**, Gupta M, Pocius S, Agarwal S, Acharjee A, Kaur N, Shet A. Healthcare utilisation amongst children under 2 years in India during the COVID-19 pandemic: results from a cross-sectional survey. Journal of Health Management. 2025;0(0). doi:10.1177/09720634241307283.
8. Roche SD, Omollo V, Mogere P, Asewe M, Gakuo S, **Banerjee P**, Harkey K, Sharma M, Pintye J, Mugambi ML, Shah P, Odoyo J, Ong'wen P, Were D, Bukusi EA, Ngure K, Ortblad KF. A modified pharmacy provider-led delivery model of oral HIV pre- and post-exposure prophylaxis in Kenya: a pilot study extension. J Int AIDS Soc. 2025 Jun;28 Suppl 1(Suppl 1):e26467. doi: 10.1002/jia2.26467. PMID: 40569884; PMCID: PMC12231645.
9. **Banerjee, P.,** Huber, J., Denti, V., Sauer, M., Weeks, R., Dhaliwal, B. K., & Shet, A. (2023). Closing the pneumococcal conjugate vaccine (PCV) introduction gap: an archetype analysis of last-mile countries. Global Health Action, 16(1). https://doi.org/10.1080/16549716.2023.2281065
10. Gupta M, Kaur N, Sengupta P, Majhi J, **Banerjee P,** Rajeev T, Agarwal S, Pocius S , Das A , Acharjee A , Mehta K, Shet A (2023). Impact of COVID-19 pandemic on the utilization of maternal health services in Chandigarh and Kalyani, West Bengal, India: A retrospective cross-sectional study. J Obstet Gynecol India (2024). https://doi.org/10.1007/s13224-024-02001-8
11. Mehta K, Kaur A, **Banerjee P,** et al. Healthcare provider perspectives on COVID-19 vaccination for children in India. BMJ Paediatrics Open 2023;7:e002165. doi: 10.1136/bmjpo-2023-002165
12. Schleiff M, Brahmbhatt H, **Banerjee P**, et al. Key factors influencing public health students and curricula in India: Recommendations from a mixed methods analysis. PLoS One. 2023;18(2):e0279114. doi:10.1371/JOURNAL.PONE.0279114.
13. **Banerjee P**, Seth R, Dhaliwal BK, Sullivan A, Qiayum Y, Thankachen B, Closser S and Shet A (2022) Vaccine acceptance in rural India: Engaging faith leaders as vaccine ambassadors. Front. Public Health 10:979424. doi: 10.3389/fpubh.2022.979424
14. Mehta K, Dhaliwal BK, Zodpey S, Loisate S, **Banerjee P**, Sengupta P, et al. (2022) COVID-19 vaccine acceptance among healthcare workers in India: Results from a cross-sectional survey. PLOS Glob Public Health 2(7): e0000661. https://doi.org/10.1371/journal.pgph.0000661
15. Miller, E., Reddy, M., **Banerjee, P**. et al. Strengthening institutions for public health education: results of an SWOT analysis from India to inform global best practices. Hum Resour Health 20, 19 (2022). https://doi.org/10.1186/s12960-022-00714-3
16. Dhaliwal BK, Singh S, Sullivan L, **Banerjee P**, Seth B, Sengupta P, Bhattacharjee I, Mehta K, Reddy KS, Shet A. Love, labor and loss on the frontlines: India's community health workers straddle life and the COVID-19 pandemic. J Glob Health 2021; 11:03107. doi: 10.7189/jogh.11.03107
17. Mehta K, Zodpey S, **Banerjee P**, Pocius SL, Dhaliwal BK, DeLuca A, et al. (2021) Shifting research priorities in maternal and child health in the COVID-19 pandemic era in India: A renewed focus on systems strengthening. PLoS ONE 16(8): e0256099. https://doi.org/10.1371/journal. pone.0256099
18. Shet A, Dhaliwal B, **Banerjee P**, et al. Childhood immunisations in India during the COVID-19 pandemic; BMJ Paediatrics Open 2021;5: e001061. doi: 10.1136/bmjpo-2021-001061
19. Shet A, Dhaliwal B, **Banerjee P**, et al. COVID-19-related disruptions to routine vaccination services in India: a survey of paediatric providers; BMJ Paediatrics Open 2021;5: e001060. doi: 10.1136/bmjpo-2021-001060

NON–PEER-REVIEWED REPORTS & POLICY BRIEFS

- Banerjee P. Ending HIV: Balancing Innovation and Affordability of Lenacapavir. Think Global Health. 2024. https://www.thinkglobalhealth.org/article/ending-hiv-balancing-innovation-and-affordability-lenacapavir
- Banerjee P. Addressing the Contraceptive Needs of Women Living with HIV. Think Global Health. 2024. https://www.thinkglobalhealth.org/article/addressing-contraceptive-needs-women-living-hiv
- Banerjee P. Optimizing the Preventive Power of HPV Vaccine Introduction Among AGYW in India. PLOS Your Say. March 2023. https://yoursay.plos.org/2023/03/optimizing-the-preventive-power-of-hpv-vaccine-introduction-among-agyw-in-india/
- Banerjee P. Task Sharing and Its Effectiveness in Addressing Mental Health: An Overview of CHW-Led Approaches. CHW Central. 2019. https://chwcentral.org/task-sharing-and-its-effectiveness-in-addressing-mental-health-an-overview-of-chw-led-approaches/
- Choyal A, Holly L, Vishwanath P, Kickbusch I, **Banerjee P**, Castro Lopes S. *Addressing the Digital Determinants of Youth Mental Health and Well-Being*. World Health Organization Regional Office for Europe; 2025 https://iris.who.int/server/api/core/bitstreams/26d26448-7fdd-44be-8e7e-bbcbe4ee4ce1/content

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FELLOWSHIPS & AWARDS

Washington Research Foundation (WRF) Health Economics & Outcomes Research Fellowship 2025-2026
Awarded competitive fellowship to support an economic evaluation of a novel catheter for hypertrophic cardiomyopathy, including cost-effectiveness modeling and value assessment of innovative cardiovascular technologies.

CFAR Trainee Support Grant 2025
Selected for trainee support to conduct Health Economics and Outcomes Research on the cost-effectiveness of long-acting injectable antiretrovirals (e.g., lenacapavir) across diverse healthcare settings, with a focus on equity and implementation considerations.

Plein Fellowship 2025
Awarded fellowship support for doctoral research examining the relationship between antiviral treatment and antibiotic prescribing among older adults using nationally representative MEPS data, generating policy-relevant evidence for antimicrobial stewardship.

Rubenstein Graduate Student Fellowship 2024–2025
Awarded competitive School of Pharmacy/CHOICE Institute funding support ($2,500) for graduate training and research in Health Economics and Outcomes Research.

K.C. Mahindra Education Trust Scholarship for Postgraduate Studies Abroad 2018
Competitive merit-based scholarship awarded to support graduate training abroad in public health and epidemiology

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LEADERSHIP & PROFESSIONAL SERVICE

University of Washington ISPOR Student Chapter – Seattle, WA

President | 2025
- Lead a student organization dedicated to advancing Health Economics and Outcomes Research (HEOR) through educational programming, professional development, and networking.

Vice President | 2024
- Supported chapter leadership by assisting with strategic planning, event coordination, and member engagement.
- Helped expand programming and foster collaboration across departments and student organizations.

PEER REVIEW & ACADEMIC SERVICE

BMC Public Health; npj Health Systems; Antimicrobial Resistance & Infection Control; Discover Public Health; Health Research Policy and Systems; Indian Pediatrics; PLOS ONE.

EXPLANATION OF INTEREST

I am applying to the NBER Mentoring Program on Aging and Health Economics Research because I hope to build an independent research agenda at the intersection of aging, healthcare utilization, treatment decision-making, and health policy. My broader goal is to generate policy-relevant evidence on how older adults interact with the healthcare system, how treatment patterns vary across patients and settings, and how those decisions shape outcomes, spending, and equity. As a third-year PhD student in Health Economics and Outcomes Research at the University of Washington School of Pharmacy, I am in the process of identifying my dissertation questions and developing empirical projects that will form the foundation of my early research career.

My interest in aging research is rooted in a longstanding commitment to studying how health systems serve vulnerable populations and how evidence can be used to improve policy and care delivery. Over time, that interest has evolved from broad public health and epidemiologic work into a more focused interest in the economics of treatment access, prescribing behavior, and downstream healthcare consequences. I am especially drawn to older adult populations because they experience a disproportionate burden of multimorbidity, medication exposure, and healthcare spending, yet many of the policy questions that affect them most—appropriate prescribing, access to effective treatment, and the costs of suboptimal care remain insufficiently studied.

My current doctoral research reflects these interests directly. Using the Medical Expenditure Panel Survey (MEPS), I am developing a project on antiviral and antibiotic treatment patterns for viral respiratory infections in older adults. My original project focused on the relationship between antiviral treatment and later antibiotic prescribing behavior, motivated by the broader problem of antimicrobial resistance and the inappropriate use of antibiotics for viral respiratory infections in older adults. In the process of refining this work with my advisor, Dr. Kyu Lee, and collaborator Dr Jing Li, I recognized that the most policy-relevant and methodologically defensible direction was to pivot toward an episode-level analysis of prescribing and downstream outcomes. The revised project now asks two linked questions: first, what patient characteristics are associated with antiviral and antibiotic receipt for influenza in the pre-COVID era, influenza in the post-COVID era, and COVID-19; and second, how are these treatment strategies associated with downstream healthcare utilization and expenditures among adults aged 65 and older.

I am particularly excited about this project because it brings together several themes that I hope will define my future research. One is the question of how evidence-based treatments diffuse into real-world care, especially for older adults who often face greater clinical complexity and more fragmented care. Another is the role of prescribing decisions as both clinical and economic events: whether a patient receives an antiviral, an antibiotic, both, or neither can affect not only immediate care but also emergency department use, hospitalization risk, and short-term healthcare spending. I am also motivated by the equity dimensions of these questions, including whether access to appropriate treatment differs by insurance, socioeconomic status, comorbidity burden, geography, or other patient characteristics that shape healthcare access and decision-making.

This work also aligns with a central issue in aging and health economics: how to improve quality and efficiency of care for older adults in settings where treatment decisions are made under uncertainty. Older adults are major users of outpatient antibiotics and are among those most affected by the downstream consequences of inappropriate prescribing, including antimicrobial resistance, adverse events, and avoidable spending. My Plein application and SAP both grew from that concern, emphasizing that older adults are not only highly exposed to respiratory infections and medications, but also particularly vulnerable to the clinical and economic harms of low-value prescribing. I see this line of work as an opportunity to contribute to the literature on aging by studying how prescribing practices in outpatient care may reveal broader patterns in treatment access, stewardship, and resource use.

The NBER Mentoring Program is especially appealing to me because I am at a stage where close mentorship could have an outsized effect on the trajectory of my research. I come to health economics with substantial prior experience in epidemiology, implementation science, global health, and economic evaluation, including work in cost-effectiveness modeling, micro-costing, trial and survey data analysis, and policy-oriented research in both U.S. and international settings. That background has shaped the kinds of questions I ask, but I am now looking to sharpen the economics

framing of those questions and to strengthen the empirical strategies I use to answer them. In particular, I want to develop stronger instincts around causal inference in observational data, the interpretation of utilization and expenditure outcomes, and the design of projects that speak directly to aging, insurance, and healthcare markets.

I would particularly value mentorship on three fronts. First, I want guidance on how to develop a coherent portfolio of aging-focused research that is methodologically rigorous and clearly situated within health economics rather than adjacent fields. Second, I would benefit from advice on translating descriptive and policy-motivated questions into sharper empirical designs, especially when treatment selection is nonrandom and patient severity is difficult to observe fully in survey data. Third, I would welcome mentorship on dissertation development and publication strategy, how to shape projects that are both feasible in the near term and foundational for a longer-term research agenda in aging and health economics.

More broadly, I hope to build a research program that examines how patients especially older adults and other medically vulnerable populations navigate healthcare systems, how treatment and technology adoption vary across groups, and how those differences affect outcomes, spending, and equity. My prior training in epidemiology and public health has shaped my substantive interests in vulnerable populations, care delivery, and policy implementation. My doctoral training in HEOR is helping me bring a more explicit economic lens to those same questions, especially around utilization, expenditures, and value. The NBER Mentoring Program would provide an ideal environment to deepen that transition, refine my research agenda, and accelerate my development as a scholar working at the intersection of aging and health economics