

Sachiko Ozawa, Ph.D., M.H.S.

A. PERSONAL INFORMATION

Division of Practice Advancement and Clinical Education

UNC Eshelman School of Pharmacy

University of North Carolina at Chapel Hill

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B. EDUCATION

- 2023 **Certificate in Media and Medicine**
How to Tell Stories that Make a Difference
Blavatnik Institute Global Health and Social Medicine
Harvard Medical School, Boston, MA
- 2007-2010 **Doctor of Philosophy (Ph.D.) in International Health**
Specialization in International Health Economics
Certificate in Public Health Economics
Johns Hopkins University, School of Public Health, Baltimore, MD
- 2005-2007 **Master of Health Science (M.H.S.) in Public Health**
Department of International Health, Health Systems Program
Johns Hopkins University, School of Public Health, Baltimore, MD
- 1999-2003 **Bachelor of Science (B.S.) in Science, Technology and International Affairs**
Concentration in Business, Communication and Information
Certificate in International Business Diplomacy
Georgetown University, School of Foreign Service, Washington, DC

C. PROFESSIONAL EXPERIENCE

C.1. POSITIONS

- 2023-Present **Cancer Prevention and Control Program Member**
UNC Lineberger Comprehensive Cancer Center
The University of North Carolina, Chapel Hill, NC
- 2022-Present **Carolina Population Center Fellow**
UNC Carolina Population Center
The University of North Carolina, Chapel Hill, NC
- 2020-Present **Associate Professor (tenured)**
Division of Practice Advancement and Clinical Education (PACE)
UNC Eshelman School of Pharmacy
The University of North Carolina, Chapel Hill, NC
- 2020-Present **Co-Director, UNC-Aesara Market Access and Informatics Fellowship**
UNC Eshelman School of Pharmacy

- The University of North Carolina, Chapel Hill, NC
- 2020-2022 **Director, UNC-USP Fellowship in Quality of Medical Products**
UNC Eshelman School of Pharmacy
The University of North Carolina, Chapel Hill, NC
- 2017-Present **PACE Division Director, Research and Scholarship in Pharmacy (RASP)**
UNC Eshelman School of Pharmacy
The University of North Carolina, Chapel Hill, NC
- 2017-Present **Adjunct Associate Professor**
Department of Maternal and Child Health
UNC Gillings School of Global Public Health
The University of North Carolina, Chapel Hill, NC
- 2016-2020 **Associate Professor (tenure-track)**
Division of Practice Advancement and Clinical Education (PACE)
UNC Eshelman School of Pharmacy
The University of North Carolina, Chapel Hill, NC
- 2010-2016 **Assistant Scientist**
Department of International Health, Health Systems Program
Johns Hopkins Bloomberg School of Public Health, Baltimore, MD
- 2010-2016 **Health Economist**
International Vaccine Access Center, Economics and Finance Team
Johns Hopkins Bloomberg School of Public Health, Baltimore, MD
- 2007-2010 **Research Assistant**
Department of International Health, Health Systems Program
Johns Hopkins Bloomberg School of Public Health, Baltimore, MD
- 2009 **Dean's Teaching Fellow**
Undergraduate Program in Public Health Studies
Johns Hopkins Zanvyl Krieger School of Arts and Sciences, Baltimore, MD
- 2005-2009 **Consultant**
Health, Nutrition and Population Unit, Human Development Network
The World Bank, Washington, DC
- 2005 **Community Health/Medical Outreach Worker**
Operation Crossroads Africa
Consolata Mission Hospital, Nkubu, Kenya
- 2003-2005 **Risk Analyst**
Department of Insurance and Benefits Services
Marsh & McLennan Companies, Marsh Inc., New York, NY
- 2002 **Technology Risk Management Intern**
Visa International, San Francisco, CA
- 2001 **Assistant Business Consultant**
Japan Future Information Technology & Systems, Tokyo, Japan

- 2001-2003 **Student Technology Consultant**
Georgetown University, Washington, DC
- 1999-2000 **Policy Research Intern**
Japan Center for International Exchange, Tokyo, Japan
- 1998 **Legislative Intern**
Office of Congressman John F. Tierney, Washington, DC

C.2. PROFESSIONAL DEVELOPMENT

- 2022-2023 **Leadership Fundamentals**
Center for Faculty Excellence, UNC Chapel Hill
- 2022 **Mental Health First Aid USA**
National Council for Mental Wellbeing, hosted at UNC Chapel Hill
- 2021-2022 **Women ADVANCE Leadership**
Team Advance, Center for Faculty Excellence, UNC Chapel Hill
- 2017-Present **Center for Innovative Pharmacy Education & Research (CIPhER) Programs**
CIPhER, UNC Eshelman School of Pharmacy, UNC Chapel Hill
- 2017, 2018 **Summer Writing Group Program**
Center for Faculty Excellence, UNC Chapel Hill
- 2016-2020 **Bill and Karen Campbell Faculty Mentorship Program**
UNC Eshelman School of Pharmacy, UNC Chapel Hill

D. HONORS AND AWARDS

- 2023 Worthy of Recognition – Instructor (PHCY 725, Research and Scholarship in Pharmacy II, Fall 2023)
- 2022 Worthy of Recognition – Instructor and Course (PHCY 725, Research and Scholarship in Pharmacy II, Fall 2022)
- 2022 Worthy of Recognition – Instructor (PHCY 619, Business of Healthcare: Focus on the Pharmacy Enterprise, Spring 2022)
- 2022 Certificate of Outstanding Contribution, Journal of the American Pharmacists Association
- 2021 Worthy of Recognition – Instructor (PHCY 725, Research and Scholarship in Pharmacy II, Fall 2021)
- 2020 Junior Faculty Development Award, the University of North Carolina at Chapel Hill
- 2020 Worthy of Recognition – Instructor (PHCY 725, Research and Scholarship in Pharmacy II, Fall 2020)
- 2019 Worthy of Recognition – Instructor and Course (PHCY 725, Research and Scholarship in Pharmacy II, Fall 2019)
- 2017-2020 Elected Co-Chair, Medicines in Health Systems Thematic Working Group,

Health Systems Global

- 2016 Two First-Author Papers included in *Health Affairs'* Top 10 Most Read Articles
- 2014 First-Author Paper included in Top 10 downloaded papers by *Health Policy and Planning*
- 2012 Teaching Excellence, Health Financing in Low and Middle Income Countries Course, Johns Hopkins School of Public Health
- 2011 Teaching Excellence, Health Financing in Low and Middle Income Countries Course, Johns Hopkins School of Public Health
- 2010 Faculty Grants in Global Health Research, Center for Global Health, Johns Hopkins University
- 2010 The Toyota Foundation Research Grant Award, the Toyota Foundation
- 2009 New Investigator in Global Health Award, Global Health Council
- 2009 Nancy Stephens Student Support Award, Johns Hopkins School of Public Health
- 2009 The Ruth Rice Puffer Award for International Student Support, Johns Hopkins School of Public Health
- 2008 The Dean's Teaching Fellowship, Johns Hopkins School of Arts and Sciences
- 2008 Baker, Reinke, Taylor Scholarship in International Health, Johns Hopkins School of Public Health
- 2007 *Delta Omega Public Health Honors Society* Inductee, Alpha Chapter
- 2007 Dean's Alumni Advisory Council Scholarship, Johns Hopkins School of Public Health
- 2007 Global Field Experience Fund Award, Johns Hopkins School of Public Health
- 2006 Department of International Health Full Tuition Scholarship, Johns Hopkins School of Public Health
- 2005 Associate in Risk Management (ARM) Designation Awarded from RIMS - the Risk Management Society
- 2003 *Phi Beta Kappa National Honors Society* Inductee, Georgetown University Chapter
- 2003 *Magna Cum Laude* Undergraduate Distinction, Honors in the Major in Science, Technology and International Affairs, Georgetown University

E. BIBLIOGRAPHY

E.1. BOOK CHAPTERS (3)

3. Anchorena J, Ronconi L and **Ozawa S**. Social Capital and Health in Low- and Middle- Income Countries. In Folland S and Rocco L (Eds), *The Economics of Social Capital and Health*. World Scientific Series in Global Healthcare Economics and public Policy – Vol. 2. (p.153 – 175). Hackensack NJ: World Scientific Publishing Co. Pte. Ltd, 2013.

2. **Ozawa S**, Walker DG. Villagers' evaluation of a community-based health insurance scheme in Thmar Pouk, Cambodia. In Jalilian H and Sen V (Eds.), *Improving Health Sector Performance: Institutions, Motivations and Incentives – The Cambodian Dialogue* (p.365-384). Singapore: Institute of Southeast Asian Studies Press, 2011.
1. **Ozawa S**. Private health insurance. In Guinness L and Wiseman V (Eds.), *Introduction to Health Economics: Understanding Public Health* (p.160-172). London: Open University Press, 2011.

E.2. REFEREED MANUSCRIPTS (88)

(§Corresponding author; *Lead author mentored by S. Ozawa; †Authors contributed equally)

88. Richmond J, Anderson A, Cunningam-Erves J, **Ozawa S**, Wilkins CH. Conceptualizing and measuring trust, mistrust, and distrust: Implications for advancing health equity and building trustworthiness. *Annual Review in Public Health*. 2023 Dec 15. <http://dx.doi.org/10.1146/annurev-publhealth-061022-044737>. PMID: 38100649.
87. Kong WY*, Oh NL, Kennedy KL, Carlson RB, Li A, **Ozawa S**, Brewer NT, Gilkey MB. Identifying healthcare professionals with lower human papillomavirus (HPV) vaccine recommendation quality: A systematic review. *Journal of Adolescent Health*. 2023 Nov: S1054-139X(23)00597-9. <http://dx.doi.org/10.1016/j.jadohealth.2023.11.016>. PMID: 38231146.
86. Kong WY*, Queen TL, Gottfredson O'Shea N, Heisler-MacKinnon J, Liu A, **Ozawa S**, Brewer NT, Gilkey MB. Impact of visit characteristics on intention to recommend HPV vaccine: An experiment with US health care professionals. *Preventative Medicine*. 2023 Dec;179:107841. <http://dx.doi.org/10.1016/j.ypm.2023.107841>. PMID: 38160884.
85. **Ozawa S**, Schuh HB, Nakamura T, Yemeke TT, Lee YA, MacDonald NE. How to increase and maintain high immunization coverage: Vaccination demand resilience (VDR) framework. *Vaccine*. 2023 Oct;41(45):6710-6718. <http://dx.doi.org/10.1016/j.vaccine.2023.09.027>. PMID: 37798209.
84. Habashy C*, Yemeke T, Bolous N, Chen Y, **Ozawa S**, Bhakta N, Alexander T. Variations in global prices of chemotherapy for childhood cancer: A descriptive analysis. *EClinicalMedicine*. 2023. May 18;60:102005. <http://dx.doi.org/10.1016/j.eclinm.2023.102005>. PMID: 37251630.
83. Yemeke T*, Umaru F, Ferrand R, **Ozawa S**. Impact of COVID-19 on the quality of medical products in Zimbabwe: Key informant interviews with health systems stakeholders. *BMJ Open*. 2023. Jun 8;13(6):e068923. <http://dx.doi.org/10.1136/bmjopen-2022-068923>. PMID: 37290943.
82. Yemeke T*, Chen HH, **Ozawa S**[§]. Economic and cost-effectiveness aspects of vaccines for combating antibiotic resistance. *Human Vaccines and Immunotherapeutics*. 2023. Dec 31; 19(1): 2215149. <http://dx.doi.org/10.1080/21645515.2023.2215149>. PMID: 37248971.
81. Higgins CR*, Kobia B, **Ozawa S**[§]. Comparing the return on investment of technologies to detect substandard and falsified Amoxicillin: A Kenya case study. *PLOS One*. 2023 Jan 18;18(1):e0268661. <http://doi.org/10.1371/journal.pone.0268661> PMID: 36652447.
80. Black R*, Hughes T, Ma F, Hudzik A, Shepherd G, Ferreri S, **Ozawa S**[§]. Systematic review of community pharmacist administration of long-acting injectable antipsychotic medications. *Journal of the American Pharmacists Association*. 2023 May-Jun;63(3):742-750.e3. <http://doi.org/10.1016/j.japh.2022.08.006>. PMID: 36740528.

79. Stoker KJ, Tiemann A, Brunk KM, Agegnehu B, Buhlinger K, Amerine L, Roberts MC, McLaughlin JE, Clark SM, Rose R, Mekonnen B, Bhakta N, Fentie AM, Alexander TB, **Ozawa S**, Chargualaf M, Muluneh B. Processes and perceptions of chemotherapy supply chain in Ethiopia: A mixed-method study. *Journal of Oncology in Pharmacy Practice*. 2023 Oct;29(7):1555-1564. <http://doi.org/10.1177/10781552221134254> PMID: 36303425.
78. Burbage SC*, Parikh MA, Campbell PJ, Ramachandran S, Gatwood J, **Ozawa S**, Urick BY. Associations between pharmacy choice and influenza vaccination: mail order vs community pharmacy users. *Journal of Managed Care Specialty Pharmacy*. 2022 Dec;28(12):1379-1391. <http://doi.org/10.18553/jmcp.2022.28.12.1379> PMID: 36427345.
77. **Ozawa S**[§], Chen HH, Lee YF, Higgins C, Yemeke T. Characterizing medicine quality by active pharmaceutical ingredient levels: A systematic review and meta-analysis across low- and middle-income countries. *American Journal of Tropical Medicine and Hygiene*. 2022 Jun 15;106(6):1778-1790. <http://doi.org/10.4269/ajtmh.21-1123> PMID: 35895431.
76. **Ozawa S**[§], Higgins C, Nwokike J, Phanouvong, S. Modeling the health and economic impact of substandard and falsified medicines: A review of existing models and approaches. *American Journal of Tropical Medicine & Hygiene*. 2022 Jul 13;107(1):14-20. <http://doi.org/10.4269/ajtmh.21-1133> PMID: 35895357.
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74. Cheng A, Hughes T, Chen H, **Ozawa S**, Ferreri S. Beyond refill alignment: Evaluating the impact of appointment-based model. *Research in Social and Administrative Pharmacy*. 2022 May 10;S1551-7411(22)00154-1. <http://doi.org/10.1016/j.sapharm.2022.05.004> PMID: 35597711.
73. Richmond J*, Boynton M, **Ozawa S**, Muessig K, Cykert S, Ribisl K. Development and validation of the trust in my doctor, trust in doctors in general, and trust in the health care team scales. *Social Science and Medicine*. 2022 Apr; 298: 114827. <http://doi.org/10.1016/j.socscimed.2022.114827>. PMID: 35255277.
72. Penley B*, Minshew L, Chen H, Eckel S, **Ozawa S**[§]. Accessibility of low-cost insulin from illegitimate internet pharmacies: Cross-sectional study. *Journal of Medical Internet Research*. 2022 Feb 14;24(2):e25855. <http://doi.org/10.2196/25855>. PMID: 35156937.
71. **Ozawa S**[§], Billings J, Sun C, Yu S, Penley B. COVID-19 treatments sold online without prescription requirements in the United States. *Journal of Medical Internet Research*. 2022 Feb 16;24(2):e27704. <http://doi.org/10.2196/27704>. PMID: 34662286.
70. **Ozawa S**[§], Laing S, Higgins C, Yemeke T, Park C, Carlson R, Ko YE, Guterman LB, Omer S. Educational and economic returns to cognitive ability in low- and middle-income countries: A systematic review. *World Development*. 2022 Jan; 149:105668. <http://doi.org/10.1016/j.worlddev.2021.105668>. PMID: 34980939.
69. Bui V*, Higgins C, Laing S, **Ozawa S**[§]. Assessing the impact of substandard and falsified antimalarials in Benin. *American Journal of Tropical Medicine and Hygiene*. 2021 Nov 8;tpmd210450. <http://doi.org/10.4269/ajtmh.21-0450>. PMID: 34749311.
68. **Ozawa S**[§], Chen HH, Rao G, Eguale T, Stringer A. Value of pneumococcal vaccination in controlling the development of antimicrobial resistance (AMR): Case study using DREAMR in

- Ethiopia. *Vaccine*. 2021. Oct 29;39(45):6700-6711. <http://doi.org/10.1016/j.vaccine.2021.04.024>. PMID: 34538697.
67. **Ozawa S[§]**, Yemeke TT, Mitgang E, Wedlock PT, Higgins C, Chen HH, Pallas SW, Abimbola T, Wallace A, Bartsch SM, Lee BY. Systematic review of the costs for vaccinators to reach vaccination sites: Incremental costs of reaching hard-to-reach populations. *Vaccine*. 2021 Jul 30;39(33):4598-4610. <http://doi.org/10.1016/j.vaccine.2021.05.019>. PMID: 34238610.
66. Yemeke TT*, Mitgang E, Wedlock PT, Higgins C, Chen HH, Pallas SW, Abimbola T, Wallace A, Bartsch SM, Lee BY, **Ozawa S[§]**. Promoting, seeking, and reaching vaccination services: A systematic review of costs to immunization programs, beneficiaries, and caregivers. *Vaccine*. 2021 Jul 22;39(32):4437-4449. <http://doi.org/10.1016/j.vaccine.2021.05.075>. PMID: 34218959.
65. Cox SN, Wedlock PT, Pallas SW, Mitgang EA, Yemeke TT, Bartsch SM, Abimbola T, Sigemund SS, Wallace A, **Ozawa S**, Lee BY. A systems map of the economic considerations for vaccination: Application to hard-to-reach populations. *Vaccine*. 2021 Nov 5;39(46):6796-6804. <http://doi.org/10.1016/j.vaccine.2021.05.033>. PMID: 34045101.
64. Lu E*, Chen H, Zhao H, **Ozawa S[§]**. Health and economic impact of the pneumococcal conjugate vaccine in hindering antimicrobial resistance in China. *Proceedings of the National Academy of Sciences*. 2021;118: e2004933118. <http://doi.org/10.1073/pnas.2004933118>. PMID: 33758096.
63. Morbitzer K, McLaughlin J, Devanathan A, **Ozawa S**, McClurg M, Carpenter D, Lee C. How-to guide for overcoming barriers of research and scholarship training in Pharm.D. and pharmacy residency programs. *Journal of the American College of Clinical Pharmacy*. 2021 Jun; 4(6): 743-753. <http://doi.org/10.1002/jac5.1426>. PMID: 34355135.
62. Chen H*, Higgins C, Laing S, Bliese S, Lieberman M, **Ozawa S[§]**. Cost savings of paper analytical devices (PADs) to detect substandard and falsified antibiotics: Kenya case study. *Medicine Access @ Point of Care*. 2021 Jan-Dec;5:10. <http://doi.org/10.1177/2399202620980303>. PMID: 33834120.
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60. Penley B*, Chen H, Eckel S, **Ozawa S[§]**. Characteristics of online pharmacies selling Adderall. *Journal of the American Pharmacists Association*. 2020 Sep 7:S1544-3191(20)30347-2. <http://doi.org/10.1016/j.japh.2020.07.022>. PMID: 32912756.
- *Certificate of Outstanding Contribution from JAPhA (as of April 2022)**
59. Yemeke T*, Kiracho E, Mutebi A, Apolot R, Ssebagereka A, Evans D, **Ozawa S[§]**. Health versus other sectors: Multisectoral resource allocation preferences in Mukono district, Uganda. *PLoS One*. 2020;15(7):e0235250. <http://doi.org/10.1371/journal.pone.0235250>. PMID: 32730256.
58. **Ozawa S[§]**, Higgins CR, Yemeke TT, Nwokike JI, Evans L, Hajjou M, Pribluda VS. Importance of medicine quality in achieving universal health coverage. *PLoS One*. 2020 Jul 9;15(7):e0232966. <http://doi.org/10.1371/journal.pone.0232966>. PMID: 32645019.
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53. Portnoy A, Clark S, **Ozawa S**^{§†}, Jit M[†]. The impact of vaccination on gender equity: Conceptual framework and human papillomavirus (HPV) vaccine case study. International Journal for Equity in Health. 2020 Jan 14; 19(1):10. <http://doi.org/10.1186/s12939-019-1090-3>. PMID: 31937328.
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51. **Ozawa S**[§], Shankar R, Leopold C, Orubu S. Access to medicines through health systems in low- and middle-income countries. Health Policy and Planning. 2019 Dec 1; 34(Supplement_3):iii1-iii3. <http://doi.org/10.1093/heapol/czz119> PMID:31816069.
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49. Newton P, Bond K, on behalf of the Oxford statement signatories. Global access to quality-assured medical products: The Oxford statement and call to action. Lancet Global Health. 2019 Dec;7(12):e1609-11. [https://doi.org/10.1016/S2214-109X\(19\)30426-7](https://doi.org/10.1016/S2214-109X(19)30426-7) PMID: 31708137.
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47. Evans D*, Yemeke T, Kiracho E, Mutebi A, Apolot R, Ssebagereka A, **Ozawa S**[§]. Trust in vaccines and medicines in Uganda. Vaccine. 2019 Aug 22. pii: S0264-410X(19)30913-2. <http://dx.doi.org/10.1016/j.vaccine.2019.07.022> PMID: 31447127.
46. **Ozawa S**[§], Yemeke T, Evans D, Pallas S, Wallace A, Lee BY. Defining hard-to-reach populations for vaccination. Vaccine. 2019 Aug 7. pii: S0264-410X(19)30858-8. <http://dx.doi.org/10.1016/j.vaccine.2019.06.081> PMID: 31400910.

45. Tak C, Marciniak M, Savage A, **Ozawa S**. The essential role of pharmacists facilitating vaccination in older adults: The case of Herpes Zoster. Human Vaccines & Immunotherapeutics. 2019 Aug 1:1-6. <http://dx.doi.org/10.1080/21645515.2019.1637218> PMID: 31369322.
44. Beargie S*, Higgins C, Evans D, Laing S, Erim D, **Ozawa S**[§]. The economic impact of substandard and falsified antimalarial medications in Nigeria. PLoS One. 2019 Aug 15; 14(8):e0217910. <http://dx.doi.org/10.1371/journal.pone.0217910> PMID: 31415560.
**Top 10% Most Cited PLOS ONE papers published in 2019 (as of July 2021)*
43. Lee B, Brown S, Haidari L, Clark S, Abimbola T, Pallas S, Wallace A, Mitgang E, Leonard J, Bartsch S, Yemeke T, Zenkov E, **Ozawa S**. Economic value of vaccinating geographically hard-to-reach populations with measles vaccine: A modelling application in Kenya. Vaccine. 2019 Apr 17; 37(17):2377-2386. <http://dx.doi.org/10.1016/j.vaccine.2019.03.007> PMID: 30922700.
42. **Ozawa S**[§], Haynie D, Bessias S, Laing S, Ngamasana E, Yemeke T, Evans D. Modeling the economic impact of substandard and falsified antimalarials in the Democratic Republic of Congo. American Journal of Tropical Medicine and Hygiene. 2019 May; 100(5):1149-1157. <https://doi.org/10.4269/ajtmh.18-0334> PMID: 30675851.
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40. **Ozawa S**[§], Villar-Urbe M, Evans D, Kulkarni V, Por I. Building informed trust: developing an educational tool for injection practices and health insurance in Cambodia. Health Policy and Planning. 2018 Nov 1; 33(9):1009-17. <http://dx.doi.org/10.1093/heapol/czy080> PMID: 30312416.
39. **Ozawa S**[§], Evans D, Bessias S, Haynie D, Yemeke T, Laing S, Herrington J. Prevalence and estimated economic burden of substandard and falsified medicines in low- and middle-income countries: A systematic review and meta-analysis. JAMA Network Open. 2018 Aug 3; 1(4):e181662. <http://dx.doi.org/10.1001/jamanetworkopen.2018.1662> PMID: 30646106.
38. **Ozawa S**[§], Yemeke T, Thompson KM. Systematic review of the incremental costs of interventions that increase immunization coverage. Vaccine. 2018 Jun 14; 36:3641-3649. <http://dx.doi.org/10.1016/j.vaccine.2018.05.030> PMID: 29754699.
37. **Ozawa S**[§], Zhou M, Wonodi C, Chen H, Bridges J. Parents' preferences for interventions to improve childhood immunization uptake in northern Nigeria. Vaccine. 2018 May 11; 36(20):2833-2841. <http://dx.doi.org/10.1016/j.vaccine.2018.03.073> PMID: 29661582.
36. Morizio P*, Burkhart J, **Ozawa S**. Denosumab: A unique perspective on adherence and cost-effectiveness compared with oral bisphosphonates in osteoporosis patients. Annals of Pharmacotherapy. 2018 Oct; 52(10):1031-1041. <http://dx.doi.org/10.1177/1060028018768808> PMID: 29616561.
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34. Sripad P*, **Ozawa S**, Merritt M, Jennings L, Kerrigan D, Ndwiga C, Abuya T, Warren C. Exploring meaning and types of trust in maternity care in peri-urban Kenya: A qualitative cross-perspective analysis. Qualitative Health Research. 2018 Jan; 28(2):305-320. <http://dx.doi.org/10.1177/1049732317723585> PMID: 28821220.

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2. **Ozawa S**, Baker TD. An international comparison of physician workforce: how many doctors does it take to make a nation healthy? Maryland Medicine. 2008 Summer; 9(3):18-21. <https://www.ncbi.nlm.nih.gov/pubmed/18980058> PMID: 18980058.
1. **Ozawa S[§]**. The role of trust in healthcare settings: Does trust matter? Oxford Policy Institute. 2008 (Peer Reviewed) **Most read paper on OPI website July-Sept 2008.* https://www.researchgate.net/publication/273696497_The_role_of_trust_in_health_care_settings_does_trust_matter

E.3. REFEREED JOURNAL ISSUE EDITOR (1)

Ozawa S (Guest Editor), Health Policy and Planning. Volume 34, Issue Supplement_3, December 2019. Special issue on “Access to medicines through health systems in low- and middle-income countries.” https://academic.oup.com/heapol/issue/34/Supplement_3

E.4. NON-REFEREED PUBLICATIONS (5)

5. Himelfarb A, Boecker A, Carignan ME, Caulfield T, Cliche JF, Hodson J, Horn O, Khenti A, Lewandowsky S, MacDonald N, Mai P, **Ozawa S**, Sterling J. Fault Lines, Expert Panel on the Socioeconomic Impacts of Science and Health Misinformation. 2023. Ottawa, Canada: The Council of Canadian Academies.
<https://cca-reports.ca/reports/the-socioeconomic-impacts-of-health-and-science-misinformation/>
4. National Advisory Committee on Immunization. Guidelines for the economic evaluation of vaccination programs in Canada. 1st Edition, April 2023. Ottawa, Canada: Public Health Agency of Canada. [Acknowledged as an academic member of the NACI Economic Guidelines Task Group]
<https://www.canada.ca/content/dam/phac-aspc/documents/services/immunization/national-advisory-committee-on-immunization-naci/methods-process/incorporating-economic-evidence-federal-vaccine-recommendations/guidelines-evaluation-vaccination-programs-canada.pdf>
3. **Ozawa S**, Pribluda VS, Yemeke T, Higgins C, Hajjou M, Evans III L, Nwokike JI. Integrating medicines quality assurance into universal health coverage programming: A path to increasing efficiency, access, and coverage. 2019. Rockville, MD: United States Pharmacopeial Convention, Promoting the Quality of Medicines Program.
<https://www.usp-pqm.org/sites/default/files/field/image/pqm-uhc-white-paper.pdf>
2. Bao J, Rodriguez D, Paina L, **Ozawa S**, Bennett S. Guide for the monitoring and evaluation of the transition of health programs. 2015. Bethesda, MD: Health Finance & Governance Project, Abt Associates Inc. United States Agency for International Development.
<https://www.hfgproject.org/guide-monitoring-evaluation-transition-health-programs/>
1. Brown L, **Ozawa S**, Chitama D, Killewo J, Baqui A. Bridges J. Stakeholder preferences for an integrated national community health worker program. Knowledge Brief. 2015. Dar Es Salaam, Tanzania: Community Health Worker Learning Agenda Project. United States Agency for International Development.

E.5. WEB PAGES / ELECTRONIC MEDIA (125) – 5 Fellowships; 47 Med Quality; 73 Vaccine (99 UNC, 26 Hopkins)

Fellowships. Our research fellowships I coordinate through the School of Pharmacy at UNC has received attention from some media sources.

125. UNC Eshelman School of Pharmacy
“Students share research findings at FIP in Australia,” November 2023
<https://pharmacy.unc.edu/2023/11/students-share-research-findings-at-fip-in-australia/>
124. University of North Carolina at Chapel Hill
“Post-doctoral fellowships UNC Eshelman School of Pharmacy – Health outcomes and market access” October 2023
https://pharmacy.unc.edu/wp-content/uploads/sites/1043/2023/10/UNC-intro_to_fellowship_2023.pdf
123. UNC Carolina Population Center
“Meet the Carolina Population Center Faculty Fellows elected in 2022,” July 2022
<https://www.cpc.unc.edu/news/meet-the-carolina-population-center-faculty-fellows-elected-in-2022/>
122. Business Wire, Yahoo! Finance

“AESARA to welcome the incoming class of five fellows and a visiting scientist”, July 2022
<https://www.businesswire.com/news/home/20220708005496/en/AESARA-to-welcome-the-incoming-class-of-five-fellows-and-a-visiting-scientist>.
<https://finance.yahoo.com/news/aesara-welcome-incoming-class-five-191300249.html>

121. UNC Eshleman School of Pharmacy

“New UNC-USP fellowship will support original research in medicine quality”, March 2020
<https://pharmacy.unc.edu/2020/03/new-unc-usp-fellowship-will-support-original-research-in-medicine-quality/>

Media Appearances on Medicine Quality & Access. Our work to examine the prevalence and economic impact of substandard and falsified medicines received attention from various media sources. Our work examining the impact of poor quality antimalarials in various low-income countries also received local media coverage.

120. UNC Eshelman School of Pharmacy

“Opportunity to impact global health supply chains” January 2024
<https://pharmacy.unc.edu/2024/01/opportunity-to-impact-global-health-supply-chains/>

119. Salon

“Overpriced drugs are driving people to “rogue” online pharmacies – sometimes with deadly results,” December 2023
<https://www.salon.com/2023/12/04/over-priced-are-driving-people-to-rogue-online-pharmacies--sometimes-with-results/>

118. Medium

“Adderall use among students: What is a good grade worth?” November 2023
https://medium.com/@kuehne_15518/adderall-use-among-students-what-is-a-good-grade-worth-21e7bd3951a4

117. The Center for Safe Internet Pharmacies

Report: Accessibility of low-cost insulin from illegitimate internet pharmacies, September 2023
<https://safemedsonline.org/resource/report-accessibility-of-low-cost-insulin-from-illegitimate-internet-pharmacies/>

116. International Pharmaceutical Federation Digital Events

“Vaccination: Benefits beyond specific disease prevention, Part 3” panelist, September 2023
<https://events.fip.org/vaccination-benefits-beyond-specific-disease-prevention/>

115. Pharmaceutical Technology

“As RSV vaccine approvals loom, regulators need to devise vaccination strategies” June 2023
https://pharma.nridigital.com/pharma_jun23/qa-as-rsv-vaccine-approvals-loom-regulators-need-to-devise-vaccination-strategie

114. Pharmaceutical Technology

“Illegal online pharmacies gain traction as regulators lag behind,” May 2023
<https://www.pharmaceutical-technology.com/features/illegal-online-pharmacies-gain-traction-as-regulators-lag-behind/?cf-view>

113. Pharmaceutical Technology

“Insulin pricing in flux as major pharma players take action” April 2023

<https://www.pharmaceutical-technology.com/features/insulin-pricing-in-flux-as-major-pharma-players-take-action/>

112. Clinical Pain Advisor

“Patients with cancer may fall prey to illegitimate online pharmacies,” April 2023

<https://www.clinicalpainadvisor.com/general-medicine/cancer-patients-may-fall-prey-illegitimate-online-pharmacies/>

111. Cancer Therapy Advisor / Renal + Urology News

“Cancer patients may fall prey to illegitimate online pharmacies.” February 2023

<https://www.cancertherapyadvisor.com/home/cancer-topics/general-oncology/cancer-patients-may-fall-prey-illegitimate-online-pharmacies/>

<https://www.renalandurologynews.com/news/urology/cancer-patients-may-fall-prey-illegitimate-online-pharmacies/>

110. UNC Carolina Population Center

“Faculty fellow Sachiko Ozawa serves on expert panel for new report on socioeconomic impact of science and health misinformation” January 2023

<https://www.cpc.unc.edu/news/faculty-fellow-sachiko-ozawa-serves-on-expert-panel-for-new-report-on-socioeconomic-impact-of-science-and-health-misinformation/>

109. Cancer Today (by American Association of Cancer Research)

“Many online pharmacies are illegitimate.” Winter 2022/2023 Magazine Issue

<https://www.cancertodaymag.org/winter-2022-2023/many-online-pharmacies-are-illegitimate/>

108. University of North Carolina at Chapel Hill

“UNC Eshelman School of Pharmacy collaboration with UNC Project Malawi supported by a NIH grant” December 2022

<https://www.unc.edu/posts/2022/12/15/unc-eshelman-school-of-pharmacy-collaboration-with-unc-project-malawi-supported-by-a-nih-grant/>

107. Daily Mail (United Kingdom)

“Doctors issue warning over “fake” abortion pills being sold on eBay for just \$20 as predatory sellers cash in on Roe v Wade fears” December 2022

<https://www.dailymail.co.uk/health/article-11509137/Doctors-issue-warning-fake-abortion-pills-sold-eBay-just-20.html>

106. Pregnancy Help News

“Nothing empowering” about cheap knockoff abortion drugs” December 2022

<https://pregnancyhelpnews.com/nothing-empowering-about-cheap-knockoff-abortion-drugs>

105. The Well, University of North Carolina at Chapel Hill

“Pharmacy research examines access, safety of online chemotherapy medication” November 2022

<https://thewell.unc.edu/2022/11/09/pharmacy-research-examines-access-safety-of-online-chemotherapy-medication/>

104. UNC Eshelman School of Pharmacy

“UNC Eshelman School of Pharmacy professors conduct research into online chemotherapy medication access,” October 2022

<https://pharmacy.unc.edu/2022/10/online-chemotherapy-medication-access/>

103. Healio Hematology/Oncology

“Online search for oral chemotherapy drug will likely lead your patient to “rogue” pharmacy
September 2022

<https://www.healio.com/news/hematology-oncology/20220907/online-search-for-oral-chemotherapy-drug-will-likely-lead-your-patient-to-rogue-pharmacy>

102. Drug Topics

“Leukemia patients turn to online pharmacies due to escape high drug prices,” August 2022

<https://www.drugtopics.com/view/leukemia-patients-turn-to-online-pharmacies-due-to-escape-high-drug-prices>

101. Partnership for Safe Medicines

“Discount cancer drugs?” August 2022

<https://www.youtube.com/watch?v=Hgsu4fL16dE>

100. The American Society of Clinical Oncology Post

“Study evaluates availability of imatinib in online pharmacies”, August 2022

<https://ascopost.com/news/august-2022/study-evaluates-availability-of-imatinib-in-online-pharmacies/>

99. Managed Healthcare Executive

“High chemo drug prices leading Leukemia patients to online pharmacies”, August 2022

<https://www.managedhealthcareexecutive.com/view/high-chemo-drug-prices-leading-leukemia-patients-to-online-pharmacies>

98. Cancer Health

“Warnings about buying chemotherapy drugs from “Rogue” online pharmacies”, August 2022

<https://www.cancerhealth.com/article/danger-buying-chemotherapy-drugs-rogue-online-pharmacies-leukemia-imatinib-nccn>

97. Medpage Today

“Rogue online pharmacies are dispensing cancer drugs – Shady sites with little oversight are selling imatinib for much less than U.S. retail price”, July 2022

<https://www.medpagetoday.com/hematologyoncology/leukemia/99981>

96. National Comprehensive Cancer Network, Eurekalert, Yahoo! Finance, e cancer

“Chemotherapy drugs from “Rogue” online pharmacies could endanger Leukemia patients, suggests research in JNCCN”, July 2022

<https://www.prnewswire.com/news-releases/chemotherapy-drugs-from-rogue-online-pharmacies-could-endanger-leukemia-patients-suggests-research-in-jnccn-301595280.html>

<https://www.eurekalert.org/news-releases/960188>

<https://finance.yahoo.com/news/chemotherapy-drugs-rogue-online-pharmacies-121200334.html>

<https://ecancer.org/en/news/22078-chemotherapy-drugs-from-rogue-online-pharmacies-could-endanger-leukaemia-patients>

95. Verywell Health

“Drones could soon deliver medications to your home”, February 2022

<https://www.verywellhealth.com/drones-medications-delivery-5219050>

94. UNC Eshelman School of Pharmacy

“UNC Ethiopia Alliance”, November 2020 (Listed under team member)

<https://wp.media.unc.edu/ethiopia/>

93. Health Policy and Planning Debated / Health Systems Global Blog

- “Supplement launch: Access to medicines through health systems in low- and middle-income countries,” by Ebiwei Orubu and **Sachiko Ozawa**, December 2019
<https://blogs.lshtm.ac.uk/hppdebated/2019/12/11/supplement-launch-access-to-medicines-through-health-systems-in-low-and-middle-income-countries/>
<https://healthsystemsglobal.org/blog/387/Supplement-launch-Access-to-Medicines-through-Health-Systems-in-Low-and-Middle-Income-Countries.html>
92. ASTMH Annual Meeting 2019 Blog
 “Poor quality drugs, AMR resistance and ‘murder by medicine’”, November 2019
<http://iamtropmed.org/blog/2019/11/22/poor-quality-drugs-amr-resistance-and-murder-by-medicine>
91. SciDev.Net (Sub-Saharan Africa Edition)
 “Time to get quality drugs and healthcare access is now”, October 2019
<https://www.scidev.net/sub-saharan-africa/health/opinion/time-to-get-quality-drugs-and-healthcare-access-is-now.html>
90. Devex
 “Opinion: The hidden drain on universal health coverage gains and health care budgets,” by Lawrence Evans and **Sachiko Ozawa**, September 2019
<https://www.devex.com/news/sponsored/opinion-the-hidden-drain-on-universal-health-coverage-gains-and-health-care-budgets-95622>
89. Central Africa News Agency (in French) / Econfin Hebdo (in French)
 “The fake medicine industry: a new plague in Africa”, September 2019
<https://www.adiac-congo.com/content/lindustrie-des-faux-medicaments-une-nouvelle-plaie-de-lafrique-105231>
<https://www.agenceecofin.com/hebdop2/2908-68779-l-industrie-des-faux-medicaments-la-nouvelle-plaie-de-l-afrique>
88. UNC Eshleman School of Pharmacy
 “UNC Eshelman School of Pharmacy, United States Pharmacopeial Convention launch fellowship opportunity”, June 2019
<https://pharmacy.unc.edu/2019/06/unc-eshelman-school-of-pharmacy-united-states-pharmacoepial-convention-launch-fellowship-opportunity/>
87. SciDev.Net (Sub-Saharan Africa Edition)
 “Up to 43 percent of malaria costs due to fake drugs”, January 2019
<https://www.scidev.net/sub-saharan-africa/medicine/news/malaria-costs-due-to-fake-drugs.html>
86. The Medicine Maker
 “The true cost of falsified medicine”, October 2018
<https://themedicinemaker.com/business-regulation/the-true-cost-of-falsified-medicine>
85. EurekAlert / Science Daily / UNC Gillings School of Global Public Health /Medical Press / Eurasia Review
 “New study finds fake, low-quality medicines prevalent in the developing world”, August 2018
https://www.eurekalert.org/pub_releases/2018-08/uonc-nsf081018.php
<https://www.sciencedaily.com/releases/2018/08/180810120019.htm>
<https://sph.unc.edu/sph-news/new-study-finds-fake-low-quality-medicines-prevalent-in-the-developing-world/>
<https://medicalxpress.com/news/2018-08-fake-low-quality-medicines-prevalent-world.html>

<https://www.eurasiareview.com/11082018-fake-low-quality-medicines-prevalent-in-developing-world/>

84. Reuters / Business Ghana / Sierra Leone Press / VOA News
“Fake, low quality drugs come at high cost”, August 2018
<https://www.reuters.com/article/us-health-drugs-counterfeits/fake-low-quality-drugs-come-at-high-cost-idUSKCN1LG2TM>
<https://www.businessghana.com/site/news/general/171658/Fake-low-quality-drugs-come-at-high-cost>
<https://www.sierraleonepress.com/fake-low-quality-drugs-come-at-high-cost/>
<https://www.voanews.com/a/fake-low-quality-drugs-come-at-high-cost/4553145.html>
83. UNC Eshelman School of Pharmacy
“Fake, low-quality medicines burden developing world, UNC study finds,” August 2018
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Decade of Vaccine Economics (DOVE) Videos & Infographics. This project for which I was the principal investigator for over 5 years, generated economic models (cost of illness, DALYs averted, value of life years, cost of vaccine programs, financing of vaccine programs, funding gap, return on investment) to estimate the economic impact of vaccines during the Decade of Vaccines (2011-2020) across 94 countries. Results from this work have been used in Bill Gates' speeches (2011 annual letter and 2011 World Economic Forum), cited by Gavi, the Vaccine Alliance (2012 Gavi Partner's Forum and Gavi value of vaccinations website), and was instrumental in securing the funding replenishment for Gavi of \$7.5 billion for 2016-2020 (2015 Gavi Replenishment). The work also contributed to vaccine adoptions in Ghana and Nigeria in 2012. The analysis was presented at the 2012 World Health Organization Strategic Advisory Group of Experts (SAGE) Meeting and at the Immunization and Vaccines related Implementation Research (IVIR), Advisory Committee in 2012, 2014 and 2015.

2016 results on the return on investment of childhood vaccination led to press releases issued by Health Affairs and the Johns Hopkins Bloomberg School of Public Health, as well as original tweets by Bill Gates, Seth Berkley and others. The work was cited to contribute to a declaration signed by 20 health ministers at the Ministerial Conference on Immunization in Africa to increase the use of vaccines in preventing infectious diseases. Research evidence generated from the project have been picked up by various media channels (Reuters, Huffington Post, Global Health Magazine, Johns Hopkins Gazette, Kaiser Family Foundation, American Pharmacists' Association, Market Watch, Google News, Fox News, Business Day Online, Leadership Newspapers, Daily Graphic). Below are videos and infographics generated using DOVE project estimates and disseminated by various organizations for vaccine advocacy & communications (active links only).

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E.6. INVITED ORAL PRESENTATIONS (143 – 72 International; 39 National; 32 State/Local)

143. Uterotonic medication quality: Contributions toward universal health coverage. 4th Steering Committee meeting. Virtual (hosted from Geneva, Switzerland), January 26, 2024.
142. Health economic project examples. Development for Impact (D4I). Virtual (hosted from Chapel Hill, NC), November 2, 2023.
141. Return on investment in vaccine demand interventions. Fondation Mérieux Vaccine Acceptance meeting. Virtual (hosted in Annecy, France), November 1, 2023.

140. FIP Insights board: Advancing pharmacy practices in vaccination. International Pharmaceutical Federation (FIP). Virtual (hosted from Hague, Netherlands), October 25, 2023.
139. Evaluating access to childhood vaccines through rural community pharmacies. 2nd Advisory Group meeting. Virtual (hosted from Chapel Hill, NC), October 10, 2023.
138. Vaccination: Benefits beyond specific disease prevention. International Pharmaceutical Federation (FIP) Digital Events. Virtual (hosted from Hague, Netherlands), September 13, 2023.
137. Project 4. Cost-effectiveness. IMPACT Center Retreat. Chapel Hill, NC, September 11, 2023.
136. Medication quality & online pharmacy. Innovations and Transformations in Pharmaceutical Sciences 2023, UNC Eshelman School of Pharmacy. Virtual (hosted from Chapel Hill, NC), July 20, 2023.
135. Return on investment of post-market surveillance in Tanzania. International Health Economics Association 2024 Congress. Capetown, South Africa, July 12, 2023.
134. Next questions in costing and modeling methods. International Health Economics Association Immunization Economics Pre-Congress Panel Discussion. Capetown, South Africa, July 8, 2023.
133. Beware of illicit online pharmacies and substandard/falsified medications. Keio University Invited Talk. Tokyo, Japan, July 5, 2023.
132. Women seeking abortions are led to unregulated online pharmacies. Media and Medicine Final Project Presentation. Virtual (Hosted from Boston, MA), June 29, 2023.
131. Uterotonic medication quality: Contributions toward universal health coverage. Ghana Health Services meeting. Virtual (hosted from Geneva, Switzerland), June 15, 2023.
130. IMPACT project 4. 4th Modelers advisory board meeting. Virtual (hosted from Chapel Hill, NC), May 30, 2023.
129. Evaluating access to childhood vaccines through rural community pharmacies. 1st Advisory Group meeting. Virtual (hosted from Chapel Hill, NC), May 24, 2023.
128. Uterotonic medication quality: Contributions toward Universal health coverage. 3rd Steering Committee meeting. Virtual (hosted from Geneva, Switzerland), April 12, 2023.
127. The relationship between substandard and falsified antimicrobials and antimicrobial resistance and patient outcome. SF-AMR Workshop. Oxford, United Kingdom, March 20-22, 2023.
126. Access to abortion pills through online pharmacies. Media and Medicine Pitch. Virtual (hosted from Boston, MA), March 3, 2023.
125. IMPACT project 4. 3rd Modelers advisory board meeting. Virtual (hosted from Chapel Hill, NC), February 28, 2023.
124. Fault Lines. Council of Canadian Academies Confidential Sponsor Briefing. Virtual (hosted from Ottawa, Canada), January 10, 2023.
123. Uterotonic medication quality: Contributions toward universal health coverage. Ghana Health Services meeting. Virtual (hosted from Geneva, Switzerland), December 6, 2022.

122. Evaluating access to childhood vaccines through rural community pharmacies. National Association of Chain Drug Stores Foundation Presentation. Virtual (hosted from Arlington, VA), December 1, 2022.
121. Diversity, equity, & inclusion working group. IMPACT Center Integration meeting. Virtual (hosted from Chapel Hill, NC), November 14, 2022.
120. IMPACT project 4. 2nd Modelers advisory board meeting. Virtual (hosted from Chapel Hill, NC), November 9, 2022.
119. Uterotonic medication quality: Contributions toward universal health coverage. 2nd Steering Committee meeting. Virtual (hosted from Geneva, Switzerland), November 8, 2022.
118. Beware of illicit online pharmacies & substandard/falsified medications. Global Engagement Organization, UNC Eshelman School of Pharmacy. Chapel Hill, NC, November 7, 2022.
117. Storytelling: Poor quality medicines. North Carolina Global Health Alliance Annual Conference. Raleigh, NC, October 6, 2022.
116. Medicine quality & online pharmacies. PharmAlliance Week, London, United Kingdom, September 28, 2022.
115. Importance of medicine quality in achieving universal health coverage, Pharmaceutical Inspection. African Healthcare Webinars, Pitch World Fast. Virtual (hosted from Strasbourg, France), September 21, 2022.
114. Diversity, equity, & inclusion updates. Improving Provider Announcement Communication Training (IMPACT) P01 Annual Retreat. Chapel Hill, NC, August 26, 2022.
113. Medication quality & online pharmacies. Innovations and Transformations in Pharmaceutical Sciences 2022, UNC Eshelman School of Pharmacy. Virtual (hosted from Chapel Hill, NC), July 11, 2022.
112. Uterotonic medication quality: Contributions toward universal health coverage. 1st Steering Committee meeting. Virtual (hosted from Geneva, Switzerland), June 16, 2022.
111. Fifth meeting of the Expert Panel on Misinformation in Science and Health. Council of Canadian Academies Misinformation Assessment Panel. Virtual (hosted from Ottawa, Canada), June 8-9, 2022.
110. Estimating the cost of Covid-19 vaccine misinformation in Canada. Council of Canadian Academies Misinformation Assessment Panel. Virtual (hosted from Ottawa, Canada), April 25, 2022.
109. Beware of illicit online pharmacies. PharmAlliance Student Medication Safety Team, Fight the Fakes Week Event. Chapel Hill, NC, March 30, 2022.
108. Uterotonic medication quality: Contributions toward universal health coverage. Concept Foundation project kick-off meeting. Virtual (hosted from Geneva, Switzerland), February 28, 2022.
107. Fourth meeting of the Expert Panel on Misinformation in Science and Health. Council of Canadian Academies Misinformation Assessment Panel. Virtual (hosted from Ottawa, Canada), March 4 & 7, 2022.

106. Estimating the cost of Covid-19 vaccine misinformation in Canada. Council of Canadian Academies Misinformation Assessment Panel. Virtual (hosted from Ottawa, Canada), February 4, 2022.
105. IMPACT diversity equity inclusion working group. IMPACT Center Integration meeting. Virtual (hosted from Chapel Hill, NC), January 24, 2022.
104. IMPACT project 4. Modelers advisory board kickoff meeting. Virtual (hosted from Chapel Hill, NC), January 6, 2022.
103. Project 4 – cost and rurality. IMPACT clinical advisory board kickoff meeting. Virtual (hosted from Chapel Hill, NC), December 17, 2021 & January 21, 2022.
102. Economic evaluations. Academy of Managed Care Pharmacy (AMCP) Pharmacy and Therapeutics (P&T) competition bootcamp. Virtual (hosted from Chapel Hill, NC), December 13, 2021.
101. Third meeting of the Expert Panel on Misinformation in Science and Health. Council of Canadian Academies Misinformation Assessment Panel. Virtual (hosted from Ottawa, Canada), December 9-10, 2021.
100. Nigeria health, population, and nutrition (HPN) multi-activity evaluation. Data for Impact meeting with Integrated health project (IHP), president's malaria initiative for states (PMI-S), breakthrough action-Nigeria (BA-N), global health supply chain program procurement and supply management (PSM). Virtual (hosted from Chapel Hill, NC), December 14, 2021.
99. Nigeria health, population, and nutrition (HPN) multi-activity evaluation. Data for Impact meeting with USAID Nigeria. Virtual (hosted from Chapel Hill, NC), December 8, 2021.
98. Vaccines, medicine quality & antimicrobial resistance. PharmAlliance Student Medication Safety Team, Antibiotic Awareness Week Event. Chapel Hill, NC, November 15, 2021.
97. Direct and Indirect Benefits of Vaccination. PharmAlliance Student Vaccine Champion Workshop. Chapel Hill, NC, November 3, 2021.
96. COVID-19 treatments sold online without prescription requirements – A global concern. American Society of Tropical Medicine and Hygiene. Virtual (hosted from Washington, DC), November 3, 2021.
95. Second meeting of the Expert Panel on Misinformation in Science and Health. Council of Canadian Academies Misinformation Assessment Panel. Virtual (hosted from Ottawa, Canada), September 27-28, 2021.
94. Cost savings of paper analytical devices (PADs) to detect substandard and falsified antibiotics: Kenya case study. International Health Economics Association. Virtual (from Dubai, UAE), July 14, 2021.
93. COVID-19 Vaccines. Innovations and Transformations in Pharmaceutical Sciences 2021, UNC Eshelman School of Pharmacy. Virtual (hosted from Chapel Hill, NC), July 13, 2021.
92. First meeting of the Expert Panel on Misinformation in Science and Health. Council of Canadian Academies Misinformation Assessment Panel. Virtual (hosted from Ottawa, Canada), June 23-24, 2021.

91. Impact of poor-quality medicines on achieving universal health coverage. International Confederation of Midwives' Triannual Virtual Congress. Virtual (hosted from the Netherlands), June 16, 2021.
90. Return on investment of risk-based post market surveillance. World Health Organization Informal technical experts working group meeting on risk-based post market surveillance (rb-PMS). Virtual (hosted from Geneva, Switzerland), April 16, 2021.
89. COVID-19 vaccines. COVID-19 Health Disparities Panel. The Equity and Inclusion Committee of the Alumni Council, Phillips Academy, Andover. Virtual (hosted from Massachusetts), March 22, 2021.
88. COVID-19 vaccine hesitancy. COVID-19 Vaccines: Ending the Pandemic, Restarting the Economy. Clinton Foundation, moderated by Chelsea Clinton. Virtual (hosted from New York), March 18, 2021. <https://www.clintonfoundation.org/press-releases/chelsea-clinton-host-virtual-event-covid-19-vaccines-ending-pandemic-restarting>
***700 registered participants, plus live stream online and on Facebook. Other panelists: Bechara Choucair, White House COVID Response Team, Mayor Robert Garcia of Long Beach California, and Dr. Richard Besser CEO of Robert Wood Johnson Foundation.**
87. Review of models estimating the health and economic impact of substandard & falsified medicines. United States Pharmacopeia Convention Substandard and Falsified Model Advisory Group. Virtual (hosted from Rockville, MD), February 10, 2021.
86. Vaccine safety: Science, Myth, and Society. UNC Chancellor's Global Leadership Council, Virtual January Meeting, Virtual (hosted from Chapel Hill, NC), January 29, 2021.
***Invited by the UNC Chancellor's Global Leadership Council**
85. The broader impact of maternal immunization in sub-Saharan Africa and Asia: a multisite study in randomized clinical control trial cohorts. Value of Vaccination Research Network Work-in-Progress Webinar Series, Virtual (hosted from Harvard School of Public Health, Boston), January 19, 2021.
84. Impact of poor-quality medicines on achieving universal health coverage. Quality maternal health medicines: key to achieving universal health coverage. FIGO Africa Regional Kigali Congress, International Federation of Gynecology and Obstetrics, Virtual (hosted from Kigali, Rwanda), December 14, 2020. ***230 participants in meeting, including half gathered in Rwanda**
83. Economic evaluations. Academy of Managed Care Pharmacy (AMCP) Pharmacy and Therapeutics (P&T) competition bootcamp. Virtual (hosted from Chapel Hill, NC), December 8, 2020.
82. Universal health coverage and quality-assured medicines: A systems mapping approach. 6th Global Symposium on Health Systems Research. Virtual (hosted from Dubai, United Arab Emirates), November 8-12, 2020.
81. The economic impact of falsified and substandard medicines. Fighting falsified and substandard medicines during the Corona crisis Session. World Health Summit, Virtual (hosted from Berlin, Germany), October 27, 2020. <https://www.youtube.com/watch?v=aV7Gr0fKcxE>
***150 participants from 33 countries, plus 260+ views online**

80. Preliminary findings on the return on investment of risk-based post market surveillance. Briefing session for the informal experts advisory group on risk-based post market surveillance. World Health Organization, Virtual (hosted from Geneva, Switzerland), October 22, 2020.
79. Economic impact of vaccinations. UNC PACE Faculty meeting presentation, Virtual (hosted from Chapel Hill, NC), September 17, 2020.
78. Economic modeling and access to vaccines. USP COVID-Connect Webinar Interview Series, United States Pharmacopeia. Virtual (hosted from Delhi, India), September 14, 2020.
***83 participants, mostly from India**
77. Global pandemic of substandard and falsified medicines. University of Michigan School of Pharmacy. Virtual (hosted from Ann Arbor, MI), August 12, 2020.
76. Value of vaccines. University of Michigan School of Pharmacy. Virtual (hosted from Ann Arbor, MI), August 10, 2020.
75. Vaccines and global immunization programs. Innovations and Transformations in Pharmaceutical Sciences 2020, UNC Eshelman School of Pharmacy. Virtual (hosted from Chapel Hill, NC), July 27, 2020.
74. Medicines access and quality during the COVID-19 pandemic: spotlight on South Africa, Bolivia and Nigeria. Medicines in Health Systems Thematic Working Group, Health Systems Global. Moderator. Virtual (hosted from Chapel Hill, NC), June 25, 2020.
73. Global pandemic of substandard and falsified medicines. Global Engagement Organization, UNC Eshelman School of Pharmacy. Chapel Hill, NC, January 28, 2020.
72. Return on investment of risk-based post market surveillance. Planning meeting to conduct RBPMS on medicine quality in Tanzania. World Health Organization. Dar Es Salaam, Tanzania, January 20-23, 2020.
***Engaged the Tanzanian Medicine and Medical Devices Authority**
71. Modeling the health and economic costs of substandard and falsified drugs in sub-Saharan Africa. American Society of Tropical Medicine and Hygiene. Washington, DC, November 22, 2019.
70. Return on investment of risk-based post market surveillance. World Health Organization Informal Technical Experts Working Group. Geneva, Switzerland, October 21, 2019.
***Informed the World Health Organization's Member State Mechanism**
69. Exploring pathways for building trust in vaccination and strengthening health systems resilience. 7th Vaccine Acceptance Meeting. Fondation Mérieux, Annecy, France, September 25, 2019.
68. Integrating Medicines quality assurance into universal health coverage programming: A path to increasing efficiency, access, and coverage. United States Pharmacopeial Convention (USP). Rockville MD, August 29, 2019.
***Launched a White Paper with USP**
67. Integrating Medicines quality assurance into universal health coverage programming: A path to increasing efficiency, access, and coverage. United States Agency for International Development (USAID). Brownbag presentation, Crystal City VA, August 29, 2019.

66. Impact of antibiotic resistance on treatment of pneumococcal disease in Ethiopia: an agent-based modeling simulation. International Health Economics Association. Basel, Switzerland, July 17, 2019.
65. Hard-to-reach populations: A systems mapping approach to bridging the gaps for vaccination. International Health Economics Association. Basel, Switzerland, July 15, 2019.
64. Economic considerations of vaccinating hard-to-reach populations. Centers for Disease Control and Prevention. Atlanta GA, May 10, 2019.
63. Improving provider communication about HPV vaccination: P01 program project proposal. National Cancer Institute. Washington DC, May 7, 2019.
***Invited by NCI to present P01 proposal**
62. Importance of medicine quality in achieving universal health coverage. United States Pharmacopeial Convention (USP). Rockville MD, May 6, 2019.
61. Reaching the hard to reach for vaccination: definitions and economic considerations. Centers for Disease Control and Prevention, Atlanta GA, November 27, 2018.
60. Lessons from vaccines that could be adapted to cancer: Gavi case study. Health Systems Global Medicines in Health Systems Thematic Working Group organized session: Global cancer medicines' initiatives: what are we missing in the debate? Global Symposium for Health Systems Research, Liverpool, UK, October 12, 2018.
59. Development of an agent-based model to assess the impact of substandard and falsified antimalarials in Uganda. Medicine Quality and Public Health. Oxford, UK, September 25, 2018.
58. Prevalence and estimates of economic impact of substandard and falsified medicines in low- and middle-income countries: A systematic review and meta-analysis. Medicine Quality and Public Health. Oxford, UK, September 24, 2018.
***Led to Oxford Statement on Global Access to Quality-Assured Medicines**
57. Benefits of vaccines. National Vaccine Advisory Committee. U.S. Department of Health and Human Services, Washington DC, September 12, 2018.
***Recorded with Live Webcast to the Public**
56. Systematic review of the incremental costs of interventions that increase immunization coverage. EPIC3 Immunization Costing Project Technical Advisory Group meeting. Harvard T.H. Chan School of Public Health, Center for Health Decision Sciences, Boston MA, July 16, 2018.
55. Antibiotic Stewardship: Right drug, right time, right dose, right duration. Lightning Round, CIPhER Center for Innovative Pharmacy Educational & Research. Chapel Hill NC, May 16, 2018.
54. Value of vaccination in controlling the development of antimicrobial resistance. UNC Institute for Global Health and Infectious Diseases. Friday Morning Conference. Chapel Hill NC, March 2, 2018.
53. Global Health Economics for Pharmacy. UNC Pharmacy Global Engagement Organization. General Body Meeting. Chapel Hill NC, February 20, 2018.
52. Online pharmacy. Lightning Round, CIPhER Center for Innovative Pharmacy Educational & Research. Chapel Hill NC, December 1, 2017.
***Voted No.1 for "Most likely to be funded"**

51. Antimicrobial stewardship and antimicrobial resistance practice and policy: UNC perspectives. PharmAlliance Research Symposium, Chapel Hill NC, November 17, 2017.
50. Global Health Economics for Pharmacy (GHEP). GlaxoSmithKline meeting, Chapel Hill NC, November 6, 2017.
49. Economic impact of vaccinations. UNC PACE Faculty meeting presentation, Chapel Hill NC, October 19, 2017.
48. Global Health Economics for Pharmacy (GHEP). Maternal Child Health Department Faculty Talk, Chapel Hill NC, October 2, 2017.
47. The global pandemic of substandard and falsified medicines. Triangle Global Health Annual Conference. Raleigh NC, September 28, 2017.
46. Prevalence and economic impact of substandard and falsified medicines in low- and middle-income countries: a systematic review and meta-analysis. World Congress of Pharmacy and Pharmaceutical Sciences. Seoul, Korea, September 12, 2017.
45. Resource requirements and cost-effectiveness of achieving maternal and neonatal tetanus elimination by 2020. International Health Economics Association (IHEA) World Congress Symposium, Boston MA, July 10, 2017.
44. Impact of online pharmacies. Triangle Health Economics Workshop, Durham NC, June 30, 2017.
43. Impact of online pharmacies. Center for Safe Internet Pharmacies Board Meeting, New York NY, June 9, 2017.
42. Childhood immunization: What's the value? Toward a Carolina Improvement Science Initiative, A lightening symposium, University of North Carolina, Chapel Hill NC, May 19, 2017.
41. Value of health. Workshop on Innovative Approaches to Widening and Deepening Research on the Value of Vaccination, Value of Vaccination Research Network, Harvard T.H. Chan School of Public Health, Boston, MA, May 12, 2017.
40. Survey Tools to Estimate Cost of Treatment and Productivity Loss for Vaccine Preventable Diseases. Immunization Costing Workshop, Bill & Melinda Gates Foundation, Washington, DC, May 18, 2016.
39. Return on Investment in Childhood Immunization. Advancing the Value of Vaccines Research Agenda Meeting, Harvard T.H. Chan School of Public Health, Boston, April 27, 2016.
38. Return on Investment From Childhood Immunizations In Low- And Middle-Income Countries, 2011-20. Health Affairs February 2016 Issue Briefing on Vaccines, National Press Club, Washington, DC, February 9, 2016.
***Recorded with Live Webcast from the National Press Club**
37. Decade of Vaccine Economics (DOVE) Supplementary Immunization Activities (SIA) Global Operational Cost Estimates. Convening on Immunization Delivery Costs, University of Washington, Seattle, October 15, 2015.
36. Decade of Vaccine Economics (DOVE) Return on Investment (ROI) Analysis. Bill & Melinda Gates Foundation Dissemination Meeting, Seattle, September 24, 2015.

35. Stakeholder Preferences for an Integrated National Community Health Worker Program. Community Health Worker Learning Agenda Project Stakeholder Dialogue Workshop, hosted by Tanzania Ministry of Health and Social Welfare, US Agency for International Development, Johns Hopkins Bloomberg School of Public Health, Dar Es Salaam, Tanzania, September 1, 2015.
34. Economic benefits of vaccination – the full income approach. International Health Economics Association (IHEA) World Congress Symposium, Milan, Italy, July 13-15, 2015.
33. Decade of Vaccine Economics (DOVE). Immunization and Vaccines related Implementation Research (IVIR) Advisory Committee meeting, World Health Organization, Geneva, June 9, 2015.
32. Decade of Vaccine Economics (DOVE). Gavi-BMGF Modeling the Health Impacts of Vaccination meeting, Gavi & Bill and Melinda Gates Foundation, Geneva, May 7-8, 2015.
31. Decade of Vaccine Economics (DOVE): Costing, Financing & Funding Gap Model Training. Global Vaccine Action Plan Costing & Financing Steering Committee meeting, Gavi, Geneva, March 30, 2015
30. Decade of Vaccine Economics (DOVE) project. Broader Economic Impact of Vaccines (BEIV) meeting, World Health Organization, Bangkok, November 24-25, 2014
***Led to Research Grant with the Centers for Disease Control and Prevention**
29. Decade of Vaccines Economics (DOVE): Costing, Financing & Return on Investment Analysis. Gavi Secretariat Dissemination meeting, Gavi, Geneva, October 7, 2014.
28. Decade of Vaccines Economics (DOVE): Return on Investment Preliminary Results. Global Vaccine Action Plan Costing & Financing Steering Committee meeting, World Health Organization, Geneva, October 6, 2014.
27. Decade of Vaccines Economics (DOVE) Models. Immunization and Vaccines related Implementation Research (IVIR) Advisory Committee meeting, World Health Organization, Geneva, September 17, 2014.
***Evaluated by WHO's IVIR-AC on Methodological Rigor of Proposed Research**
26. Decade of Vaccines Economics (DOVE): Costing, Financing & Funding Gap Model. Immunization and Vaccines related Implementation Research (IVIR) Advisory Committee Ad Hoc Working Group meeting, World Health Organization, Geneva, June 17, 2014.
25. Decade of Vaccines Economics (DOVE): Costing, Financing & Return on Investment Analysis. Gavi Secretariat Dissemination meeting, Gavi, Washington DC, March 6, 2014.
24. Decade of Vaccines Economics (DOVE): Costing, Financing, Funding Gap & Economic Benefits Analyses. Gavi-BMGF Vaccination Impact meeting, Gavi & Bill and Melinda Gates Foundation, Washington DC, February 25-26, 2014.
23. Decade of Vaccines Economics (DOVE): Costing, Financing & Funding Gap Analyses. Global Vaccine Action Plan Costing & Financing Steering Committee meeting, The United Nations, Copenhagen, Denmark, February 5, 2014.
22. Decade of Vaccines Economics (DOVE): Costing, Financing & Funding Gap Analyses. Global Vaccine Action Plan Costing & Financing Steering Committee meeting, Gavi, Washington DC, December 17, 2013; October 3, 2013.

21. Decade of Vaccines Economics (DOVE): Costing and Return on Investment Analyses. Global Vaccine Action Plan Costing & Financing Steering Committee meeting, UNICEF, New York, July 22, 2013.
20. Decade of Vaccines Economics (DOVE) Project. Data Day, Johns Hopkins University International Vaccine Access Center, Baltimore, July 17, 2013
19. Measuring Trust in the Health System: A Systematic Review. International Health Economics Association (IHEA) World Congress Symposium, Sydney, Australia, July 6-10, 2013.
18. Treatment costs saved and economic burden of averted mortality & morbidity over the 'Decade of Vaccines'. International Health Economics Association (IHEA) World Congress Symposium, Sydney, Australia, July 6-10, 2013.
17. Decade of Vaccines Economics (DOVE): Scope of Return on Investment Analysis. Technical consultation on methods for estimating global immunization costs for the Decade of Vaccines, Gavi, Geneva, Switzerland, June 14, 2013.
16. Decade of Vaccines Economics (DOVE) Project. Value of vaccines working group meeting, Gavi, Geneva, January 14-15, 2013.
***Invited as One of 25 Global Leaders on the Value of Vaccines**
15. Where's the evidence at: The current status of value of vaccines work globally. Gavi Partners' Forum, Gavi, Dar es Salaam, Tanzania, December 5-7, 2012.
***Presented to Ministers of Health, Ministers of Finance and Parliamentarians**
14. Decade of Vaccines Economics (DOVE) Project. Workshop on Gavi's vaccine impact estimates, Gavi, Washington DC, October 12, 2012.
13. Use of Value of Statistical Life (VSL) for the Decade of Vaccines. Immunization and Vaccine related Implementation Research (IVIR) Advisory Committee meeting, World Health Organization, Geneva, Switzerland, September 25-26, 2012.
***Evaluated by WHO's IVIR-AC on Methodological Rigor of Proposed Research**
12. Decade of Vaccines Economics (DOVE) Project. Bill and Melinda Gates Foundation Dissemination Meeting, Seattle, September 11, 2012.
11. Building informed trust: Injection practices in Cambodia. Social Science and Medicine Conference on Health System Reform in Asia, Hong Kong, December 9-12, 2011.
10. Trust matters: Villager's trust in providers and insurers and their demand for community-based health insurance in Cambodia. Social Science and Medicine Conference on Health System Reform in Asia, Hong Kong, December 9-12, 2011.
9. Decade of Vaccines Economics (DOVE) Project. Bill and Melinda Gates Foundation Dissemination Meeting, Seattle, February 4, 2011 & December 12, 2010
8. How do you measure 'trust' in health systems? First Global Symposium on Health Systems Research, Montreux, Switzerland, November 16-19, 2010.
7. Trust & voluntary health insurance in Cambodia. Workshop on Social Capital and Health, Social Capital and Health Global Network, Oslo, Norway, September 10-11, 2010.

6. Trust & voluntary health insurance in Cambodia. Regional Conference on Health Sector: Institutions, Motivation and Incentives, Phnom Penh, Cambodia, April 26-28, 2010.
 5. Trust and community-based health insurance schemes in Cambodia: Trust in providers and insurers. Workshop in Institutional Development for Rural Health Service, School of Social Development and Public Policy, Beijing Normal University, Beijing, China, July 17-18, 2009.
 4. The role of trust in the demand for community-financed schemes in Cambodia. Panel on *Healthcare Market Failures in Low Income Countries* chaired by David Bishai. International Health Economics Association (IHEA) World Congress Symposium, Beijing, China, July 12-15, 2009.
 3. Trust in private providers in rural Cambodia. Pre-IHEA World Congress Symposium on the Role of the Private Sector in Health, Beijing, China, July 11, 2009.
 2. Meaning of 'Trust' in Health Systems in Cambodia. Global Health Council, Annual International Conference on Global Health: New Technology + Proven Strategies = Healthy Communities, Washington, D.C., May 26-30, 2009.
- *New Investigator in Global Health Award Winner**
1. Investigation of Trust in the context of a Community-Based Health Insurance scheme in Cambodia. Panel on *Experiences with the design of health financing interventions and evidence on their performance*. Health and Social Protection - Meeting the Needs of the Poor by Consortium POVILL: Protecting the rural poor against the economic consequences of major illness, Vientiane, Laos, October 9-10, 2008.

F. TEACHING ACTIVITIES

F.1. COURSE COORDINATOR

1. Course Title: Research and Scholarship in Pharmacy 2
Course Details: PHCY 725 (PY3 Elective, Honors)
Role: Course Director, UNC Eshelman School of Pharmacy
Dates: 2018 – Present
2. Course Title: Health Systems in Low- and Middle-Income Countries
Course Details: 221.646.81 Online Course (Masters' and PhD Elective)
Role: Co-Instructors with Sara Bennett, Johns Hopkins School of Public Health
Dates: 2013 – 2016
3. Course Title: Health Financing in Low- and Middle-Income Countries
Course Details: 221.845.01 (Masters' and PhD Elective)
Role: Co-Instructors with Krishna Rao, Johns Hopkins School of Public Health
Dates: 2010 – 2016 (course developer)

F2. LECTURER

The University of North Carolina at Chapel Hill: 2017 – Present

Term / Year	Course Number, Title, Type	Students	Approx. Enrolled	Teaching Responsibility	Evaluation
Spring 2024	PHCY 619, Business of Healthcare: Focus on the Pharmacy Enterprise, 2 credits,	PharmD	135	Lecturer	n/a

	Required for PY2				
Spring 2024	PHCY 624, Research and Scholarship in Pharmacy 1, 1.5 credits, PY2 Elective	PharmD	18 (10 Block1; 8 Block2)	PACE Division Director, Faculty Mentor	n/a
Spring 2024	PHCY 726, Research and Scholarship in Pharmacy 3, 3 credits, PY3 Elective	PharmD	38	PACE Division Director, Faculty Mentor	n/a
Spring 2024	PHRS 994 – Doctoral Research and Dissertation, Required for PhD	PhD	1	Advisor	n/a
Spring 2024	PHRS 991, Research in Pharmaceutical Sciences, Required for PhD	PhD	1	Advisor	n/a
Fall 2023	PHCY 725, Research and Scholarship in Pharmacy 2, 1.5 credits, PY3 Elective	PharmD	38 (17 Block1; 18 Block2; 3 ASH)	Course Director, Lecturer, PACE Division Director, Faculty Mentor	3.9/5 & 4.4/5 & 4.7/5 Overall 4.8/5 & 4.8/5 & 4.7/5 Lecturer
Fall 2023	PACE 815, Evaluation Research and Project Design, 3 credits, Required for Masters in Pharmaceutical Sciences	Masters'	20	Lecturer	4.8/5 Overall 4.7/5 Lecturer
Fall 2023	PHCY 504, Evidence Based Practice, 3 credits, Required for PY1 PharmD	PharmD	135	Lecturer	n/a
Fall 2023	PHRS 994 – Doctoral Research and Dissertation, Required for PhD	PhD	1	Advisor	n/a
Fall 2023	HPM 715, Health Economics for Policy and Management, 3 credits, Masters' and PhD Elective (UNC Gillings School of Global Public Health)	Masters' PhD	30	Lecturer	n/a
Fall 2023	HPM 772, Techniques for the Economic Evaluation of Health Care, 3 credits, Masters' and PhD Elective (UNC Gillings School of Global Public Health)	Masters' PhD	20	Lecturer	n/a
Summer 2023	PHRS 500 Innovations and Transformations in Pharmaceutical Sciences, 4 credits, ITPS program	ITPS	190	Lecturer	n/a
Spring 2023	PHCY 619, Business of Healthcare: Focus on the Pharmacy Enterprise, 2 credits, Required for PY2	PharmD	141 (66 Block1; 66 Block2; 9 ASH)	Lecturer	4.0/5 & 4.1/5 & 4.3/5 Overall 4.2/5 & 4.3/5 & 4.3/5 Lecturer
Spring 2023	PHCY 624, Research and Scholarship in Pharmacy 1, 1.5 credits, PY2 Elective	PharmD	43 (22 Block1; 21 Block2)	PACE Division Director, Faculty Mentor	n/a
Spring 2023	PHCY 726, Research and Scholarship in Pharmacy 3, 3 credits, PY3 Elective	PharmD	34	PACE Division Director, Faculty Mentor	n/a
Spring	PHRS 994 – Doctoral Research	PhD	1	Advisor	n/a

2023	and Dissertation, Required for PhD				
Fall 2022	PHCY 725, Research and Scholarship in Pharmacy 2, 1.5 credits, PY3 Elective	PharmD	34 (18 Block1; 16 Block2)	Course Director, Lecturer, PACE Division Director, Faculty Mentor	4.6/5 Overall 4.9/5 Lecturer
Fall 2022	PACE 815, Evaluation Research and Project Design, 3 credits, Required for Masters in Pharmaceutical Sciences	Masters'	19	Lecturer	4.7/5 Overall 4.9/5 Lecturer
Fall 2022	PHCY 100, Pharmaceuticals: Ethical and Social Issues, 1 credit, Undergraduate Elective	Under-graduate	10	Lecturer	n/a
Fall 2022	PHCY 504, Evidence Based Practice, 3 credits, Required for PY1 PharmD	PharmD	137	Lecturer	4.0/5 Overall 4.3/5 Lecturer
Fall 2022	PHRS 994 – Doctoral Research and Dissertation, Required for PhD	PhD	1	Advisor	n/a
Fall 2022	HPM 715, Health Economics for Policy and Management, 3 credits, Masters' and PhD Elective (UNC Gillings School of Global Public Health)	Masters' PhD	60	Lecturer	n/a
Fall 2022	HPM 772, Techniques for the Economic Evaluation of Health Care, 3 credits, Masters' and PhD Elective (UNC Gillings School of Global Public Health)	Masters' PhD	20	Lecturer	n/a
Summer 2022	PHRS 500 Innovations and Transformations in Pharmaceutical Sciences, 4 credits, ITPS program	ITPS	190	Lecturer	n/a
Spring 2022	PHCY 619, Business of Healthcare: Focus on the Pharmacy Enterprise, 2 credits, Required for PY2	PharmD	124 (67 Block1; 57 Block2)	Lecturer	3.2/5 Overall 4.3/5 Lecturer
Spring 2022	PHCY 624, Research and Scholarship in Pharmacy 1, 1.5 credits, PY2 Elective	PharmD	35 (18 Block1; 17 Block2)	PACE Division Director, Faculty Mentor	n/a
Spring 2022	PHCY 625, Research and Scholarship in Pharmacy 3, 3 credits, PY3 Elective	PharmD	44	PACE Division Director, Faculty Mentor	n/a
Fall 2021	PHCY 725, Research and Scholarship in Pharmacy 2, 1.5 credits, PY3 Elective	PharmD	44 (21 Block1; 23 Block2)	Course Director, Lecturer, PACE Division Director, Faculty Mentor	4.1/5 Overall 4.8/5 Lecturer
Fall 2021	PACE 815, Evaluation Research and Project Design, 3 credits, Required for Masters in Pharmaceutical Sciences	Masters'	14	Lecturer	4.0/5 Overall 4.7/5 Lecturer
Fall 2021	PHRS 899, Pharmacy Outcomes and Policy Seminar, 1 credit,	PhD	17	Lecturer	n/a

	Required for DPOP PhD				
Fall 2021	PHCY 100, Pharmaceuticals: Ethical and Social Issues, 1 credit, Undergraduate Elective	Undergraduate	14	Lecturer	n/a
Fall 2021	HPM 715, Health Economics for Policy and Management, 3 credits, Masters' and PhD Elective (UNC Gillings School of Global Public Health)	Masters' PhD	40	Lecturer, Poster Grader	n/a
Summer 2021	PHRS 500 Innovations and Transformations in Pharmaceutical Sciences, 4 credits, ITPS program	ITPS	150	Lecturer	n/a
Spring 2021	PHCY 624, Research and Scholarship in Pharmacy 1, 1.5 credits, PY2 Elective	PharmD	47 (21 Block1; 26 Block2)	PACE Division Director, Faculty Mentor	n/a
Spring 2021	PHCY 625, Research and Scholarship in Pharmacy 3, 3 credits, PY3 Elective	PharmD	26	PACE Division Director, Faculty Mentor	n/a
Spring 2021	DPOP 991, Research, PhD Elective	PhD	1	Faculty Mentor	n/a
Fall 2020	PHCY 725, Research and Scholarship in Pharmacy 2, 1.5 credits, PY3 Elective	PharmD	27 (12 Block1; 15 Block2)	Course Director, Lecturer, PACE Division Director, Faculty Mentor	4.3/5 Overall 4.8/5 Lecturer
Fall 2020	PACE 815, Evaluation Research and Project Design, 3 credits, Required for Masters in Pharmaceutical Sciences	Masters'	15	Lecturer	4.9/5 Overall 4.8/5 Lecturer
Fall 2020	DPOP 806, Pharmaceutical Policy, 3 credits, Required for DPOP PhD	PhD	8	Lecturer	n/a
Fall 2020	PHCY 504, Evidence Based Practice, 3 credits, Required for PY1 PharmD	PharmD	123	Lecturer	3.8/5 Overall 4.4/5 Lecturer
Fall 2020	PLCY 575, Innovation, Science, and Public Policy, 3 credits, Public Policy Elective	Masters' Undergraduate	24	Lecturer	n/a
Summer 2020	PHRS 500 Innovations and Transformations in Pharmaceutical Sciences, 4 credits, ITPS program	ITPS	204	Lecturer	n/a
Spring 2020	PHCY 624, Research and Scholarship in Pharmacy 1, 1.5 credits, PY2 Elective	PharmD	30 (16 Block1; 14 Block2)	PACE Division Director, Faculty Mentor	n/a
Spring 2020	PHCY 625, Research and Scholarship in Pharmacy 3, 3 credits, PY3 Elective	PharmD	26	PACE Division Director, Faculty Mentor	n/a
Fall 2019	PHCY 725, Research and Scholarship in Pharmacy 2, 1.5 credits, PY3 Elective	PharmD	28 (18 Block1; 10 Block2)	Course Director, Lecturer, PACE Division Director, Faculty Mentor	4.8/5 & 4.7/5 Overall 4.9/5 & 4.9/5 Lecturer
Fall	PACE 815, Evaluation Research	Masters'	15	Lecturer	4.3/5 Overall

2019	and Project Design, 3 credits, Required for Masters in Pharmaceutical Sciences				4.7/5 Lecturer
Fall 2019	HPM 715, Health Economics for Policy and Management, 3 credits, Masters' and PhD Elective (UNC Gillings School of Global Public Health)	Masters' PhD	40	Lecturer, Poster Grader	n/a
Spring 2019	PHCY 624, Research and Scholarship in Pharmacy 1, 1.5 credits, PY2 Elective	PharmD	28 (13 Block1; 15 Block2)	Lecturer, PACE Division Director, Faculty Mentor	4.9/5 Overall 4.6/5 Lecturer
Spring 2019	PHCY 625, Research and Scholarship in Pharmacy 3, 3 credits, PY3 Elective	PharmD	25	PACE Division Director, Faculty Mentor	n/a
Spring 2019	DPOP 870, Pharmaceutical Outcomes Research, 3 credits, Required for DPOP PhD	PhD	5	Lecturer	n/a
Fall 2018	PHCY 725, Research and Scholarship in Pharmacy 2, 1.5 credits, PY3 Elective	PharmD	25 (14 Block1; 11 Block2)	Course Director, Lecturer, PACE Division Director, Faculty Mentor	4.4/5 & 4.0/5 Overall 4.7/5 & 4.8/5 Lecturer
Fall 2018	PHCY 504, Evidence Based Practice, 3 credits, Required for PY1 PharmD	PharmD	145 (130 CH; 15 ASH)	Lecturer	2.3/5 & 2.0/5 Overall 3.9/5 & 4.5/5 Lecturer
Fall 2018	PACE 815, Evaluation Research and Project Design, 3 credits, Required for Masters in Pharmaceutical Sciences	Masters'	10	Lecturer	3.9/5 Overall 4.7/5 Lecturer
Fall 2018	HPM 715, Health Economics for Policy and Management, 3 credits, Masters' and PhD Elective (UNC Gillings School of Global Public Health)	Masters' PhD	35	Lecturer	n/a
Spring 2018	PHCY 624, Research and Scholarship in Pharmacy 1, 1.5 credits, PY2 Elective	PharmD	26 (14 Block1; 12 Block2)	Lecturer, PACE Division Director, Faculty Mentor	4.4/5 & 4.2/5 Overall 4.7/5 & 4.3/5 Lecturer
Spring 2018	PHCY 726, Research and Scholarship in Pharmacy 3, 3 credits, PY3 Elective	PharmD	26	Lecturer, PACE Division Director, Faculty Mentor	4.7/5 Overall 4.5/5 Lecturer
Spring 2018	PHRS 899, Pharmacy Outcomes and Policy Seminar, 1 credits, Required for DPOP PhD	PhD	15	Lecturer	n/a
Fall 2017	PHCY 725, Research and Scholarship in Pharmacy 2, 1.5 credits, PY3 Elective	PharmD	26 (17 Block1; 9 Block2)	PACE Division Director, Faculty Mentor	n/a
Fall 2017	PHCY 504, Evidence Based Practice, 3 credits, Required for PY1 PharmD	PharmD	154 (126 CH; 28 ASH)	Lecturer	2.7/5 & 3.6/5 Overall 4.2/5 & 4.5/5 Lecturer
Fall 2017	PACE 815, Evaluation Research and Project Design, 3 credits,	Masters'	9	Lecturer	4.2/5 Overall 4.3/5 Lecturer

	Required for Masters in Pharmaceutical Sciences				
Spring 2017	PHCY 624, Research and Scholarship in Pharmacy 1, 1.5 credits, PY2 Elective	PharmD	27 (18 Block1; 9 Block2)	PACE Division Director, Faculty Mentor	n/a

Johns Hopkins University: 2007 – 2016

Term / Year	Course Number, Title, Type	Students	Approx. Enrolled	Teaching Responsibility	Evaluation
Spring 2016	221.652.01 Health Financing in Low and Middle Income Countries, 3 credits, Elective	Masters' PhD	35	Course Developer, Co-Coordinator, Lecturer	3.1/4 Overall 3.2/4 Lecturer
Fall 2015	221.646.81 Health Systems in Low and Middle Income Countries, 3 credits, Elective, * <i>Online Course</i>	Masters' PhD	63	Course Redesign, Co-Coordinator, Lecturer	3.2/4 Overall 3.4/4 Lecturer
Fall 2015	221.861.01 Doctoral Seminar in Health Systems, 1 credit, Required for Health Systems PhD	PhD	12	Lecturer	n/a
Spring 2015	221.845.01 Health Financing in Low and Middle Income Countries, 3 credits, Elective	Masters' PhD	27	Course Developer, Co-Coordinator, Lecturer	3.5/4 Overall 3.5/4 Lecturer
Spring 2015	313.861.01 Public Health Economics Seminar, 1 credit, Required for Masters' and PhD in Health Economics	Masters' PhD	26	Lecturer	n/a
Spring 2015	221.860.01 Health Systems Program Seminar, 1 credit, Required for Health Systems Students and Faculty	Masters' PhD	57	Lecturer	n/a
Fall 2014	221.646.81 Health Systems in Low and Middle Income Countries, 3 credits, Elective, * <i>Online Course</i>	Masters' PhD	65	Course Redesign, Co-Coordinator, Lecturer	3.3/4 Overall 3.5/4 Lecturer
Spring 2014	221.845.01 Health Financing in Low and Middle Income Countries, 3 credits, Elective	Masters' PhD	16	Course Developer, Co-Coordinator, Lecturer	3.5/4 Overall 3.3/4 Lecturer
Fall 2013	221.646.81 Health Systems in Low and Middle Income Countries, 3 credits, Elective, * <i>Online Course</i>	Masters' PhD	24	Course Redesign, Co-Coordinator, Lecturer	3.4/4 Overall 3.7/4 Lecturer
Fall 2013	221.646.01 Health Systems in Low and Middle Income Countries, 3 credits, Elective	Masters' PhD	55	Lecturer	n/a
Fall 2013	313.861.01 Public Health Economics Seminar, 1 credit, Required for Masters' and PhD in Health Economics	Masters' PhD	20	Lecturer	n/a
Fall	221.860.01 Health Systems	Masters'	44	Lecturer	n/a

2013	Program Seminar, 1 credit, Required for Health Systems Students and Faculty	PhD			
Spring 2013	221.845.01 Health Financing in Low and Middle Income Countries, 3 credits, Elective	Masters' PhD	25	Course Developer, Co- Coordinator, Lecturer	3.3/4 Overall 3.3/4 Lecturer
Fall 2012	221.646.01 Health Systems in Low and Middle Income Countries, 3 credits, Elective	Masters' PhD	60	Lecturer	n/a
Fall 2012	313.861.01 Public Health Economics Seminar, 1 credit, Required for Masters' and PhD in Health Economics	Masters' PhD	21	Lecturer	n/a
Spring 2012	221.845.01 Health Financing in Low and Middle Income Countries, 3 credits, Elective	Masters' PhD	12	Course Developer, Co- Coordinator, Lecturer	3.2/4 Overall 3.8/4 Lecturer *Teaching Excellence
Spring 2011	221.652.01 Health Financing in Low and Middle Income Countries, 3 credits, Elective (offered as special studies)	Masters' PhD	14	Course Developer, Co- Coordinator, Lecturer	3.7/4 Overall 3.7/4 Lecturer *Teaching Excellence
Spring 2011	221.860.01 Health Systems Program Seminar, 1 credit, Required for Health Systems Students and Faculty	Masters' PhD	38	Lecturer	n/a
Fall 2010	313.861.01 Public Health Economics Seminar, 1 credit, Required for Masters' and PhD in Health Economics	Masters' PhD	17	Lecturer	n/a
Spring 2010	221.861.01 Doctoral Seminar in Health Systems, 1 credit, Required for Health Systems PhD	PhD	10	Lecturer	n/a
Spring 2010	313.861.01 Public Health Economics Seminar, 1 credit, Required for Masters' and PhD in Health Economics	Masters' PhD	12	Lecturer	n/a
Spring 2010	221.860.01 Health Systems Program Seminar, 1 credit, Required for Health Systems Students and Faculty	Masters' PhD	52	Lecturer	n/a
Fall 2009	AS.280.307 Health Financing in the Global Arena: Paying for Healthcare, 3 credits, Undergraduate Elective *Dean's Teaching Fellow (School of Arts and Sciences)	Under graduate	22	Course Developer, Course Director, Lecturer, 25 weeks	4.9/5 Overall 5.0/5 Lecturer *Teaching Excellence
Spring 2009	313.861.01 Public Health Economics Seminar, 1 credit, Required for Masters' and PhD in Health Economics	Masters' PhD	15	Lecturer	n/a
Spring 2009	221.860.01 Health Systems Program Seminar, 1 credit, Required for Health Systems	Masters' PhD	45	Lecturer	n/a

	Students and Faculty				
Spring 2009	221.616.01 Ethics of Public Health Practice in Developing Countries, 3 credits, Elective	Masters' PhD	60	Teaching Assistant	n/a
Fall 2008	313.641.01 Health Economics, 3 credits, Required for Health Economics Masters' and PhD	Masters' PhD	77	Teaching Assistant	n/a
Fall 2008	221.614.01 International Political Science for Public Health Practitioners, 3 credits, Elective	Masters' PhD	43	Teaching Assistant	n/a
Spring 2008	313.630.01 Concepts and Applications in Economic Evaluation, 3 credits, Elective	Masters' PhD	40	Teaching Assistant	n/a
Spring 2008	313.790.81 Understanding Cost-Effectiveness, 3 credits, Elective <i>*Online Course</i>	Masters' PhD	96	Teaching Assistant	n/a
Fall 2007	220.601.01 Introduction to International Health, 3 credits, Required for Masters' and PhD in International Health	Masters' PhD	151	Teaching Assistant, Group Facilitator	n/a
Spring 2007	221.661.01 Project Development for Primary Healthcare in Developing Countries, 3 credits, Elective	Masters' PhD	47	Teaching Assistant	n/a
Spring 2007	221.609.01 Comparative Health Systems, 3 credits, Elective	Masters' PhD	73	Teaching Assistant, Group Facilitator	n/a

F.3. MENTORING

UNC-AESARA Market Access and Health Informatics Fellows

2023-present Amy Wu, PharmD
UNC-AESARA Market Access and Health Informatics Fellow

2023-present Paige Ngo, PharmD
UNC-AESARA Market Access and Health Informatics Fellow

2022-present Denise Garner, PharmD
UNC-AESARA Market Access and Health Informatics Fellow

2022-present Ashik Jayakumar, PharmD
UNC-AESARA Market Access and Health Informatics Fellow

2021-2023 Anthony Hudzik, PharmD
UNC-AESARA Market Access and Health Informatics Fellow

2020-2022 Rachel Black, PharmD
UNC-AESARA Market Access and Health Informatics Fellow

Post-Doctoral Fellows

2020-2022 Tamara Hughes, PharmD

Systematic review of community pharmacist administration of long-acting injectable antipsychotic medications

2019-2022 Catherine Habashy, Doctor of Medicine (MD), Masters of Public Health (MPH)
Clinical Fellow in Pediatric Hematology and Oncology

Research Scientists

2022-present Ashley Yi-Fang Lee, Master in Healthcare Administration
2019: Research Associate, UNC Eshelman School of Pharmacy
2020-2022: UNC-USP Quality of Medical Products Fellow

2022 Tatenda Yemeke, Master of Science in Global Health
2016-2019: Research Associate, UNC Eshelman School of Pharmacy
2020-2022: UNC-USP Quality of Medical Products Fellow
2023-present: FHI360

Research Associates

2018-present Colleen Higgins, Master of Science in Public Health
Independent Consultant, UNC Eshelman School of Pharmacy

2017-2019 Sarah Laing, Master of Public Health
Research Associate, UNC Eshelman School of Pharmacy
2019-present: Research Program Leader, Duke Global Health Institute

2017-2018 Daniel Evans, Master of Science in Global Health
Research Associate, UNC Eshelman School of Pharmacy
2018-present: Duke University Medical School

2016-2017 Sophia Bessias, Joint European Masters' in Public Health. MS in Analytics
Research Associate, UNC Eshelman School of Pharmacy
2017-2018: Institute for Advanced Analytics, North Carolina State University
2018-present: Statistician/Data Scientist at UNC Health Care

2017 Deson Haynie, MHS in Health Economics
Independent Consultant, UNC Eshelman School of Pharmacy
2017-present: University of Virginia School of Medicine

2015-2016 Grace Morgan, MHS in Health Economics
Research Data Analyst, Johns Hopkins School of Public Health
2016-present: Manager, Cost-Effectiveness Analysis, Evidence Action

2016 Diane Coraggio, MHS in International Health
Research Data Analyst, Johns Hopkins School of Public Health
2017-present: Center for Public Health Advocacy, Johns Hopkins University

2014-2016 Samantha Clark, MHS in Health Economics
Research Associate, Johns Hopkins School of Public Health
2017-present: PhD Student, University of Washington School of Pharmacy

2013-2015 Allison Portnoy, MSPH in Health Policy and Management, PhD
Research Associate, Johns Hopkins School of Public Health
2016-2019: PhD Student, Harvard School of Public Health

2020-2023: Post-doctoral fellow, Harvard Center for Health Decision Science
 2023-present: Assistant Professor, Boston University

2013-2014 Simrun Grewal, MHS in Health Economics, PhD
 Research Associate, Johns Hopkins School of Public Health
 2015-present: PhD Student, Pharmaceutical Outcomes Research & Policy,
 Strategic Analysis, Research & Training Center, U Washington

2011-2013 Meghan Stack, MHS in International Health
 Research Associate, Johns Hopkins School of Public Health

Research and Scholarship in Pharmacy (RASP) PharmD Honors Students

2024-present Caroline Jeter & Adwoa Agyeiwaa Tweneboa-Koduah, PharmD candidates
Access to medicines through online pharmacies

Victoria Greene, PharmD candidate
Impact of pharmacists in vaccinations

2023-present Dahye Kim & Yuki Yang, PharmD candidates
HPV vaccines and diversity, equity, & inclusion

Gautham Venkatesh & Julia Du, PharmD candidates
Access to medicines through online pharmacies

2022-present Savannah Moody, PharmD candidate
Role of pharmacists in vaccination globally during the Covid-19 pandemic

Cecilia Kim, PharmD candidate
Impact of online pharmacies on pharmacy practice

Kiara Bautista, PharmD candidate
Impact of substandard and falsified medicines in developing countries

Sendy Lin, PharmD candidate
Building the rationale for a national vaccination registry in the U.S.

2021-2023 SiTong Shu, PharmD candidate
Impact of sampling on post-market surveillance: South Africa case study

Sophia Nies, PharmD candidate
Understanding Covid-19 vaccine hesitancy in the US

Noelia Goti, PharmD candidate
Availability of Oxycodone and Percocet through online pharmacies

2020-2022 Jordan (Peijie) Sun, PharmD candidate
Substandard and falsified medicines during the Covid-19 pandemic

Betty Kobia, PharmD candidate
Value of risk-based post market surveillance on medication quality in Kenya

2019-2021 Arden Bui, PharmD candidate
Value of vaccination against antimicrobial resistance in Indonesia

Vy Bui, PharmD candidate
Impact of substandard and falsified antimalarials in Benin

Ben Penley, PharmD candidate
Online pharmacies: Assessing medication safety, marketing, and price

2018-2020 Yiwei (Ember) Lu, PharmD candidate
Impact of PCV in controlling antimicrobial resistance in China

Jinah Han, PharmD candidate
Economic impact of substandard and falsified antimalarials in Myanmar

2017-2020 Stephen McMillan, PharmD candidate
The role of pharmacists in immunization services in low- and middle-income countries

2017-2019 Sarah Beargie, PharmD
Economic impact of substandard and falsified antimalarial medications in Nigeria
2019-present: Pharmacy Resident, Vanderbilt University Medical Center

Other PharmD Students beyond RASP

2021 Feiyun Ma, PharmD candidate
Systematic review of community pharmacist administration of long-acting injectable antipsychotic medications

2021 Catherine Sun, Adam Hendrix, PharmD candidates
Availability of Imatinib through online pharmacies

2020 Joanna Billings, Catherine Sun, Sushan Yu, PharmD candidates
Online pharmacy: Medication safety in the COVID-19 pandemic

2020 Aliyah Cruz, Monica Cozad, Michael Laskowitz, Kyle Ritter, PharmD candidates
VAXCESS – barriers to implementation of a national vaccination registry

2018 Akshara Kumar, PharmD candidate
Impact of substandard and falsified antimalarials in Kenya

Vraj Patel, PharmD candidate
Impact of PCV in controlling antimicrobial resistance in India

2017-2018 Christine Chong, PharmD candidate
Economic and educational returns to cognitive ability
2019-present: United Therapeutics Medical Affairs Fellow, UNC Eshelman School of Pharmacy

2017-2018 Paige Morizio, PharmD candidate
Cost-effectiveness of oral bisphosphonates in osteoporosis patients
2019-present: Pharmacy Resident, Durham Veterans Affairs

Doctor of Philosophy (PhD) Students (Advisee)

2020-present Hui-Han Chen, MHS in Health Economics, PhD candidate
Pharmaceutical Outcomes and Policy, UNC Eshelman School of Pharmacy

2017-2020: Research Associate, UNC Eshelman School of Pharmacy
 2020-2022: PhD student
 2022-present: BMS-UNC Worldwide Health Economics and Outcomes Research
 Pre-doctoral Fellow

2023-present Yesha Patel, PharmD, PhD candidate
 Pharmaceutical Outcomes and Policy, UNC Eshelman School of Pharmacy

Doctor of Philosophy (PhD) Students (non-Advisee)

- 2021-present Assanatou Bamogo, PhD candidate in Maternal & Child Health
 Olufeyisayo Odebunmi, PhD candidate in Health Policy & Management
 Juan Yanguela Eguizabal, PhD candidate in Health Policy & Management
 Research assistants, UNC Gillings School of Global Public Health
Budget impact, cost-effectiveness, and population outcomes of interventions to improve HPV vaccine communication and uptake in rural and nonrural communities
- 2021-2023 Caitlin Biddell, PhD candidate in Health Policy & Management
 Research assistant, UNC Gillings School of Global Public Health
Budget impact, cost-effectiveness, and population outcomes of interventions to improve HPV vaccine communication and uptake in rural and nonrural communities
- 2021-2022 Lauren Passero, PhD candidate, Pharmaceutical Outcomes and Policy
 UNC Eshelman School of Pharmacy
 Student Advisory Committee
- 2020-2023 Wei Yi (Shirley) Kong, PhD candidate in Health Behavior
 Research assistant, UNC Gillings School of Global Public Health
Impact of COVID-19 on routine immunizations
- 2019-2020 Rachel Parry, PhD candidate, Pharmaceutical Outcomes and Policy
 UNC Eshelman School of Pharmacy
 Student Advisory Committee
- 2019-2020 Jennifer Richmond, PhD, Health Behavior
 UNC Gillings School of Global Public Health
 Doctoral Thesis Committee
Development and validation of the trust in my doctor (T-MD), trust in doctors in general (T-DiG), and trust in the health care system (T-HCS) scales
- 2015-2016 Lauren Brown, PhD, International Health – Health Systems
 Johns Hopkins School of Public Health
 Doctoral Thesis Committee
 Preliminary Oral Exam, March 2016
Preferences and perceptions of services and governance of community-level health providers in Morogoro, Tanzania
 2018-present: U.S. Food and Drug Administration
- 2014 Taufique Joarder, PhD, International Health – Health Systems
 Johns Hopkins School of Public Health
 Preliminary Oral Exam, March 2014
Understanding and measuring human resources for health responsiveness in a non-urban Bangladeshi setting
 2018-present: Research Director, FHI 360 in Bangladesh

- 2012-2015 Pooja Sripad, PhD, International Health – Health Systems
 Johns Hopkins School of Public Health
 Doctoral Thesis Committee
 Preliminary Oral Exam, October 2012
 Final Thesis Defense, May 2015
Health systems trust and women’s experiences of facility-based maternity care in peri-urban Kenya
 2016-present: Associate in Reproductive Health Program, Population Council

Doctor of Medicine (MD) Students

- 2022-present Anna Ilyasova, MD candidate
 Research assistant, UNC Gillings School of Global Public Health
Budget impact, cost-effectiveness, and population outcomes of interventions to improve HPV vaccine communication and uptake in rural and nonrural communities
 2020-2022: UNC BS in Public Health and Biology,
 Research assistant, *Impact of COVID-19 on routine immunizations*

Masters’ (MSPH, MPH, MHS, MBA, MPP) Students

- 2019-2020 Shah Nomair Alam, MSPH candidate in Health Policy & Management
 Masters’ thesis project, UNC Gillings School of Global Public Health
Cost-effectiveness of dengue screening & Dengvaxia vaccine in Southeast Asia and Latin America
- Chidera Agwu, MSPH candidate in Health Policy & Management
 Research assistant, UNC Gillings School of Global Public Health
Impact of PCV on antimicrobial resistance in Nigeria
- Li (Amanda) Lin, MSPH in Biostatistics
 Research assistant, UNC Gillings School of Global Public Health
Providers’ antibiotic prescribing behavior in Yunnan, China
- 2018-2019 Kathryn Jackson, MBA-MSPH in Health Policy & Management
 Masters’ thesis project, UNC Gillings School of Global Public Health
Application of an agent-based model to assess the impact of substandard and falsified antimalarials: Zambia case study
 2019-present: Senior Associate, Medtronic
- Tsion Ghedamu, MSPH in Health Policy & Management
 Masters’ thesis project, UNC Gillings School of Global Public Health
Assessing global health program readiness for transition
 2019-present: Program Manager, The Aspen Institute
- 2015-2016 Jennifer Wenjing Tao, MPH program
 Academic & Capstone advisor, Johns Hopkins School of Public Health
A systems dynamics approach to assess the impact of PEPFAR transition on key population access to HIV/AIDS services: A study of peer case managers in Ghana
- Thomas Ngonde Ajah, MPH program
 Academic advisor, Johns Hopkins School of Public Health
- Radhika Tampi, MHS in Health Economics

- Academic advisor, Johns Hopkins School of Public Health
- Joshua Cole, MSPH in Health Systems
Academic advisor, Johns Hopkins School of Public Health
- 2014-2016 Rachel Rosen, MPH-MBA program
Academic advisor, Johns Hopkins School of Public Health
- 2015 Raheem Noormohamed, MSPH Program, International Health – Health Systems
MSPH essay reader
Sustainable financing for HIV/AIDS in middle-income countries in the age of universal health coverage
- 2014-2015 Nobuhiro Koba, MPH program
Academic & Capstone advisor, Johns Hopkins School of Public Health
An evaluation of mobile health applications in Japan
- Ahmad Alkasir, MPH program
Academic advisor, Johns Hopkins School of Public Health
- Hnin (Julia) Lwin, MPH program
Academic advisor, Johns Hopkins School of Public Health
- 2014 Hiwote Getaneh, MPP program
Practicum advisor, Johns Hopkins School of Public Health
Modeling the economic burden of vaccine-preventable diseases (VPDs) among adults in the United States
- Michelle Hsin Yi Ferng, MSPH Program, International Health – Health Systems
MSPH Essay Reader
Faculty retention strategies at higher education institutions: a companion paper on the USAID/Ethiopia human resources for health (HRH) project (2012-17)
- 2013-2014 Reetu Verma, MPH program
Academic & Practicum advisor, Johns Hopkins School of Public Health
Economic burden of vaccine preventable diseases in US adults
- Joseph Nwadiuko, MPH program
Academic & Capstone advisor, Johns Hopkins School of Public Health
The Diaspora Health Network: A business plan
- Junun Bae, MHS in Health Economics program
Academic advisor, Johns Hopkins School of Public Health
- 2013 Vivek Kulkarni, MSPH Program, International Health – Health Systems
MSPH Essay Reader
A descriptive analysis of medical injections among rural healthcare providers within the context of Cambodia's health financing system
- 2012-2013 Yukako Ichimiya, MPH program
Academic advisor, Johns Hopkins School of Public Health
- Yuta Yokobori, MPH program
Academic advisor, Johns Hopkins School of Public Health

- 2011-2012 Kyung Min Song, MPH-MBA program
Capstone advisor, Johns Hopkins School of Public Health
Policy survey for the introduction of Hepatitis A vaccine in Korea
- 2010-2011 Adaora Chima, MPH program
Academic & Capstone advisor, Johns Hopkins School of Public Health
Where are the physicians in Ghana found? Addressing the inequitable distribution of physicians between rural and urban regions in Ghana through policy

G. GRANTS

Notes: (1) Listed funding total represents total of direct and indirect costs unless otherwise indicated.
(2) For grants I am a Co-Investigator, only costs to my lab or myself are listed.

Ongoing Research Support (9 Grants/Contracts, \$3,525,000)

42. Shahi (PI) **Ozawa** and Eckel (**Site co-PI**) U.S. Agency for International Development, DAI (Prime) up to \$2,200,000,000 1/24-12/33
Next Generation Comprehensive Technical Assistance for Health Supply Chain and Pharmaceutical Management
The purpose of this indefinite delivery, indefinite quantity contract is to provide technical assistance to support USAID's 10-year effort in ensuring sustainable access to and appropriate use of safe, quality-assured, affordable health commodities globally through locally led supply chain and pharmaceutical management systems. Led by DAI.
41. Brice (PI) **Ozawa** and Eckel (**Site co-PI**) U.S. Agency for International Development Panagora Group (Prime) up to \$2,200,000,000 1/24-12/33
Next Generation Comprehensive Technical Assistance for Health Supply Chain and Pharmaceutical Management
The purpose of this indefinite delivery, indefinite quantity contract is to provide technical assistance to support USAID's 10-year effort in ensuring sustainable access to and appropriate use of safe, quality-assured, affordable health commodities globally through locally led supply chain and pharmaceutical management systems. Led by the Panagora Group.
40. **Ozawa (PI)** National Association of Chain Drug Stores Foundation \$250,000 (10% effort) 4/23-3/25
Evaluating Access to Childhood Vaccines Through Community Pharmacies
The purpose of this research is to estimate the health and economic outcomes associated with community pharmacy administration of COVID-19 vaccines to children in rural North Carolina, and (2) assess the successes and challenges that community pharmacies have faced in administering childhood vaccines to rural populations in North Carolina.
39. **Ozawa (PI)** Merck & Co. Inc. \$192,000 (20% effort) 1/23-3/25
Value of Pneumococcal Vaccination in Controlling the Development of Antimicrobial Resistance
The purpose of this research is to estimate the benefit of pneumococcal vaccination in controlling the development of antimicrobial resistance in Brazil using the DREAMR microsimulation model.
38. **Ozawa (PI)** Merck & Co. Inc. \$480,000 (20% effort) 4/21-12/24
Assessing the Economic Burden of Covid-19 Vaccine Hesitancy in the US and Globally
The purpose of this research is to evaluate the immediate impact of the Covid-19 outbreak and response measures on people's confidence in Covid-19 vaccines, by forecasting the expected demand and examining the economic burden of Covid-19 vaccine hesitancy.

37. **Ozawa (PI)** Concept Foundation; Merck & Co. Inc.; Global Financing Facility; Johnson & Johnson \$300,000 (20% effort) 1/21-2/24
Uterotonic Medication Quality: Contributions toward Universal Health Coverage
 The purpose of this research is to demonstrate the health and economic impact of poor-quality uterotonics across low- and middle-income countries (LMICs).
36. **Ozawa and Seyerle (Co-PI)** AESARA, Inc. \$305,000 (10% effort) 7/20-6/24
UNC-AESARA Market Access and Informatics Fellowship
 The purpose of this research is for AESARA to support a post-doctoral fellowship for PharmD graduates to conduct research in market access, informatics and communication of evidence.
35. Brewer (overall PI), Wheeler & **Ozawa (Project 4 Co-PI)** National Institutes of Health (NIH) \$11,700,000 Overall; \$1,700,000 Project 4 (17% effort) 9/21-8/26
Improving Provider Announcement Communication Training (IMPACT)
 The purpose of the P01 Program Project IMPACT is to improve provider communication and HPV vaccine coverage among adolescents. IMPACT's specific aims are to 1) build evidence on opportunities to improve providers' HPV vaccine communication; 2) evaluate the impact and cost of HPV vaccine communication interventions in large healthcare systems; and 3) support implementation of interventions to improve HPV vaccine uptake in large healthcare systems.
34. Lieberman (PI) **Ozawa (Site PI)** National Institute of Health \$298,000 (5% effort) 10/22-6/27
Adapting a point of use test card, the chemoPAD, for protecting chemotherapy drug quality in sub-Saharan Africa
 The purpose of this research is to address the challenge of assuring the quality of chemotherapy drugs in low- and middle-income countries. A point-of-use test card, the chemoPAD, will be adapted and validated to screen the quality of injectable chemotherapy drugs. This technology will be implemented in hospitals in Ethiopia, Malawi, Kenya, and Cameroon.

Completed Research Support (33 Grants/Contracts, Total \$5,478,500)

33. **Ozawa (PI)** U.S. Agency for International Development \$258,000 (4% effort) 7/20-6/23
Data 4 Impact (D4I): Costs of vertical vs. horizontal programs in Nigeria
 The purpose of this research is to estimate the differences in costs between vertical versus horizontal health programs supported by USAID in Nigeria.
32. **Ozawa (PI)** U.S. Pharmacopeial Convention (USP) / U.S. Agency for International Development \$10,000 (1% effort) 1/22-1/23
Estimating Health and Economic Costs of Substandard and Falsified Medicines, PQM+ Project
 The purpose of this research is to help validate the substandard and falsified cost model tool which will be pilot tested in Kenya and Pakistan.
31. **Ozawa (PI)** Council of Canadian Academies \$32,000 (1% effort) 11/21-8/22
Assessing the Burden of Misinformation on Covid-19 Vaccine Hesitancy in Canada
 The purpose of this research is to use a quantitative model to estimate the economic costs of the contribution of misinformation to vaccine hesitancy in Canada.
30. **Ozawa (PI)** U.S. Pharmacopeial Convention (USP) \$480,000 (20% effort) 2/20-1/22
UNC-USP Fellowship in Quality of Medical Products
 The purpose of this research is for USP to support two fellows at UNC Eshelman School of Pharmacy to conduct research examining the role of procurement on quality of medical products.
29. **Ozawa (PI)** U.S. Pharmacopeial Convention (USP) / U.S. Agency for International Development \$14,000 (2% effort) 2/21-9/21
Estimating Health and Economic Costs of Substandard and Falsified Medicines, PQM+ Project

The purpose of this research is to support the development of a model to estimate the costs of substandard and falsified medicines by reviewing existing models and data sources.

28. Brewer (PI) **Ozawa (Co-I)** North Carolina Department of Health and Human Services (NCDHHS) \$10,000 (7% effort) 6/21-8/21
Rapid evaluation of North Carolina Covid-19 vaccine incentive program
 The purpose of this research is to evaluate the Covid-19 vaccination incentives program, which includes lotteries and guaranteed cash payments.
27. **Ozawa (PI)** University of North Carolina at Chapel Hill \$10,000 (0% effort) 1/20-12/20
UNC Junior Faculty Development Award
 The purpose of this research is to estimate the health and economic impact of buying antibiotics from illicit online pharmacies.
26. **Ozawa (PI)** World Health Organization \$100,000 (10% effort) 1/20-10/20
Return on Investment of Risk-Based Post Market Surveillance
 The purpose of this research is to develop a business case for strengthening national regulatory authorities to conduct risk-based post market surveillance to counter the threat of substandard and falsified medicines.
25. **Ozawa (PI)** U.S. Pharmacopeial Convention (USP) \$30,000 (5% effort) 3/19-6/19
Importance of medicine quality in achieving universal health coverage
 The purpose of this research is to develop a white paper on the importance of medicine quality in low- and middle-income countries toward achieving universal health coverage.
24. Omer (PI) **Ozawa (Site PI)** Bill & Melinda Gates Foundation \$60,000 (4% effort) 8/18-12/22
Estimating the impact of maternal flu immunization
 The purpose of this research is to estimate the impact of maternal flu immunization on economic productivity gains by examining the linkage between children's cognitive function, educational attainment and employment outcomes.
23. Lee (PI) **Ozawa (Co-I)** Centers for Disease Control & Prevention \$63,000 (7% effort) 8/18-6/19
Hard-to-reach populations bridging the gaps for immunization (H2R BTG)
 The purpose of this research is to identify gaps in literature on populations that are hard-to-reach for immunization, including the mechanisms that make individuals hard-to-reach and the economic impact of not reaching them.
22. **Ozawa (PI)** World Health Organization \$25,000 (10% effort) 3/17-9/17
Estimation of financial resource requirements for achieving and sustaining maternal and neo-natal tetanus elimination
 The purpose of this research is to develop an investment case that presents the cost-effectiveness of maternal and neo-natal tetanus elimination and show the resource requirements needed for achieving maternal and neo-natal tetanus elimination.
21. Thompson (PI) **Ozawa (Co-I)** Centers for Disease Control & Prevention \$62,500 (32% effort) 3/17-7/17
Characterization of the costs of expanded measles and rubella immunization efforts to achieve eradication
 The purpose of this research is to gather known evidence on the costs of immunization and develop cost functions to assess the necessary costs towards disease eradication.
20. Wonodi, Chugbo, Rakshani (PIs) **Ozawa (Co-I)** 3ie \$8,000 Direct (6% effort) 1/16-12/16
Community distribution of vaccine indicator and reminder (VIR) band to improve vaccine initiation and completion in Nigeria

The purpose of this research is to assess the change in vaccination timeliness and completion among newborn infants following community engagement through social mobilization campaign and administration of the Vaccine Indicator and Reminder (VIR) band.

19. Moss, Hayford (PIs) **Ozawa (Co-I)** Bill & Melinda Gates Foundation \$6,000 (5% effort) 11/15-9/16
Assessing the feasibility of using serological data to monitor and guide immunization programs in low income countries
 The purpose of this research is to demonstrate the resource needs, feasibility and sustainability of serological surveillance in low income countries.

18. **Ozawa (PI)** Bill & Melinda Gates Foundation \$1,650,000 (50% effort) 10/15-9/16
Decade of Vaccine Economics IV
 The purpose of this research is to assess the economic impact of vaccination by gathering primary data on the averted cost of illness due to vaccine preventable diseases in low- or middle-income countries, as well as update and extend the existing DOVE vaccine economic models to inform the progress of the Global Vaccine Action Plan.

17. Bennett (PI) **Ozawa (Co-I)** U.S. Agency for International Development \$8,000 (5% effort) 10/15-9/16
Project SOAR
 The purpose of this research is to assess the effects of the geographic prioritization process undertaken under PEPFAR on key service delivery and health systems indicators in sub-Saharan Africa.

16. Lee (PI) **Ozawa (Co-I)** Center for Disease Control and Prevention \$16,000 (10% effort) 8/15-8/16
Demonstrating the Incremental Economic and Societal Impact of Reaching Hard-to-Reach Population through Routine Immunization
 The purpose of this research is to identify various pockets of hard-to-reach populations and model the economic and societal impact of reaching these populations through specific vaccines.

15. Constenla (PI) **Ozawa (Co-I)** Gavi, the Vaccine Alliance \$10,000 (5% effort) 1/15-9/16
Economic evaluation of the pneumococcal conjugate vaccine in urban Nepal
 The purpose of this research is to determine the economic impact of pneumonia of any cause, clinical meningitis and/or invasive pneumococcal disease (IPD) and the impact of PCV on the health systems and households in urban Nepal.

14. Baqui (PI) **Ozawa (Co-I)** U.S. Agency for International Development \$24,000 (10% effort) 10/13-3/15
Evaluation Support for the Development of an Integrated Community Program in Tanzania
 The purpose of this research is to conduct discrete choice experiments to identify characteristics of a community health worker (CHW) program that would recruit, retain and motivate CHWs and govern at the local level.

13. **Ozawa (PI)** Merck & Co, Inc. \$210,000 (15% effort) 6/13-12/14
Economic Burden of Adult Vaccine Preventable Diseases in the United States
 The purpose of this research is to model the economic burden of 14 vaccine preventable diseases in US adults, including direct and indirect costs associated with illness using two methodologies (cost of illness and full income method).

12. **Ozawa (PI)** Bill & Melinda Gates Foundation \$1,076,000 (50% effort) 1/13-9/15
Decade of Vaccine Economics III
 The purpose of this research is to generate new evidence on the economic impact of vaccines by developing 7 models (cost of illness, disability adjusted life year averted, value of life years, cost of vaccine programs, financing of vaccine programs, funding gap, return on investment) to estimate the economic impact of vaccines during the Decade of Vaccines (2011-2020) across 18 antigens in 94 countries.

11. **Ozawa (PI)** Gavi, The Vaccine Alliance \$138,000 (5% effort) 1/13-12/13
Equity of Vaccine Coverage & Trust in Vaccines
 The purpose of this research is to conduct primary data collection in northern Nigeria to understand the importance of trust in routine immunization uptake, develop a measure of trust in vaccines, and discuss possible solutions to improve trust.
10. Bennett (PI) **Ozawa (Co-I)** U.S. Agency for International Development \$16,000 (5% effort) 10/12-9/14
Health Financing and Governance
 The purpose of this research is to improve health financing in priority health services and improve measurement of global health systems progress through increased use of evidence-based tools and innovative measurement techniques.
9. **Ozawa (PI)** Merck & Co. Inc \$285,000 (15% effort) 11/11-12/12
Policy Surveys for the Introduction of Hepatitis A Vaccine in Six Countries
 The purpose of this research is to understand the process used by key stakeholders in 6 countries for vaccine adoption decision-making including introduction of the Hepatitis A vaccine.
8. **Ozawa (PI)** Bill & Melinda Gates Foundation \$425,000 (50% effort) 10/11-2/13
Decade of Vaccine Economics II
 The purpose of this research is to generate new evidence on the economic benefits of vaccines (value of statistical life, cost of illness & DALY analyses) and feed into strategies developed by the Decade of Vaccine Collaboration, the WHO Strategic Advisory Group of Experts (SAGE) on Immunization and Gavi.
7. Niessen (PI) **Ozawa (Co-I)** PATH Malaria Vaccine Initiative \$18,000 (20% effort) 4/11-12/11
Accelerated Vaccine Initiative (AVI) Economics Component
 The purpose of this research is to conduct a multi criteria decision analysis in Uganda to weigh criteria for priority setting in health among policy makers with a focus on malaria control.
6. Bennett (PI) **Ozawa (Co-I)** UK Aid \$80,000 (10% effort) 1/11-12/15
Future Health Systems II: Innovations for Equity
 The purpose of this research consortium program is to understand how institutional arrangements and technologies can be introduced, tested and expanded to meet the needs of the poor.
5. **Ozawa (PI)** Johns Hopkins Center for Global Health \$50,000 (0% effort) 1/11-6/13
Building informed trust: injections and health insurance
 The purpose of this research is to develop an educational tool for injection practices and health insurance in Cambodia.
4. **Ozawa (PI)** The Toyota Foundation \$14,000 (0% effort) 11/10-10/12
Comparison of People's Trust in Education vs. Health Systems in Cambodia
 The purpose of this research is to examine measures and compare people's trust in the public education system and the public health system in Cambodia.
3. **Ozawa (PI)** Bill & Melinda Gates Foundation \$110,000 (50% effort) 11/10-4/11
Decade of Vaccine Economics
 The purpose of this research is to link vaccination to tangible economic benefits beyond mortality savings by modeling the value of statistical life and cost of illness, and conducting a systematic literature review.
2. Frick (PI) **Ozawa (Co-I)** Bill & Melinda Gates Foundation \$10,000 (25% effort) 4/10-7/10
Cost-Effectiveness of Trachoma Antibiotic Treatment in Tanzania

The purpose of this research is to examine the cost-effectiveness of the Antibiotic treatment for Trachoma operated by the Partnership for the Rapid Elimination of Trachoma (PRET).

1. Bennett (PI) **Ozawa (Co-I)** Bill & Melinda Gates Foundation \$170,000 (30% effort) 1/10-6/14
Evaluative Assessment of the Avahan HIV/AIDS Prevention Program
 The purpose of this research is to assess the transition of the Avahan HIV/AIDS prevention program from the donor to the local government and communities and to evaluate its influence on HIV/AIDS policy.

H. PROFESSIONAL SERVICE

American Society of Tropical Medicine & Hygiene (ASTMH)

- 2020-present Invited Scientific Program Committee member, Global Health Subcommittee
 Reviewer, Abstracts for 2020 ASTMH Annual Meeting
 Reviewer, Abstracts for 2022 ASTMH Annual Meeting

Bill & Melinda Gates Foundation (BMGF)

- 2022 Contributed to report on Substandard & Falsified Medicines: A landscape investigating knowledge gaps and most impactful opportunities for intervention, prepared by Voyager Consulting for the BMGF Integrated development team.
- 2016 Invited workshop participant, BMGF-Gavi Impact Modeling Meeting, co-hosted by Gavi and BMGF, Washington DC, April 19-20, 2016.
- 2015 Invited workshop participant/presenter, Convening on Immunization Delivery Costs, University of Washington and BMGF, Seattle, October 14-15, 2015.
- 2014 Invited workshop participant/presenter, Vaccination Impact Estimates Phase 2 Meeting, co-hosted by Gavi and BMGF, Washington DC, February 25-26, 2014.

Boston Consulting Group (BCG)

- 2014-2015 Advisor, Maternal Immunization Health Impact Assessment funded by BMGF, Advising individuals at BCG on cost-effectiveness modeling methodology, November 13, 2014 – April 6, 2015.

Centers for Disease Control and Prevention (CDC)

- 2019 Invited brownbag speaker, Economic considerations of vaccinating hard-to-reach populations. Atlanta GA, May 10, 2019.
- 2018 Invited brownbag speaker, Reaching the hard to reach for vaccination: definitions and economic considerations. Atlanta GA, November 27, 2018.

Copenhagen Consensus Center

- 2018-2019 Reviewer, Cost-benefit analysis of Gavi, Global Polio Eradication Initiative, Global Fund and the Global Finance Facility for the Bill and Melinda Gates Foundation. Presented by Bill Gates at the World Economic Forum, January 25, 2019.

Council of Canadian Academies (CCA)

- 2021-2023 Invited Expert Panel Member, Assessment on Socio-Economic Impacts of Science and Health Misinformation

Fondation Mérieux

- 2023 Invited participant/presenter, Vaccine Acceptance Meeting, Annecy, France, November 1, 2023.
- 2019 Invited participant/presenter, 7th Vaccine Acceptance Meeting, Annecy, France, September 25, 2019.
- 2016 Workshop participant, Estimating the full public health value of vaccines. Annecy, France, December 5-7, 2016.

Gavi, the Vaccine Alliance

- 2013 Invited workshop participant/presenter, Value of Vaccines Meeting, presented as one of 26 worldwide experts on the values of vaccines. Gavi, Geneva, Switzerland, January 14-15, 2013.
- 2012 Invited workshop participant/presenter, The Gavi Partners Forum; hosted by Gavi, Dar Es Salaam, Tanzania, December 5-7, 2012.
- 2012 Invited workshop participant/presenter, Revising Gavi's Vaccine Impact Estimates Meeting, hosted by Gavi, Washington DC, October 12, 2012.

Health Research Council of New Zealand

- 2020 Review of grant proposal for 2020 Achieving equitable access to medicines request for proposal, December 1, 2020.

Health Systems Global (HSG)

- 2020 Organizer, Webinar "From IP to falsifications to shortages: what COVID-19 teaches us about medicines access during a pandemic," Hosted by Medicines in Health Systems Thematic Working Group, May 13, 2020.
- 2018 Chair, "Medicines in Health Systems TWG Business Meeting" Global Symposium for Health Systems Research, Liverpool, UK, October 12, 2018.
- 2018-present Reviewer, Abstracts for Global Symposium for Health Systems Research
- 2018-2019 Organizer, Supplement to *Health Policy and Planning*, "Access to Medicines through Health Systems in Low- and Middle-Income Countries"
- 2018 Called for and Reviewed 33 papers for a Journal Supplement on Access to Medicines through Health Systems in Low- and Middle-Income Countries.
- 2017-2021 Elected Co-chair of Medicines in Health Systems Thematic Working Group (TWG) to facilitate positive change in medicines availability, access, affordability, and use, by informing and promoting dialogue among stakeholders in health systems.
- 2013 Chair, "The evolution of the global health marketplace: Implications for health systems," Private Sector in Health Symposium, Sydney, Australia July 6, 2013.

Institute of Medicine and National Academy of Engineering

- 2015 Reviewer, *Ranking Vaccines: Applications of a Prioritization Software Tool, Phase III: Use Case Studies and Data Framework*. Committee on Identifying and Prioritizing Preventive Vaccines for Development, Phase III. Washington, DC: The National Academies Press. <https://www.nap.edu/read/18763/chapter/1>

International Centre for Diarrheal Disease Research, Bangladesh (ICDDR,B)

- 2010 Reviewer, Impact of educational intervention on knowledge, attitude and practice to and willingness to pay for micro health insurance among low-income workers in informal sector in urban Bangladesh

International Health Economics Association (IHEA)

- 2023 Moderator, Barriers to Access, IHEA's 2023 World Congress
- 2022-2023 Selected Program Chair for IHEA's 2023 World Congress
- 2016-present Selected Member of the Scientific Committee Review Panel
- 2015 Chair, Session on "Utilization of Development Funds" and "Cost of Vaccination" iHEA World Congress Symposium, Milan, Italy, July 13-15, 2015.

Johns Hopkins Bloomberg School of Public Health (JHSPH)

- 2016 Workshop organizer/participant/presenter, Workshop on Strategic Issues in Global Health Program Transitions; co-hosted by Results for Development and JHSPH, Warrenton, Virginia, March 30-April 1, 2016.
- 2011 Strategic Directions Committee, Representative

2009-2010 Students Promoting Healthcare Reform (SPHERE), Co-VP of Education
 2007-2008 International Health Student Group, Co-President
 2006-2007 International Health Student Group, Vice President
 2006-2007 Deans for Students Network, Elected Student Representative
 2005-2006 Curriculum and Credentials Committee, Masters Student Representative
 2005-2006 Self-Study Committee, Student Representative

Merck Inc.

2020 Invited presenter. FIGO Africa Regional Kigali Congress, Virtual (hosted from Kigali, Rwanda), December 14, 2020.
 2017 Consultant, Economic burden of select diseases for which vaccines are available among adults in the United States

Pan American Health Organization (PAHO)

2016 Invited Expert Reviewer, Expert review of ProVac e-toolkit. Washington DC, October 20-21, 2016.

Public Health Agency of Canada

2018-2023 Economic Guidelines Task Group Member, reporting to the National Advisory Committee on Immunization (NACI), to develop economic guidelines to help standardize and facilitate the economic evaluation of vaccines in Canada.

Public Health Foundation of India (PHFI)

2015-16 Member of Steering Committee, "Cost of delivering routine immunization services in India" led by Immunization Technical Support Unit (ITSU) at PHFI.

United Nations Children's Fund (UNICEF)

2023-present Consultant on building an investment case for a primary healthcare community platform involving community health workers.

United States Agency for International Development (USAID)

2019 Invited brownbag presenter, Integrating medicines quality assurance into universal health coverage programming. USAID, Crystal City, VA, August 29, 2019.
 2015 Invited workshop participant/presenter, Community Health Worker Learning Agenda Project Stakeholder Dialogue Workshop, with Tanzania Ministry of Health and Social Welfare, Dar Es Salaam, Tanzania, September 1, 2015.
 2013-2015 Quality Advisor, Discrete Choice Experiment (DCE) in Bangladesh, Advising on DCE literature and methodology for Health Financing and Governance Project funded by USAID

U.S. Department of Health and Human Services (HHS)

2018 Invited expert presenter, National Vaccine Advisory Committee. Live Webcast to the Public. Washington DC, September 12, 2018.

United States Pharmacopeial Convention (USP)

2020 Invited speaker, USP COVID-Connect Webinar Interview Series. Virtual (hosted from Delhi, India), September 14, 2020.
 2019-present Invited member of the Evidence Curation Working Group of the Medicines We Can Trust campaign led by USP: <https://medswecantrust.org/the-campaign/>
 2019 Invited brownbag speaker, Integrating Medicines quality assurance into universal health coverage programming. Rockville MD, August 29, 2019.
 2019 Invited workshop/presenter, Importance of medicine quality in achieving universal health coverage. Rockville MD, May 6, 2019.

University of North Carolina Eshelman School of Pharmacy

2023	Vice chair of research PACE co-representative with Tim Ives
2021	5-year service to the University and the State of North Carolina
2021	Invited presenter, Chancellor's Global Leadership Council meeting
2021-present	PharmAlliance Practice Domain Deputy Chair
2021-2022	Postdoc Advisory Committee (PAC)
2020-2022	Graduate Education Committee (GEC)
2020-present	UNC-AESARA Market Access and Health Informatics Fellowship Director
2020-2022	UNC-USP Quality of Medical Products Fellowship Director
2020-2021	PACE Fellowship Working Group Co-Lead
2020-2021	Global Engagement Committee
2019	Search Committee Member for PACE Division Chair
2019	Chair, Search Committee for Research Associate position in PACE
2018-2019	Chair, Search Committee for Clinical Assistant Professor position in PACE
2018-2019	Accreditation Self-Study, Standards (18-19) Reviewer
2018	Strategic Plan Refresh, Global Engagement Committee Member
2017-2018	Search Committee for Open Rank Position in Health Economics in DPOP
2017	PharmAlliance Research Symposium on Antimicrobial Resistance, Discussion Lead on Practice and Policy
2017	Chair, Search Committee for Research Associate position in PACE
2016-present	Research and Scholarship in Pharmacy (RASP) Oversight Committee
2016-present	Research and Scholarship in Pharmacy (RASP) PACE Division Director
2016	Chair, Search Committee for Research Associate position in PACE

Vaccine, Journal

2014	Invited Editorial Board Member, Supplementary Issue, "Expanding the evidence base to inform vaccine introduction: program costing and cost-effectiveness analyses" https://www.sciencedirect.com/journal/vaccine/vol/33/suppl/S1
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Value of Vaccines Research Network (VoVRN)

2021	Invited webinar presenter, <u>Value of Vaccination Research Network Work-in-Progress Webinar Series</u> , Virtual (hosted from Harvard School of Public Health, Boston), January 19, 2021.
2016	Invited workshop participant/presenter, <u>Advancing the Value of Vaccines Research Agenda</u> , hosted by Harvard T.H. Chan School of Public Health, Boston, April 26-27, 2016.

The World Bank

2009	Consultant, Analysis of monitoring and evaluation considerations across 35 health, nutrition and population projects. Washington DC, May 11- June 30, 2009.
2008	Consultant, Review thematic codes to monitor/track World Bank lending in Health, Nutrition and Population projects. Washington DC, May 26 – June 30, 2008.
2007	Consultant, Analyze Quality Enhancement Reviews for the Health, Nutrition and Population Quality Group. Washington DC, November 10, 2005 - June 30, 2007.

World Health Organization (WHO)

2021	Invited participant/presenter, Informal technical experts working group meeting on risk-based post market surveillance (rb-PMS). Virtual (hosted from Geneva, Switzerland), April 16, 2021.
2020	Invited participant/presenter, Briefing session for the informal experts advisory group on risk-based post market surveillance. Virtual (hosted from Geneva, Switzerland), October 22, 2020.
	Invited planning meeting participant/presenter, Risk-based post market surveillance on medicine quality. Dar Es Salaam, Tanzania, January 20-23, 2020.

- 2019 Invited participant/presenter, WHO Informal Technical Expert Working Group on Risk-Based Post Market Surveillance. Geneva, Switzerland, October 21, 2019.
- 2016 Invited workshop participant, Technical meeting on costing surveillance. Geneva, Switzerland, December 7-8 2016.
- 2015-16 Member of WHO Strategic Advisory Group of Experts (SAGE) Global Vaccine Action Plan (GVAP) Working Group on Strategic Objective Two, Demand for Immunization to define and develop indicators to measure how individuals and communities understand the value of vaccines and demand immunization.
- 2014 Invited workshop participant/presenter, WHO Consultation on the Broader Economic Impact of Vaccines and Immunization Programs, co-hosted by WHO and Health Intervention and Technology Assessment Program, Ministry of Public Health, Bangkok, Thailand, November 24-25, 2014.
- 2014 Invited participant/presenter, Immunization and Vaccines related Implementation Research (IVIR) Advisory Committee meeting. Geneva, September 17, 2014.
- 2012 Invited participant/presenter, Immunization and Vaccine related Implementation Research (IVIR) Advisory Committee meeting. Geneva, Switzerland, September 25-26, 2012.

JOURNAL REVIEWER (2006-present)

American Journal of Tropical Medicine and Hygiene
 BMC Health Services Research
 BMC Public Health
 BMC Medicine
 Bulletin of the World Health Organization
 Cochrane Review Group
 Health Affairs

Acknowledged in April 2021 <https://doi.org/10.1377/hlthaff.2021.00231>

Health Economics
 Health Policy and Planning
 International Journal for Equity in Health
 The Lancet
 Lancet Global Health
 Medicine Access @ Point in Care
 Ophthalmologic Epidemiology
 Social Science and Medicine
 Vaccine
 World Development

PROFESSIONAL AFFILIATIONS

American Society of Tropical Medicine and Hygiene, Member since 2020
 International Pharmaceutical Federation (FIP), Member since 2017
 American College of Clinical Pharmacy, Member since 2017
 International Society for Pharmacoeconomics and Outcomes Research, Member since 2015
 International Health Economics Association, Member since 2010
 Scientific Committee, Milan 2015, Boston 2017, Basel 2019, Virtual 2021, Cape Town 2023
 Health Systems Global, Member since 2012
 Scientific Committee, Vancouver 2016, Liverpool 2018, Dubai 2020, Bogota 2022
 Society of Medical Decision Making, Member since 2014
 American Society of Health Economists, Member since 2007
 Delta Omega Honors Society in Public Health, Alpha Chapter, *Lifetime membership* since 2007
 American Public Health Association, Member since 2006
 Global Health Council, Member since 2006