NATHANIEL HENDRIX

July 2025

Center for Professionalism and Value   https://nathanielhendrix.com/
1016 16th St NW #8   nhendrix@theabfm.org
Washington, DC 20036

RESEARCH POSITIONS

American Board of Family Medicine, Center for Professionalism and Value in Health Care
    Data Scientist, 2022 – Present

Stanford University, School of Medicine
    Research Affiliate, 2022 – Present

Harvard University, T.H. Chan School of Public Health
    Visiting Scientist, 2022

EDUCATION & TRAINING

Postdoctoral Fellowship, Harvard University, T.H. Chan School of Public Health, 2020 – 2022.

Ph.D., Health Economics and Outcomes Research, University of Washington, 2020.
    Dissertation Title: "Using Health Economics Tools to Enhance the Clinical Utility of Artificial Intelligence-Based Diagnostics: A Case Study in Breast Cancer Screening"
    Committee: David L. Veenstra (chair), Aasthaa Bansal, Brett Hauber, Christoph I. Lee

Pharm.D., University of Washington, 2015.

B.A. English Literature, Texas State University, 2004.

RESEARCH INTERESTS

Clinical Artificial Intelligence, Natural Language Processing, Pharmacoepidemiology, Preference Assessment

PEER-REVIEWED PUBLICATIONS
indicates co-first author, [†] *indicates co-senior author,* <u>indicates direct reports</u>

1. **N. Hendrix**, R.V. Parikh, M. Taskier, G. Walter, D.H. Rehkopf, and R.L. Phillips (2025, in press). "Natural Language Processing Improves Reliable Identification of COVID-19 Compared to Diagnostic Codes." *American Journal of Epidemiology*.

2. T. Wang, K. Stelter, T. O'Neill, **N. Hendrix**, A. Bazemore, K. Rode, and W. Newton (2025, in press). "Blueprinting the Future: Automatic Item Categorization using Hierarchical Zero-Shot and Few-Shot Classifiers." *Journal of Applied Testing Technology*.

3. E.E. Velásquez, N. Kamdar, **N. Hendrix**, X. Chen, R.L. Phillips, and D. Rehkopf (2025). "An intersectional analysis of the underutilization of nirmatrelvir-ritonavir for treatment of COVID-19 in U.S. primary care practices, 2021 to 2023." *Journal of Primary Care and Community Health.* doi: 10.1177/21501319251350935

4. J. Park, Y. Jabbarpour, R.L. Phillips, A. Bazemore, and **N. Hendrix** (2025). "Factors Associated with Documenting Social Determinants of Health in Electronic Health Records by Family Physicians." *Journal of the American Board of Family Medicine.* doi: 10.3122/jabfm.2024.240279R1

5. **N. Hendrix**, R.V. Parikh, M. Taskier, G. Walter, I. Rochlin, S. Saydah, E.H. Koumans, O. Rincón-Guevara, D.H. Rehkopf, and R.L. Phillips (2025). "Heterogeneity of Diagnosis and Documentation of Post-COVID Conditions in Primary Care: A Machine Learning Analysis." *PLOS One.* doi: 10.1371/journal.pone.0324017

6. L. Rotenstein, **N. Hendrix**, R.L. Phillips, and J. Adler-Milstein (2024). "Team and EHR Features and Burnout Among Family Physicians: A National Survey Study.' *JAMA Network Open* doi: 10.1001/jamanetworkopen.2024.42687

7. **N. Hendrix**, R.L. Phillips, and A.W. Bazemore (2024). "Only One Quarter of Family Physicians are Very Satisfied with their Electronic Health Records Platform" *Journal of the American Board of Family Medicine*. doi: 10.3122/jabfm.2024.240034R1

8. AJ. Holmgren, **N. Hendrix**, N. Maisel, J. Everson, A. Bazemore, L. Rotenstein, J. Adler-Milstein, and R.L. Phillips (2024). "Assessing the relationship between EHR satisfaction, burnout, and burden reduction strategies for primary care physicians." *JAMA Network Open.* doi: 10.1001/jamanetworkopen.2024.26956

9. L.T. Olana, T. Forzy, F. Getnet, A. Misganew, M. Agachew, A. Arja, S. Warkaye, S. Kassahun, S. Memirie, T. Moshag, R. Sato, **N. Hendrix**, M. Zelalem, Y. Lakew, M. Hailu, and S. Verguet (2024). "Estimating immunization coverage at the district level: A case study of measles and diphtheria-pertussis-tetanus vaccines in Ethiopia." *PLOS Global Public Health.* doi: 10.1371/journal.pgph.0003404

10. **N. Hendrix**, N. Maisel, J. Everson, V. Patel, A. Bazemore, L.S. Rotenstein, AJ. Holmgren, A.H. Krist, J. Adler-Milstein, and R.L. Phillips (2024). "Impact of Response Bias in Three Surveys on Primary Care Providers' Experiences with Electronic Health Records." *Journal of the American Medical Informatics Association.* doi: 10.1093/jamia/ocae148

11. J. Everson, **N. Hendrix**, R.L. Phillips, J. Adler-Milstein, A. Bazemore, and V. Patel (2024). "Primary Care Physicians' Satisfaction With Interoperable Health Information Technology." *JAMA Network Open* doi: 10.1001/jamanetworkopen.2024.3793

12. **N. Hendrix**, R.L. Phillips, and A.W. Bazemore (2023). "How Often Do Family Physicians Document Social Needs in Electronic Health Records?" *Journal of the American Board of Family Medicine.* doi: 10.3122/jabfm.2022.220296R1

13. **N. Hendrix**, A. Bazemore, A.J. Holmgren, L.R. Rotenstein, A.R. Eden, A.H. Krist, and R.L. Phillips (2023). "Variation in Family Physicians' Experiences Across Different Electronic Health Record Platforms: A Descriptive Study." *Journal of General Internal Medicine.* doi: 10.1007/s11606-023-08169-5

14. **N. Hendrix**, S. Warkaye, L. Tesfaye, M. Agachew, A. Arja, R. Sato, F. Getnet, and S. Verguet (2023). "Estimated Travel Time and Staffing Constraints to Accessing the Ethiopian Healthcare System: A Two-Step Floating Catchment Area Analysis." *Journal of Global Health.* doi: 10.7189/jogh.13.04008

15. **N. Hendrix**, S. Bolongaita, S.T. Memirie, M.T. Tolla, D. Villano, and S. Verguet (2023). "Equitable prioritization of healthcare interventions by weighting outcomes on financial risk protection criteria." *Value in Health*, doi: 10.1016/j.jval.2022.09.007.

16. **N. Hendrix**, N. Oestreicher, D. Lalla, C.M. Dolan, K.A. Fisher, D.L. Veenstra and B. Moy (2022). "Residual disease burden after neoadjuvant therapy among U.S. patients with high-risk HER2+ early-stage breast cancer: A population effectiveness model." *Clinical Breast Cancer*, 22(8). doi: 10.1016/j.clbc.2022.08.012

17. **N. Hendrix***, K.P. Lowry*, J.G. Elmore, W. Lotter, A.G. Sorensen, W. Hsu, G.J. Liao, S. Parsian, S. Kolb, A. Naeim, and C.I. Lee (2022). "Radiologist preferences for the implementation of artificial intelligence-based decision support for detection and risk prediction during interpretation of screening mammography." *Journal of the American College of Radiology*, 19(10). doi: 10.1016/j.jacr.2022.06.019

18. S. Jiang, P. Mathias, **N. Hendrix**, D.L. Veenstra, and B. Devine (2022). "Customizing value-based methods to prioritize implementation of pharmacogenomic clinical decision support for learning health systems: A cost-utility analysis." *The Pharmacogenomics Journal*, 22. doi: 10.1038/s41397-022-00275-7

19. **N. Hendrix**, X. Jiang Kwete, S. Bolongaita, I. Megiddo, S.T. Memirie, A. Mirkuzie, J. Nonvignon, and S. Verguet (2022). "Economic evaluations of health system strengthening activities in low- and middle-income countries: A methodological systematic review." *BMJ Global Health*, 7(e007392). doi: 10.1136/bmjgh-2021-007392

20. L.F. Assebe, D. Dillu, K.A. Johansson, M.T. Tolla, G. Tiru, S. Bolongaita, A. Chakrabarti, and **N. Hendrix** (2021). "Financial risks of care-seeking for malaria by rural households in southwest Ethiopia." *BMJ Open*, 11(e056162). doi: 10.1136/bmjopen-2021-056162

21. **N. Hendrix**, D.L. Veenstra, M. Cheng, N.C. Anderson, and S. Verguet (2021). "Assessing the economic value of clinical artificial intelligence: Challenges and opportunities." *Value in Health*, 25(3). doi.org/10.1016/j.jval.2021.08.015

22. **N. Hendrix**, R. Gulati, B. Jiao, A.K. Kader, S.T. Ryan, and R. Etzioni (2021). "Clarifying the trade-offs of risk-stratified screening for prostate cancer: A cost-effectiveness study." *American Journal of Epidemiology*, 190(10). doi:10.1093/aje/kwab155

23. B. Jiao, R. Gulati, **N. Hendrix**, J.L. Gore, S. Rais-Bahrami, T.M. Morgan, and R. Etzioni (2021). "Modeling the cost-effectiveness of multi-parametric magnetic resonance imaging and urine-based reflex testing before prostate biopsy in men with intermediate prostate-specific antigen levels." *Value in Health*, 24(8). doi:10.1016/j.jval.2021.02.009

24. **N. Hendrix**, D.D. Kim, K.S. Patel, and B. Devine (2021). "Differences in the selection of health state utility values by sponsorship in published cost-effectiveness analyses." *Medical Decision Making*, 41(3). doi:10.1177/0272989X20985821

25. **N. Hendrix**, B. Hauber, C.I. Lee, A. Bansal, and D.L. Veenstra (2020). "Artificial intelligence in breast cancer screening: Primary care provider preferences." *Journal of the American Medical Informatics Association*, 28(6). doi:10.1093/jamia/ocaa292

26. **N. Hendrix**, Z. Marcum, and D.L. Veenstra (2020). "Medication persistence of targeted immunomodulators for plaque psoriasis: A retrospective analysis of a US claims database." *Pharmacoepidemiology & Drug Safety*, 29(6). doi:10.1002/pds.5021

27. **N. Hendrix**, D.A. Regier, A. Basu, D.L. Veenstra, J. Chatterjee, D.S. Dhanda, and J.J. Carlson (2020). "Provider preferences for resolving uncertainty and avoiding harms in precision medicine: Results from a discrete choice experiment." *Personalized Medicine*, 17(5). doi:10.2217/pme-2020-0018

28. R. Baral, J. Fleming, S. Khan, D. Higgins, **N. Hendrix**, and C. Pecenka (2020). "Inferring antenatal care visit timing in low- and middle-income countries: Methods to inform potential maternal vaccine coverage." *PLOS One*, 15(8). doi:10.1371/journal.pone.0237718

29. F. Debellut, **N. Hendrix**, V.E. Pitzer, K.M. Neuzil, D. Constenla, N. Bar-Zeev, A. Marfin, and C. Pecenka (2019). "Forecasting demand for the typhoid conjugate vaccine in low- and middle-income countries." *Clinical Infectious Diseases*, 68(S2). doi:10.1093/cid/ciy1076

30. **N. Hendrix**, D.A. Ollendorf, R.H. Chapman, A. Loos, S. Liu, V. Kumar, J.A. Linder, S.D. Pearson, and D.L. Veenstra (2018). "Cost-effectiveness of targeted pharmacotherapy for moderate to severe plaque psoriasis." *Journal of Managed Care & Specialty Pharmacy*, 24(12). doi:10.18553/jmcp.2018.24.12.1210

31. J.J. Carlson, D.D. Kim, G.F. Guzauskas, C.S. Bennette, D.L. Veenstra, A. Basu, **N. Hendrix**, D.L. Hershman, L. Baker and S.D. Ramsey (2018). "Integrating value of research into NCI Clinical Trials Cooperative Group research review and prioritization: A pilot study." *Cancer Medicine*, 7(9). doi:10.1002/cam4.1657

32. F. Debellut*, **N. Hendrix***, J.R. Ortiz, P. Lambach, K.M. Neuzil, N. Bhat, and C. Pecenka (2018). "Forecasting demand for maternal influenza immunization in low- and lower-middle-income countries." *PLOS One*, 13(6). doi:10.1371/journal.pone.0199470

33. W.J. Canestaro, **N. Hendrix**, A. Bansal, S.D. Sullivan, B. Devine, and J.J. Carlson (2017). "Favorable and publicly-funded studies are more likely to be published: A systematic review and meta-analysis." *Journal of Clinical Epidemiology*, 92. doi:10.1016/j.jclinepi.2017.08.004

34. **N. Hendrix**, N. Bar-Zeev, D. Atherly, J. Chikafa, H. Mvula, R. Wachepa, A. Crampin, T. Mhango, C. Mwansambo, R. Heyderman, N. French, N. Cunliffe, and C. Pecenka (2017). "The economic impact of childhood acute gastritis on Malawian families and the healthcare system: A prospective cohort study." *BMJ Open*, 7(9). doi:10.1136/bmjopen-2017-017347

35. P.C. Mathias, **N. Hendrix**, W.-J. Wang, K. Keyloun, M. Khelifi, P. Tarczy-Hornoch, and B. Devine (2017). "Characterizing pharmacogenomic-guided medication use with a clinical data repository." *Clinical Pharmacology & Therapeutics*, 102(2). doi:10.1002/cpt.611

Manuscripts Currently Undergoing Peer Review

1. B.W. Ward, A. Strashny, **N. Hendrix**, S.M. Schappert, D.K. Cherry, C.J. DeFrances, and R.L. Phillips. "Dataset Resources for Studying Ambulatory Care: National Ambulatory Medical Care Survey Physician Induction Interview and American Board of Family Medicine Continuous Certification Questionnaire."

2. **N. Hendrix**. "Compounded GLP-1 Agonists Gave Us a Glimpse into the Future of Healthcare Automation."

3. **N. Hendrix**, E.E. Velásquez, <u>H. Pham</u>, and A. Bazemore. "Documentation of compounded GLP-1 receptor agonists in a large primary care dataset."

4. **N. Hendrix**, D. Rehkopf, and R.L. Phillips. "Long Covid Prevalence Estimates Show How Little We Know about the Disease."

5. **N. Hendrix**, M. Nielsen, and A. Bazemore. "Vaccination Trends and their Relationship to Continuity of Care in a US-Based Primary Care Practice Registry."

6. R. Romanni, **N. Hendrix**, R. Freedman, R.W. Evans[†], and J. deBacker[†]. "A GDP approach to measuring returns on investment in aging biology."

7. D.W. Price, K. Stelter, **N. Hendrix**, L. Handler, T. Wang, and A. Bazemore. "Early Experience Using Large Language Models to Generate Cloned Medical Knowledge Multiple-Choice Questions for Knowledge Transfer."

8. L.F. Assebe, O.F. Norheim, **N. Hendrix**, and S. Verguet. "Equity impact of a package of interventions addressing infectious diseases in Ethiopia."

NON-PEER-REVIEWED PUBLICATIONS

Preprints

1. **N. Hendrix**, E.E. Velásquez, <u>H. Pham</u>, and A. Bazemore. "Documentation of compounded GLP-1 receptor agonists in a large primary care dataset." *medRxiv*.doi: 10.1101/2025.05.12.25327436v1

2. **N. Hendrix**, R.V. Parikh, M. Taskier, G. Walter, I. Rochlin, S. Saydah, E.H. Koumans, O. Rincón-Guevara, D.H. Rehkopf, and R.L. Phillips (2024). "Heterogeneity of Diagnosis and Documentation of Post-COVID Conditions in Primary Care: A Machine Learning Analysis." *medRxiv*. doi: 10.1101/2024.02.07.24302451v1

3. **N. Hendrix**, N. Maisel, J. Everson, V. Patel, A. Bazemore, L.S. Rotenstein, AJ. Holmgren, A.H. Krist, J. Adler-Milstein, and R.L. Phillips (2024). "Comparative Analysis of Three Surveys on Primary Care Providers' Experiences with Interoperability and Electronic Health Records." *medRxiv*. doi: 10.1101/2024.01.02.24300713v1

4. T. Wang, K. Stelter, J. Floyd, T. O'Neill, **N. Hendrix**, A. Bazemore, K. Rode, and W. Newton (2023). "Blueprinting the Future: Automatic Item Categorization using Hierarchical Zero-Shot and Few-Shot Classifiers." *arXiv*. doi: 10.48550/arXiv.2312.03561

5. **N. Hendrix**, H. Sidky, D. Sahner, and the N3C Consortium (2023). "Influence of Prior SARS-CoV-2 Infection on COVID-19 Severity: Evidence from the National COVID Cohort Collaborative." *medRxiv*. doi: 10.1101/2023.08.03.23293612v1

6. S. Hegselman, Y. Zhou, …, **N. Hendrix**, et al. (2023). "Recent Advances, Applications and Open Challenges in Machine Learning for Health: Reflections from Research Roundtables at ML4H 2022 Symposium." *Zenodo*. doi: 10.5281/zenodo.7951122

7. P.C. Mathias, S. Jiang, **N. Hendrix**, B.H. Shirts, P. Tarczy-Hornoch, D.L. Veenstra, D. Malone, and B. Devine (2022). "PRECISE Value: An interactive web application that estimates the value of implementing a clinical decision support system for a pharmacogenomic testing program." *Research Square*. doi: 10.21203/rs.3.rs-1777434/v1

MEDIA COVERAGE

1. M. Frellick (2024). "Survey Study Shows How to Reduce Family Physician Burnout." *Medscape*. https://www.medscape.com/viewarticle/survey-study-shows-how-reduce-family-physician-burnout-2024a1000ki0?form=fpf

2. B. Goodman (2023). "Covid-19 has changed and so has our immunity. Here's how to think about risk from the virus now." CNN. https://edition.cnn.com/2023/08/28/health/risk-from-catching-covid-wellness/index.html

GRANTS AND SPONSORED PROJECTS

Active Funding

1. Predictors of Changing Practice Patterns after Guideline Updates: Evidence from a Nationwide Primary Care Registry

   Role on Project: PI

   Funder: Agency for Healthcare Research and Quality

   Project Period: September 2024 - August 2026

   Project Identifier: R03 HS030011-01A1

   Amount: $100,000

2. Causal Machine Learning for Identifying Equity-Improving Interventions in Type 2 Diabetes

   Role on Project: Research Fellow

   Funder: NIH, Artificial Intelligence/Machine Learning Consortium to Advance Health Equity and Researcher Diversity (AIM-AHEAD)

   Project Period: October 2024 - September 2024

   Project Identifier: AIM-AHEAD Research Fellowship (Cohort #3)

   Amount: $50,000

3. The American Family Cohort: Enhancing and Validating Primary Care Data for Improving Urban and Rural Health

   Role on Project: Data scientist, subcontractor (PI: D. Rehkopf)

   Funder: ARPA-H

   Project Period: August 2025 - July 2030

   Amount: $42,000,000 (American Board of Family Medicine subcontract: $10,033,591)

4. Bridging the Gap: Evaluating Vaccination Trends, Equity, & Hesitancy in Primary Care to Inform Policy & Practice

   Role on Project: Lead Quantitative Scientist (PI: R.L. Phillips)

   Funder: Sanofi

   Project Period: January 2024 - January 2025

   Amount: $250,000

5. Novel algorithmic fairness tools for reducing health disparities in primary care

   Role on Project: Sub-PI (PI: S. Rose)

   Funder: National Institutes of Health (National Library of Medicine)

   Project Period: April 2022 - March 2026

   Project Identifier: R01 LM013989-01

   Amount: $1,500,000

6. OPUS-HIT (Outpatient Physician Use and Satisfaction with Health IT)

   Role on Project: Data scientist (PI: R.L. Phillips)

   Funder: US Assistant Secretary for Technology Policy

   Project Period: August 2024 - August 2029

Project Identifier: CFDA 93.851

Amount: $2,125,000

Under Review

1. Evaluating the long-term safety of GLP-1 receptor agonists using real world data from primary care

    Role on Project: Aim 2 lead (PI: D. Rehkopf)

    Funder: Food and Drug Administration

    Project Period: April 2025 - March 2026

    Amount: $1,970,000

2. Identifying optimal approaches to de-identify unstructured free-text data from electronic health records: comparing rule-based approaches, statistical approaches and Large Language Models

    Role on Project: Co-Applicant (PI: A.D. Pinto)

    Funder: Canadian Institutes for Health Research

    Amount: CAD$455,000

Completed Funding

1. Assessing the racial, ethnic, and geographic equitability of COVID-19 treatments in a primary care population

    Role on Project: Data Scientist (PI: D. Rehkopf)

    Funder: Food and Drug Administration

    Project Period: May 2023 - April 2025

    Project Identifier: U01 FD007879-01

    Amount: $1,000,000

2. SARS-CoV-2 Reinfection Severity (PHASTR contract)

    Role on Project: PI

    Funder: National Institutes of Health (National Center for Advancing Translational Sciences)

    Project Period: February 2023 - April 2023

    Amount: $50,000

3. Developing Data-Driven Cancer Researchers

    Role on Project: Pre-Doctoral Trainee (PIs: R. Etzioni and S. Schwartz)

    Funder: National Institutes of Health (National Cancer Institute)

    Project Period: September 2018 – July 2020

    Project Identifier: T32 CA009168-42

4. Pre-Doctoral Fellowship in Outcomes Research

    Role on Project: Pre-Doctoral Trainee

    Funder: PhRMA Foundation

    Project Period: July 2018 – December 2019

    Total: $37,500

5. Health Services Research Training

    Role on Project: Pre-Doctoral Trainee (PI: D. Grembowski)

    Funder: Agency for Healthcare Research and Quality

    Project Period: September 2015 – August 2017

    Project Identifier: T32 HS013853-17

INVITED PRESENTATIONS

1. "Parsing the Patient: NLP and Clinical Notes." University of North Carolina, Sheps Center for Health Services Research, Sheps Data Days, 2024.

2. "Assessing the Economic Value of Clinical Artificial Intelligence." National Academies of Sciences, Engineering, and Medicine, Global Forum on Innovation in Health Professional Education, Washington, DC, 2023.

3. "Family Physicians' Experiences with Electronic Health Records." Georgetown University, Family Medicine Grand Rounds, Washington, DC, 2023.

4. "Radiologist Preferences for AI-Based Decision Support during Breast Cancer Screening." University of Washington, Program in Health Economics and Outcomes Research (PHEnOM), Seattle, 2021.

5. "Cost-Effectiveness Analysis to Support the Equitable Implementation of Clinical Artificial Intelligence." Harvard University Center for Research for Computation and Society Health Equity Panel, online (due to COVID-19), 2021.

6. "Cost-Effectiveness of Risk-Stratified Screening for Prostate Cancer." Cancer Intervention and Surveillance Modeling Network (CISNET) Annual Meeting, online (due to COVID-19), 2020.

SELECTED PRESENTATIONS

1. **N. Hendrix**, A. Bazemore, L. Rotenstein, A.J. Holmgren, A. Krist, and R.L. Phillips (2023). "Variation in Family Physicians' Experiences Across Different Electronic Health Record Platforms." AMIA Informatics Summit, Seattle.

2. **N. Hendrix**, B. Hauber, C.I. Lee, A. Bansal, and D.L. Veenstra (2020). "Provider preferences for attributes of artificial intelligence in breast cancer screening: A discrete choice experiment." ASCO Annual Meeting, online (due to COVID-19).

3. **N. Hendrix**, Z. Marcum, and D.L. Veenstra (2019). "Drug survival of targeted therapies for plaque psoriasis: Evidence from a large U.S. claims database." International Conference on Pharmacoepidemiology & Therapeutic Risk Management (ICPE), Philadelphia, Pennsylvania.

4. **N. Hendrix**, B. Adamson, A. Basu, and B. Devine (2018). "Increasing trend toward reporting significant digits in utility weights: Behavior implications of 'flat of the curve' medicine?" ISPOR Annual Meeting, Baltimore, Maryland.

5. **N. Hendrix**, D.A. Ollendorf, R. Chapman, A. Loos, S. Liu, V. Kumar, J. Linder, S. Pearson, and D.L. Veenstra (2017). "Cost-effectiveness of targeted therapy for moderate-to-severe plaque psoriasis: an analysis based on Institute for Clinical and Economic Review (ICER) report." ISPOR Annual Meeting, Boston, Massachusetts.

6. **N. Hendrix**, and B. Devine (2016). "Deriving utility weights from patient-reported outcomes in epilepsy." ISPOR Annual Meeting, Washington, DC.

TEACHING

NAPCRG Annual Meeting 2023

Workshop: "Natural language processing with clinical notes." (Conference workshop with approximately 30 attendees), 2023.

University of Michigan

Guest lecture: "Natural language processing with clinical notes." University of Michigan School of Public Health, HMP 601 (Population Health Informatics: graduate level course with approximately 30 students), 2023.

Harvard University

Guest lecture: "Visualizing results of cost-effectiveness analyses using R and ggplot2." Harvard T.H. Chan School of Public Health, GHP 501 (Modeling for Health System Analysis & Priority Setting: graduate level course with approximately 25 enrolled students), 2021.

University of Washington

Curriculum developer and instructor of MarketScan Summer Bootcamp (an introduction to claims data for 10 entering graduate students), 2019.

Approximately 18 hours of lecture and office hours covering basic SAS, SQL and R programming; data subsetting and cleaning; patient identification; and descriptive statistics

Teaching assistant for PHARM 541 (Pharmacy, Healthcare, and Society), 2018.

Developed and graded exercises on reimbursement in the healthcare system and basic ideas in the economic evaluation of medicines for a class of approximately 90 PharmD students

HONORS & AWARDS

Rubenstein Scholarship Fund ($5,000), University of Washington School of Pharmacy, 2020.

Rubenstein Scholarship Fund ($4,000), University of Washington School of Pharmacy, 2019.

Graduate Student Leadership Award, University of Washington School of Pharmacy, 2019.

SERVICE TO PROFESSION, UNIVERSITY & DEPARTMENT

Editorial Service

Referee for *BMC Health Services Research*, *BMJ Global Health*, *BMJ Open*, *European Journal of Health Economics*, *Journal of Biomedical Informatics*, *Journal of Clinical Epidemiology*, *Journal of General Internal Medicine*, *Journal of Managed Care and Specialty Pharmacy*, *Journal of Urology*, *Nature Communications*, *npj Digital Medicine*, *Pharmacoepidemiology & Drug Safety*, and *Value in Health*

University of Washington, The Comparative Health Economics, Outcomes & Policy (CHOICE) Institute

Member, Strategic Planning Committee, 2019.

Founder and lead student editor, *Incremental Thoughts: The CHOICE Institute's Student Blog*, 2018-2019.

Member, Ph.D. Admissions Committee, 2018.

PROGRAMMING LANGUAGES

R, Python, VBA, SQL