

# Jinyi Zhu

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## ACADEMIC APPOINTMENTS

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**Vanderbilt University School of Medicine**, Nashville, TN

Assistant Professor, Department of Health Policy

2022–present

## EDUCATION

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**Harvard University**, Cambridge, MA

Ph.D. in Health Policy (Decision Sciences track)

2016-2022

**Yale University**, New Haven, CT

M.P.H. in Health Policy

2014-2016

**Peking University**, Beijing, China

B.S. in Biological Science

2010-2014

B.A. in Economics

2011-2014

**University of Toronto**, Toronto, Canada

Public Health (Study Abroad Program)

Fall 2012

## PUBLICATIONS

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### *Peer-reviewed Original Research*

- Corlis J, **Zhu J**, Macul H, Tiberi O, Boothe MAS, Resch SC. Framework for determining the optimal course of action when efficiency and affordability measures differ by perspective in cost-effectiveness analysis—with an illustrative case of HIV treatment in Mozambique. *Cost Eff Resour Alloc*. 2023.
- **Zhu J**, Kamel H, Gupta A, Mushlin AI, Menzies NA, Gaziano TA, Rosenthal MB, Pandya A. Prioritizing Quality Measures in Acute Stroke Care: A Cost-Effectiveness Analysis. *Annals of Internal Medicine*. 2023.
- **Zhu J**, Lyatuu G, Sudfeld CR, Kiravu A, Sando D, Machumi L, Minde J, Chisonjela F, Cohen T, Menzies NA. Re-evaluating the Health Impact and Cost-effectiveness of Tuberculosis Prevention for Modern ART Cohorts: A Modelling Analysis Using Data From Tanzania. *The Lancet Global Health*. 2022.

*2022 Top 3 Cost-Effectiveness Analysis Paper of the Year, Tufts CEA Registry*

- Pandya A, Paulden M, **Zhu J**, Lavelle T, Hammitt J. Trends in Author-Reported Cost-Effectiveness Thresholds in the US from 1995-2018: Implications for Discount Rates. Medical Decision Making. 2022.
- Chen T, Huang S, Li G, Zhang Y, Li Y, **Zhu J**, Shi X, Li X, Xie G, Zhang L. An integrated framework for modelling quantitative effects of entry restrictions and travel quarantine on importation risk of COVID-19. J Biomed Inform. 2021.
- Gupta S, **Zhu J**, McCarty TR, Pruce J, Kassam Z, Kelly C, Fischer M, Allegretti JR. Cost-Effectiveness Analysis of Sequential Fecal Microbiota Transplantation for Fulminant C. difficile Infection. J Gastroenterol Hepatol. 2021.
- He Q, **Zhu J**, Wang A, Ji K, Ji X, Zhang J, Wu X, Li X, Bu Z, Ji J. A Decision Analysis Comparing Three Strategies for Peritoneal Lavage Cytology Testing in Staging of Gastric Cancer in China. Cancer Med. 2020.
- Spahillari A\*, **Zhu J\***, Ferket BS, Hunink MGM, Carr JJ, Terry JG, Nelson C, Mwasongwe S, Mentz RJ, O'Brien EC, Correa A, Shah, RV, Murthy VL, Pandya A. Cost-Effectiveness of Contemporary Statin-Allocation Guidelines with or without Coronary Artery Calcium in African Americans. JAMA Cardiol. 2020. (\*Co-first authors)
- Mason SE, **Zhu J**, Rahaghi FN, Washko GR, Pandya A. Cost-effectiveness microsimulation of catheter-directed thrombolysis in submassive pulmonary embolism using a right ventricular function model. J Thromb Thrombolysis. 2020.
- Pandya A, Doran T, **Zhu J**, Walker S, Arntson E, Ryan AM. Modelling the cost-effectiveness of pay-for-performance in primary care in the UK. BMC Med. 2018.

### *Editorials/Commentaries/Correspondence*

- Pandya, **Zhu J**. Focusing on Decisions, Outcomes, and Value Judgments to Confront Algorithmic Bias. JAMA Netw Open. 2023.
- **Zhu J**, Pandya A. The Advantages and Nuances of Using Disability-Adjusted Life Years to Characterize Cardiovascular Disease Burden: Insights From Parents and Offspring. Circ Cardiovasc Qual Outcomes. 2022.
- Pandya A, **Zhu J**, Spahillari A. Cost-effectiveness of Statin Use Guidelines-Reply. JAMA Cardiol. 2021.

### **WORKING PAPERS**

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- **Zhu J**, Haneuse S, Yu H, Menzies NA, Pandya A. *“Evaluating Bias and Variance across Different Validation Methods for Simulation Models.”* Under review.
- **Zhu J\***, Jhang J\*, Yu H, Mushlin AI, Kamel H, Alemayehu N, Giardina JC, Gupta A, Pandya A. “Cost-Effectiveness of Screening for Asymptomatic Carotid Artery Stenosis Based on Atherosclerotic Cardiovascular Disease Risk Thresholds.” Preprint on medRxiv. (\*Co-first authors)

## CONFERENCE PRESENTATIONS

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(Listing only conference presentations as first or senior author)

- **Zhu J**, Giardina JC, Graves JA, Kunst N, Menzies NA, Pandya A, “*Dispersion Sensitivity Analysis: Investigating Potential Bias in Subgroup Analyses and Implications for Equity-Impact Analyses*”, Oral presentation at the SMDM Annual North American Meeting, Philadelphia, PA, 2023
- Yu H, Graves JA, Garbett S, Leech AA, **Zhu J**, “*Common Random Numbers in Discrete Event Simulation for Disease Modeling: A Statin Treatment Case Study*”, Oral presentation at the SMDM Annual North American Meeting, Philadelphia, PA, 2023
- Kim KR, Yu H, Pandya A, **Zhu J**, “*Past and Future Value Gained Under the Get With The Guideline–Stroke Initiative*”, Poster presentation at the SMDM Annual North American Meeting, Philadelphia, PA, 2023
- Jhang J, Yu H, Gupta A, Mushlin AI, Kamel H, Alemayehu N, Pandya A, **Zhu J**, “*Risk Stratification for Optimal Screening of Asymptomatic Carotid Stenosis: A Simulation Modeling Approach*”, Poster presentation at the SMDM Annual North American Meeting, Philadelphia, PA, 2023
- **Zhu J**, Kamel H, Rosenthal MB, Pandya A, “*Prioritizing Quality Measures in Acute Stroke Care – A Cost-effectiveness Framework*,” E-Poster Presentation at the SMDM Annual North American Meeting, 2021.
- **Zhu J**, Lyatuu G, Sudfeld CR, Menzies NA, “*Health and Economic Implications of an Isoniazid Preventive Treatment Expansion Program Among People Living with HIV in Tanzania*,” Oral Virtual Presentation at the International Health Economics Association (iHEA) Congress, 2021.
- **Zhu J**, Sy S, Sudfeld CR, Pandya A, Lyatuu G, Menzies NA, “*The Use of Common Random Numbers in Improving the Efficiency of Microsimulation Model Calibration*,” Oral Virtual Presentation at the SMDM Annual North American Meeting, 2020.  
*Lee B. Lusted Student Award finalist in the Quantitative Methods and Theoretical Development Category*
- **Zhu J**, Pandya A, “*Evaluating Bias and Variance across Methods for Microsimulation Model Validation*,” Poster Presentation at the SMDM Annual North American Meeting, Portland, OR, 2019.  
*Lee B. Lusted Student Award winner in the Quantitative Methods and Theoretical Development Category*
- **Zhu J**, Pandya A, “*Friends with (Targeting) Benefits: Modeling Communicable Disease Interventions with and without the Friendship Paradox*,” Poster Presentation at the SMDM Annual North American Meeting, Montreal, QC, Canada, 2018.  
*Lee B. Lusted Student Award finalist in the Quantitative Methods and Theoretical Development Category*

## INVITED TALKS

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- “*Re-evaluating the health impact and cost-effectiveness of tuberculosis preventive treatment for modern HIV cohorts on antiretroviral therapy: A modelling analysis using data from Tanzania*”, guest lecture:
  - [Virtual, 2 guest lectures] Advanced Topics in Decision-Analytic Modeling for Health, course taught by Alton Russell, McGill University, Canada, 2023

- “*Advanced Modeling Techniques*”, guest lectures:
  - [Virtual] Economic Evaluation of Medical Care, course taught by Xuanzi Qin, University of Maryland School of Public Health, College Park, MD, 2023
  - Decision Analysis in Medicine and Public Health, course taught by Ashley Leech, Vanderbilt University School of Medicine, Nashville, TN, 2023
- “*Prioritizing Quality Measures in Acute Stroke Care using a Cost-Effectiveness Approach*”
  - [Virtual] Department of Health Policy, Vanderbilt University School of Medicine, Nashville, TN, 2022
  - [Virtual] Department of Health Systems, Management & Policy, Colorado School of Public Health, Aurora, CO, 2022
- “*Evaluating Bias and Variance across Different Validation Methods for Simulation Models*”
  - [Virtual] Health Economics Seminar, University of Oslo, Norway, 2021
  - [Virtual] Program in Health Economics and Outcomes Research Methodologies (PHEnOM), University of Washington, Seattle, WA, 2020
- “*Cost-Effectiveness Analysis and Health Decision Science: A Primer*”
  - Center for Physician-Scientist Development, Tsinghua University, Beijing, China, 2023
  - National Clinical Research Center for Neurological Diseases, Beijing, China, 2020
  - Health Economics Seminar, National School of Development, Peking University, Beijing, China, 2018

## TEACHING EXPERIENCE

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### Vanderbilt University

- *Instructor*, HPOL 8551: Methods and Applied Research in Decision analysis *Spring 2024*
- *Instructor*, HPOL 8225: Health Policy Research Seminar *Fall 2022-2023, Spring 2023-2024*
- *Co-Instructor*, Decision Analysis Workshop, Kano, Nigeria *November 2023*  
In partnership with the Vanderbilt-Nigeria Building Research Capacity in HIV and Non-communicable Diseases Program; ~40 physician scientist participants in Nigeria
- *Co-Instructor*, Health Economics Modeling Workshop, Bangkok, Thailand *October 2022*  
In partnership with Vital Strategies and the CDC Foundation; ~30 participants from ~15 countries’ Ministries of Health

### Harvard University, *Teaching Assistant*

- HPM 260: Health Economics with Applications to Global Health Policy *Summer 2021*
- RDS 202: Decision Science for Public Health *Spring 2021*
- RDS 280: Decision Analysis for Health and Medical Practices *Fall 2016, 2017, 2018<sup>#</sup>, 2019<sup>#</sup>, 2020*  
(<sup>#</sup>Head Teaching Assistant)
- RDS 290: Experiential Learning and Applied Research in Decision Analysis *Spring 2020*
- RDS 285: Decision Analysis Methods in Public Health and Medicine *Spring 2020*

- RDS 288: Methods for Decision Making in Medicine *Summer 2017, 2018, 2019*
- API 302: Analytic Frameworks for Policy *Fall 2018*
- RDS 286: Decision Analysis in Clinical Research *Summer 2017*

**Yale School of Public Health, Teaching Assistant**

- HPM 583: Methods in Health Services Research *Spring 2016*
- HPM 570: Cost-effectiveness Analysis and Decision Making *Fall 2015*

**RESEARCH SUPERVISION**

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- Kun-Woo Kim, PhD Student in Health Policy, Vanderbilt University *2022-Present*  
Role: Academic Co-advisor
- Hanxuan (Astrid) Yu, Health Policy Data Analyst, Vanderbilt University *2022-Present*  
Role: Co-supervisor

**FELLOWSHIPS, AWARDS & HONORS**

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- Top 3 Cost-Effectiveness Analysis Paper of the Year, *Tufts CEA Registry* *2022*
- Joan P. Curhan Citizenship Award, *Harvard Interfaculty Initiative in Health Policy* *2022*
- Teaching Assistant Recognition Award, *Harvard T.H. Chan School of Public Health* *2021*
- Lee B. Lusted Student Prize Stephen Pauker Award for Quantitative Methods and Theoretical Development, *The Society for Medical Decision Making (SMDM)* *2019*
- Distinction in Student Teaching for Teaching Fellows, *Harvard Kennedy School* *2019*
- Howard Raiffa Grant for Teaching Innovations (4,500 USD), *Harvard University* *2018*
- Next Generation Fellowship (merit-based award to cover tuition for the M.P.H. degree program, 65,000 USD), *China Medical Board and Institute of International Education* *2014*

**FUNDING INFORMATION**

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- **Rational Integration of Polygenic Risk Scores (1R01HG012262)** *2022-2027*  
National Human Genome Research Institute, PI: Joshua F. Peterson  
Role: Co-Investigator, 20% effort
- **Health Economics Modeling Workshop** *2022-2023*  
Vital Strategies (Bloomberg Philanthropies and CDC Foundation), PI: John A. Graves  
Role: Co-Instructor, 10% effort

**PROFESSIONAL SERVICES & AFFILIATIONS**

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**University service/affiliations:**

- PhD admissions committee, Vanderbilt Department of Health Policy *2022-present*
- Scholar, Vanderbilt Center for Health Services Research (CHSR) *2023-present*

**Professional affiliations:**

- Society for Medical Decision Making *2020-present*
  - Career development committee co-chair (2024-present) and member (2020-present)
  - Teaching interest group co-chair (2023-present)
- International Health Economics Association *2020-present*

**Editorial board member:**

- Medical Decision Making | MDM Policy & Practice *2023-present*

**Statistical reviewer:**

- JAMA Network Open *2022-present*

**Ad-hoc peer reviewer:**

- Applied Health Economics and Health Policy
- BMC Health Services Research
- BMC Public Health
- BMJ
- BMJ Global Health
- BMJ Open Diabetes Research & Care
- BMJ Public Health
- Clinical Infectious Diseases
- Cost Effectiveness and Resource Allocation
- Global Health Research and Policy
- International Journal of Tuberculosis and Lung Disease, The
- Journal of Public Health
- Lancet Global Health, The
- Medical Decision Making
- MDM Policy & Practice
- Occupational Medicine
- PharmacoEconomics – Open
- PLOS Computational Biology
- PLOS One
- Value in Health