

Austin Tucker

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EDUCATION

Harvard University 2020 – Expected 2027
PhD Candidate, Population Health Sciences — Global Health and Population (Health Economics concentration)

Dissertation (defense early 2027): three papers on healthcare labor markets, capital–labor substitution in nursing homes, and obstetric care quality in Kenya.

Advisor: Margaret McConnell. Committee: Jarvis Chen, Kevin Croke.

Johns Hopkins Bloomberg School of Public Health 2016 – 2017
MHS, Health Economics — Department of International Health
Thesis: Cost-Effectiveness Studies on Rotavirus Vaccine

Baylor University 2012 – 2016
BBA, Economics (Cum Laude) — Baylor Business Fellows (Honors Program)

RESEARCH POSITIONS

Doctoral Researcher, Harvard T.H. Chan School of Public Health 2020 – Present
Department of Global Health and Population; Advisor: Margaret McConnell

- Effect of pandemic-era school closures on nursing home staffing, quality, and costs: difference-in-differences design using federal Payroll-Based Journal staffing data linked to CSDH cost reports.
- Service-delivery quality of obstetric care in Kenya: analysis of 1,742 directly observed deliveries with novel timeliness measures and provider fixed effects on quality; embedded in the Kakamega Service Delivery Redesign evaluation (co-advised with Kevin Croke).
- Capital–labor substitution in nursing homes: shift-share IV design using HCRIS capital-expenditure data and immigration shocks.

Senior Research Program Coordinator, Johns Hopkins Bloomberg School of Public Health 2019 – 2020

Department of Epidemiology; PI: David Dowdy

Managed six concurrent HIV and TB health-economics projects across Uganda, Malawi, Zambia, and South Africa, embedded in randomized evaluations of TB diagnostics, case-finding strategies, and digital adherence technologies.

Research Assistant, Johns Hopkins Bloomberg School of Public Health 2017 – 2019
Department of Epidemiology; PI: David Dowdy

HIV/TB cost-effectiveness modeling for sub-Saharan Africa; field work, data collection and cleaning, data-collector training, and IRB documentation for randomized evaluations.

Graduate Research Assistant, International Vaccine Access Center (IVAC) 2016 – 2017
Johns Hopkins Bloomberg School of Public Health
Vaccine cost-effectiveness research and reporting; rotavirus evidence synthesis (Economic Compendium project).

POLICY CONSULTING

Consultant, Health, Nutrition and Population Global Practice, World Bank 2023
Synthesized evidence on differentiated service-delivery models for non-communicable disease management in low- and middle-income country settings.

Consultant, World Health Organization 2019
Cost-effectiveness analysis of gestational diabetes screening to support global guideline development.

TEACHING POSITIONS

Media and Design Fellow, Derek Bok Center for Teaching and Learning 2024 – 2025
Global Health Education and Learning Incubator (GHELI); PI: Sue Goldie, Harvard University

- Designed and coded an interactive case-study game on the TB/HIV epidemic among miners in southern Africa.
- Produced an explainer video introducing health systems concepts for GENED 1063 (~150 enrolled students).
- Refined the multimedia assignment rubric and developed interactive case studies for use across course sections.

Pedagogy Fellow, Derek Bok Center for Teaching and Learning 2023 – 2024
Global Health Education and Learning Incubator (GHELI); PI: Sue Goldie, Harvard University

- Designed weekly case studies on demographics and epidemiology, health systems, infectious and non-communicable disease, climate-driven health risks, and pandemic preparedness.
- Led teaching-fellow hiring and onboarding training for GENED 1063 across multiple cohorts.

Teaching Fellow, GHP 525 — Econometrics for Health Policy Fall 2021 – 2023
Harvard T.H. Chan School of Public Health; Professors: Sebastian Bauhoff (2021), Terence Cheng (2022–2023)

Taught weekly lab sessions in R, with supporting Stata materials, covering OLS diagnostics, randomization inference, causal inference, instrumental variables, difference-in-differences, regression discontinuity, synthetic control, and interrupted time series; designed problem sets, lab materials, and exam content.

Teaching Fellow, PHS 2000B — Quantitative Methods for Public Health Research 2022
Harvard T.H. Chan School of Public Health (doctoral core course)

Taught lab sessions on instrumental variables, difference-in-differences, regression discontinuity, and interrupted time series for first-year PhD students.

Teaching Fellow, GENED 1063 — World Health: Challenges and Opportunities Spring 2022 – 2024
Harvard College; Professor: Sue Goldie
Designed and graded weekly sections and deliverables; co-developed the multimedia assignment rubric.

Teaching Fellow, ID 100 — Foundations for Public Health

Harvard T.H. Chan School of Public Health (~600 students)

Developed interactive quiz items and authored case-study series on South Korea and the southern Africa TB/HIV miners epidemic.

Guest Lecture, Summary Measures for Public Health

2019

Johns Hopkins Bloomberg School of Public Health

“Summary Measures and their Application in Resource Allocation, Priority Setting and Policy Development,” May 9, 2019.

PEER-REVIEWED PUBLICATIONS

- Thompson RR, Kityamuwesi A, Kuan A, Oyuku D, **Tucker A**, Ferguson O, et al. Cost and Cost-Effectiveness of a Digital Adherence Technology for Tuberculosis Treatment Support in Uganda. *Value in Health*. 2022;25(6):924–30.
- Turimumahoro P, **Tucker A**, Gupta AJ, Tampi RP, Babirye D, Ochom E, et al. A cost analysis of implementing mobile health facilitated tuberculosis contact investigation in a low-income setting. *PLOS ONE*. 2022;17(4):e0265033.
- Liu C, Lee JH, Gupta AJ, **Tucker A**, Larkin C, Turimumahoro P, et al. Cost-effectiveness analysis of human-centred design for global health interventions: a quantitative framework. *BMJ Global Health*. 2022;7(3):e007912.
- Cattamanchi A, Reza TF, Nalugwa T, Adams K, Nantale M, Oyuku D, et al. (incl. **Tucker A**). Multi-component Strategy with Decentralized Molecular Testing for Tuberculosis. *New England Journal of Medicine*. 2021;385(26):2441–50.
- Cattamanchi A, Crowder R, Kityamuwesi A, Kiwanuka N, Lamunu M, Namale C, et al. (incl. **Tucker A**). Digital adherence technology for tuberculosis treatment supervision: a stepped-wedge cluster-randomized trial in Uganda. *PLOS Medicine*. 2021;18(5):e1003628.
- **Tucker A**, Oyuku D, Nalugwa T, Nantale M, Ferguson O, Farr K, et al. Costs along the TB diagnostic pathway in Uganda. *International Journal of Tuberculosis and Lung Disease*. 2021;25(1):61–63.
- Jo Y, Gomes I, Shin H, **Tucker A**, Ngwira LG, Chaisson RE, Corbett EL, Dowdy DW. Health-related quality of life of inpatients and outpatients with TB in rural Malawi. *International Journal of Tuberculosis and Lung Disease*. 2020;24(11):1165–71.
- Sohn H, **Tucker A**, Ferguson O, Gomes I, Dowdy DW. Costing the implementation of public health interventions in resource-limited settings: a conceptual framework. *Implementation Science*. 2020;15(1):86.
- **Tucker A**, Tembo T, Tampi RP, Mutale J, Mukumba-Mwenechanya M, Sharma A, et al. Redefining and Revisiting Cost Estimates of Routine ART Care in Zambia: An Analysis of 10 Clinics. *Journal of the International AIDS Society*. 2020;23(2):e25431.
- Shin H, Ngwira L, **Tucker A**, Chaisson R, Corbett E, Dowdy D. Patient-incurred cost of inpatient treatment for tuberculosis in rural Malawi. *Tropical Medicine and International Health*. 2020. doi:10.1111/tmi.13381.
- Erlinger S, Stracker N, Hanrahan C, Nonyane B, Mmolawa L, Tampi RP, **Tucker A**, et al. Tuberculosis Patients with Higher Levels of Poverty Face Equal or Greater Costs of Illness. *International Journal of Tuberculosis and Lung Disease*. 2019;23(11):1205–12.
- Stracker N, Hanrahan C, Mmolawa L, Nonyane B, Tampi RP, **Tucker A**, et al. Risk Factors for Catas-

trophic Costs Associated with Tuberculosis in Rural South Africa. *International Journal of Tuberculosis and Lung Disease*. 2019;23(6):756–63.

- Tampi RP, Tembo T, Mukumba-Mwenenchanya M, Sharma A, Dowdy DW, Holmes CB, Bolton-Moore C, Sikazwe I, **Tucker A**, Sohn H. Operational Characteristics of Antiretroviral Therapy Clinics in Zambia: A Time and Motion Analysis. *BMC Health Services Research*. 2019;19(1):244.
- Offodile AC 2nd, Sheckter CC, **Tucker A**, Watzker A, Ottino K, Zammert M, Padula WV. Preoperative Paravertebral Blocks for the Management of Acute Pain Following Mastectomy: A Cost-Effectiveness Analysis. *Breast Cancer Research and Treatment*. 2017;165(3):477–84.

WORKS IN PROGRESS

- The effect of pandemic-era school closures on nursing home staffing, quality, and costs. (Draft complete; robustness analyses in progress.)
- Service-delivery quality of obstetric care in Kenya: evidence from 1,742 directly observed deliveries. (Manuscript in preparation.)
- Capital–labor substitution in nursing homes: evidence from immigration shocks and capital expenditures. (Analysis in progress.)
- Health workforce constraints in HIV service delivery. (Analysis in progress.)

REPORTS AND OTHER WRITING

- **Tucker A**, de Broucker G, Constenla D. Cost-Effectiveness Studies on Rotavirus Vaccine. Vaccine Report for the Economic Compendium project at IVAC. 2017.

CONFERENCE PRESENTATIONS

- **Tucker A**, Mmolawa L, Tampi RP, Hanrahan C, Nonyane B, Siwelana T, et al. “Costs of Contact Investigation for Tuberculosis in Rural South Africa.” The Union World Conference on Lung Health (Hyderabad, India), poster presentation, 2019.
- Ferguson O, Dowdy D, Johnson K, **Tucker A**, Jo Y. “Cost-effectiveness of Preventive Therapy for Tuberculosis: One-Month Daily Isoniazid and Rifapentine vs. Three-Month Weekly Isoniazid and Rifapentine.” The Union World Conference on Lung Health (Hyderabad, India), oral presentation, 2019.
- Oyuku D, **Tucker A**, Nalugwa T, Nantale M, Farr K, Katamba A, et al. “Is Tuberculosis a Priority? An Assessment of Health Care Worker Workloads in Peripheral Health Centers in Uganda.” The Union World Conference on Lung Health (Hyderabad, India), poster presentation, 2019.
- Turimumahoro P, **Tucker A**, Meyer A, Tampi RP, Ayakaka I, Dowdy D, Katamba A, Davis JL. “But at What Cost? The Cost of Implementing mobile health facilitated tuberculosis contact investigation in Uganda.” The Union World Conference on Lung Health (The Hague, Netherlands), oral presentation, 2018.
- Tampi RP, Tembo T, **Tucker A**, Mukumbwa-Mwenenchanya M, Sharma A, Dowdy D, et al. “Operational Characteristics of Antiretroviral Therapy Clinics in Zambia: A Time and Motion Analysis.” CROI Conference, poster presentation, 2018.

SERVICE

Peer Reviewer

- *Journal of the International AIDS Society* (2019–2021)
- *Social Science and Medicine* (2023)

AWARDS AND FELLOWSHIPS

- Certificate of Distinction in Teaching, Harvard University (2022, 2023, 2024)
- Adam Smith Scholar, Baylor University (2016)
- Regents' Gold Scholarship, Baylor University (2012)

SKILLS

Programming: R (advanced), Python (proficient), Stata (proficient), Git/GitHub, $\text{\LaTeX}$.

Econometric methods: Randomization inference, difference-in-differences, instrumental variables, shift-share, synthetic control, regression discontinuity, event study, interrupted time series; cost-effectiveness modeling (TreeAge, Markov).

Software and tools: Google Workspace, REDCap, Zotero, EndNote, TreeAge; strategic use of AI tools (Claude, ChatGPT) for code review, analysis preparation, literature review, and teaching-material development.

Languages: English (fluent); Spanish, French (reading; conversational with refresher).

Field experience: Health economics study implementation in Uganda, Zambia, Malawi, and South Africa.