

# Sarah E. Baum

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## EDUCATION

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### Harvard University

2022–2027 (expected)

*Ph.D. in Population Health Sciences (Department of Global Health and Population)*

**Fields:** Health Economics, Infectious Disease Epidemiology

**Dissertation:** Allocation of infectious disease screening and its implications for disease surveillance

**Committee:** Nicolas Menzies (Chair), Jessica Cohen, Leila Agha

### Barnard College, Columbia University

2013–2017

*B.A. in Economics with honors, magna cum laude*

## AREAS OF EXPERTISE

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Health Economics, Health Systems, Causal Inference, Impact and Policy Evaluation, Infectious Disease Epidemiology, Public Health, Global Health and Development.

## GRANTS, FELLOWSHIPS, AND AWARDS

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| <b>2026</b>      | Social Policy Research Grant, Horowitz Foundation for Social Policy |
| <b>2023–2026</b> | NIH National Institute of Allergy and Infectious Diseases T32 Award |
| <b>2018–2019</b> | Princeton in Africa Fellowship                                      |

## PUBLICATIONS

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1. **Baum, S.E.**, Agha, L., Menzies, N.A., and Cohen, J. (2026) Prenatal syphilis screening mandates and maternal syphilis case detection. *JAMA Health Forum*, 7(3): e260123.
2. **Baum, S.E.**, Pelissari, D.M., Dockhorn Costa, F., Harada, L.O., Sanchez, M., Bartholomay, P., Cohen, T., Castro, M.C., and Menzies, N.A. (2024) Surveillance for TB drug resistance using routine rapid diagnostic testing data: Methodological development and application in Brazil. *PLOS Computational Biology*, 20(12): e1012662.
3. Graham, S.B., Machalaba, C., **Baum, S.E.**, Raufman, J., and Hill, S.E. (2023) Applying a One Health lens to understanding the impact of climate and environmental change on healthcare-associated infections. *Antimicrobial Stewardship & Healthcare Epidemiology*, 3(1): e93.
4. **Baum, S.E.** and Benshaul-Tolonen, A. (2021) Extractive industries and gender equality. *Review of Environmental Economics and Policy*, 15(2): 195–215.
5. **Baum, S.E.**, Reddy, V., Vora, N.M., Balter, S., Daskalakis, D., Barbot, O., Misener, M., Rakeman, J., Rojas, J., Starr, D., Waechter, H., Zucker, J., and Lee, D. (2020) Cost comparison between 2 responses to hepatitis A virus incidents in restaurant food handlers—New York City, 2015 and 2017. *Journal of Public Health Management and Practice*, 26(2): 176–179.
6. **Baum, S.E.**, Machalaba, C., Daszak, P., Salerno, R.H., and Karesh, W.B. (2017) Evaluating One Health: Are we demonstrating effectiveness? *One Health*, 3: 5–10.
7. Machalaba, C., Romanelli, C., Stoett, P., **Baum, S.E.**, Bouley, T.A., Daszak, P., and Karesh, W.B. (2015) Climate change and health: Transcending silos to find solutions. *Annals of Global Health*, 81(3): 445–458.

## WORKING PAPERS AND RESEARCH IN PROGRESS

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1. Selection and Surveillance: Linking Shocks to Safety Net Health Care Access and STI Case Detection

2. Physician Responses to Changes in Local Epidemiology: A Movers Design Leveraging Shocks to Lyme Disease Risk
3. Identifying Pathways to TB Drug Resistance in Brazil *with Nicolas Menzies*

## INVITED PRESENTATIONS

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- 2026 “Quasi-experimental Approaches to Program and Policy Evaluation.” **San Diego State University, DrPH Program, PH 910: Research Methods & Ethics.** (Guest Lecture)
- 2026 “Selection and Surveillance: The Impact of Abortion Funding Cuts on Safety Net Access and STI Detection.” **ASHEcon Annual Conference**, Minneapolis, MN.
- 2026 “Legal Mandates, Provider Screening, and Syphilis Detection in Pregnancy.” **AcademyHealth Annual Research Meeting**, Seattle, WA. (Poster Presentation)
- 2026 “Shocks to the U.S. Safety Net and STI Detection.” **Department of Global Health and Population Research Seminar, Harvard University.**
- 2025 “Surveillance for TB Drug Resistance Using Routine Rapid Diagnostic Testing Data.” **Department of Global Health and Population Research Seminar, Harvard University.**
- 2022 “Strengthening One Health and Veterinary Programs for Global Health Security in Africa.” **Global Health Security Conference**, Singapore.
- 2018 “The Natural Resource Curse and Women.” **World Bank Land and Poverty Conference**, Washington, DC. (Poster Presentation)
- 2016 “Beyond Operationalizing: The Need for Evaluation in One Health.” **Consortium of Universities in Global Health Conference**, San Francisco, CA. (Poster Presentation)

## TEACHING EXPERIENCE

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- 2026 **Introduction to Economics with Applications to Health and Development**  
Teaching Fellow for James Potter (Master’s students)
- 2026 **Econometric Methods in Impact Evaluation**  
Teaching Fellow for Jessica Cohen (Ph.D. students)
- 2025 **Introduction to Economics with Applications to Health and Development**  
Teaching Fellow for James Potter (Master’s students)
- 2025 **Econometric Methods for Health Policy**  
Teaching Fellow for Nidhiya Menon (Master’s and Ph.D. students)
- 2024 **Introduction to Economics with Applications to Health and Development**  
Teaching Fellow for Margaret McConnell (Master’s students)

## RESEARCH AND PROFESSIONAL EXPERIENCE

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### Harvard University

*Doctoral Researcher*

Boston, MA

*August 2022 – Present*

- Estimated impact of shocks to safety-net providers on chlamydia testing, case detection, and population health outcomes using quasi-experimental design and mathematical modeling
- Led quasi-experimental evaluation of the effect of state-level syphilis screening mandates on prenatal syphilis detection using national vital statistics data and hospital discharge claims
- Developed a statistical approach to improve surveillance of drug-resistant tuberculosis using national notification registry data, in collaboration with Brazil’s Ministry of Health

### Mass General Brigham

*Consultant*

Boston, MA

*July 2025 – February 2026*

- Identified potential public and commercial administrative and EHR data sources for quasi-experimental evaluation of antenatal steroid exposure

### **EcoHealth Alliance**

*Health & Policy Research Assistant*

New York, NY

*July 2021 – July 2022*

- Assessed multi-sectoral strategies to strengthen health security across ten African countries
- Analyzed pandemic preparedness and antimicrobial resistance data for World Bank partners
- Conducted economic evaluation of interventions against Rift Valley fever in South Africa

### **Abdul Latif Jameel Poverty Action Lab (J-PAL)**

*Senior Policy Associate*

Boston, MA

*August 2019 – July 2021*

- Synthesized lessons from randomized controlled trials of environment, energy, and climate change programs and conducted policy outreach to policymakers and NGOs
- Cultivated new research partnerships between academics, NGOs, and governments to design, pilot, evaluate, and scale effective poverty alleviation policies and programs
- Worked with PIs to design research agenda for \$25 million climate research and policy funding initiative and managed semiannual funding competitions
- Collaborated with senior leadership on increasing diversity of J-PAL's network of 200+ junior researchers

### **Population Services International**

*Research, Monitoring & Evaluation Fellow*

Johannesburg, South Africa

*November 2018 – July 2019*

- Led data reporting, audits, and data quality trainings across six countries for the HIV Self-Testing Africa (STAR) Initiative
- Facilitated DHIS2 training, piloting, and roll-out among voluntary medical male circumcision mobilizers in South Africa
- Developed and reviewed household survey instruments related to malaria and sexual and reproductive health
- Authored technical reports and publications, and managed inputs for donor deliverables in collaboration with leadership and country offices

### **Barnard College**

*Research Assistant, Department of Economics*

New York, NY

*May 2017 – July 2019*

- Co-authored a literature review and descriptive analysis on the gender impacts of extractive industries
- Assessed links between resource governance and gender equality for the Natural Resource Governance Institute

### **New York City Department of Health and Mental Hygiene**

*Consultant*

New York, NY

*July 2017 – July 2018*

- Led analysis comparing different responses to hepatitis A outbreaks
- Synthesized use cases for Regional Health Information Organizations in disease surveillance activities informed by qualitative focus groups with public health experts

### **United Nations Development Programme**

*Health & Innovative Financing Intern, HIV, Health and Development Group*

New York, NY

*June 2017 – November 2017*

- Wrote briefs to engage non-health ministries in multi-sectoral responses to non-communicable diseases and collaborated on drafting a guidance note for the Global Fund's tuberculosis programming

## **TECHNICAL SKILLS**

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**Software:** R, Stata, ArcGIS, L<sup>A</sup>T<sub>E</sub>X

**Languages:** English (native), French (conversational)

## REFERENCES

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**Nicolas A. Menzies, Ph.D.**

Associate Professor of Global Health  
Department of Global Health and Population  
Harvard T.H. Chan School of Public Health  
Boston, MA 02115  
[nmenzies@hsph.harvard.edu](mailto:nmenzies@hsph.harvard.edu)

**Leila Agha, Ph.D.**

Associate Professor of Health Care Policy  
Department of Health Care Policy  
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**Jessica Cohen, Ph.D.**

Professor of Health Economics  
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