

MARISSA B. REITSMA

STANFORD UNIVERSITY DEPARTMENT OF HEALTH POLICY

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[EDUCATION](#) | [FELLOWSHIPS & GRANTS](#) | [AWARDS](#) | [PUBLICATIONS](#) | [INVITED LECTURES & TEACHING](#) | [SERVICE](#) | [WORK EXPERIENCE](#)

EDUCATION

Stanford University

September 2019 - Present

PhD Student in Health Policy

Knight-Hennessy Scholar, NSF Graduate Research Fellow, Stanford Data Science Scholar

Advisors: Joshua Salomon, Jeremy Goldhaber-Fiebert, Sherri Rose

Brown University

September 2010 - May 2014

Sc.B Biology (Immunology)

Honors, Magna Cum Laude

FELLOWSHIPS AND GRANTS

Spectrum Early Career Pilot Grant

2023

Title: Leveraging Multi-Modal Surveys for Robust Prediction of Health Indicators

Stanford University Center for Population Health Sciences

Stanford Impact Labs PhD Fellowship

2023

Stanford Impact Labs

Stanford Data Science Scholars Program

2021-2023

50% Scholarship Funding - 2 years

Stanford University

NSF Graduate Research Fellowship Program

2021-2024

Full scholarship funding - 3 years

National Science Foundation

Spectrum Early Career Pilot Grant

2021

Title: Prioritizing effective interventions to eliminate disparities in COVID-19 outcomes among marginalized populations

Stanford University Center for Population Health Sciences

Knight-Hennessy Scholarship

2019-2022

Full scholarship funding - 3 years

Stanford University

Post-Bachelor Fellowship

2014-2016

Institute for Health Metrics and Evaluation

Brown International Scholars Program Fellowship 2013-2014
Brown University

Laura W. Bush Traveling Fellowship 2013
US Department of State / UNESCO

AWARDS

Women in Data Science Award 2023
Stanford Data Science Conference

Spotlight Award for Simulated Data 2023
Stanford Data Science Conference

Lee B. Lusted Student Award (Health Services, Outcomes, and Policy Research) 2021
Society for Medical Decision Making

Community Builder Award 2019
Institute for Health Metrics and Evaluation

Jeremiah and Rose Stamler Research Award for New Investigators 2018
American Heart Association

Undergraduate Teaching and Research Award 2012
Brown University

SELECTED PUBLICATIONS

A complete list of publications is available on [Google Scholar](#).

29. **Marissa B. Reitsma**, Stacie B Dusetzina, Jeromie M Ballreich, Antonio J Trujillo, Michelle M Mello. Examining Opportunities to Increase Savings From Medicare Price Negotiations. April 2023. *JAMA Internal Medicine*.

28. Nancy Fullman, ... **Marissa B. Reitsma**, ... Emmanuela Gakidou. Assessing the impact of community-based interventions on hypertension and diabetes management in three Minnesota communities: Findings from the prospective evaluation of US HealthRise programs. February 2023. *Plos One*.

27. Xiaochen Dai, Gabriela F Gil, **Marissa B. Reitsma**, ... Emmanuela Gakidou. Health effects associated with smoking: a Burden of Proof study. October 2022. *Nature Medicine*.

26. Dana Bryazka, **Marissa B. Reitsma**, Max G Griswold, GBD 2020 Alcohol Collaborators,

Emmanuela Gakidou. Population-level risks of alcohol consumption by amount, geography, age, sex, and year: a systematic analysis for the Global Burden of Disease Study 2020. July 2022. *The Lancet*.

25. Joshua A. Salomon, ... **Marissa B. Reitsma**, ... Ryan J. Tibshirani. The US COVID-19 Trends and Impact Survey: Continuous real-time measurement of COVID-19 symptoms, risks, protective behaviors, testing, and vaccination. December 2021. *PNAS*.

24. **Marissa B. Reitsma**, Jeremy D. Goldhaber-Fiebert, Joshua A. Salomon. Quantifying and Benchmarking Disparities in COVID-19 Vaccination Rates by Race and Ethnicity. October 2021. *JAMA Network Open*.

23. Fernando Alarid-Escudero, Valeria Gracia, Andrea Luviano, Jorge Roa, Yadira Peralta, **Marissa B. Reitsma**, Anneke L. Claypool, Joshua A. Salomon, David M. Studdert, Jason R. Andrews, Jeremy D. Goldhaber-Fiebert. Dependence of COVID-19 Policies on End-of-Year Holiday Contacts in Mexico City Metropolitan Area: A Modeling Study. October 2021. *MDM Policy Practice*.

22. **Marissa B. Reitsma***, Anneke L. Claypool*, Jason Vargo, Priya B. Shete, Ryan McCorvie, William H. Wheeler, David A. Rocha, Jennifer F. Myers, Erin L. Murray, Brooke Bregman, Deniz M. Dominguez, Alyssa D. Nguyen, Charsey Porse, Curtis L. Fritz, Seema Jain, James P. Watt, Joshua A. Salomon, Jeremy D. Goldhaber-Fiebert. Racial/Ethnic Disparities in COVID-19 Exposure Risk, Testing, and Cases at the Subcounty Level in California. May 2021. *Health Affairs*.

**Co-first author*

21. **Marissa B. Reitsma**, Parkes J. Kendrick, GBD 2019 Tobacco Collaborators, Emmanuela Gakidou. Spatial, temporal, and demographic patterns in prevalence of smoking tobacco use and attributable disease burden in 204 countries and territories, 1990-2019: a systematic analysis from the Global Burden of Disease Study 2019. May 2021. *The Lancet*.

20. Parkes J. Kendrick, **Marissa B. Reitsma**, GBD 2019 Tobacco Collaborators, Emmanuela Gakidou. Spatial, temporal, and demographic patterns in prevalence of chewing tobacco use in 204 countries and territories, 1990-2019: a systematic analysis from the Global Burden of Disease Study 2019. May 2021. *The Lancet Public Health*.

19. **Marissa B. Reitsma**, Luisa S. Flor, Erin C. Mullany, Vin Gupta, Simon I. Hay, Emmanuela Gakidou. Spatial, temporal, and demographic patterns in smoking prevalence and initiation among young people in 204 countries and territories, 1990-2019. May 2021. *The Lancet Public Health*.

18. **Marissa B. Reitsma**, Joshua A. Salomon, Jeremy D. Goldhaber-Fiebert. Mapping Inequality in SARS-CoV-2 Household Exposure and Transmission Risk in the USA. February 2021. *Journal of General Internal Medicine*.

17. Luisa S. Flor, **Marissa B. Reitsma**, Vin Gupta, Marie Ng, Emmanuela Gakidou. Assessing the

- impact of tobacco control policies on global smoking prevalence. February 2021. *Nature Medicine*.
16. **Marissa B. Reitsma**, Parkes Kendrick, Jason Anderson, Nicholas Arian, Rachel Feldman, Emmanuela Gakidou, Vin Gupta. Reexamining Rates of Decline in Lung Cancer Risk after Smoking Cessation: A meta-analysis. September 2020. *Annals of the American Thoracic Society*.
 15. Deborah C. Malta, ...**Marissa B. Reitsma**, ... Emmanuela Gakidou. Trends in prevalence and mortality burden attributable to smoking, Brazil and federated units, 1990 and 2017. September 2020. *Population Health Metrics*.
 14. **Marissa B. Reitsma**, Nancy Fullman, Marie Ng, GBD 2015 Tobacco Collaborators, Christopher Murray, Mohammad Mehrdad Forouzanfar, Emmanuela Gakidou. Estimating smoking prevalence and attributable disease burden in 195 countries and territories, 1990-2015: a systematic analysis from the Global Burden of Disease Study 2015. April 2017. *The Lancet*.
 13. Ashkan Afshin, Mohammad Mehrdad Forouzanfar, **Marissa B. Reitsma**, Patrick Sur, Kara Estep, Alex Lee, Laurie Marczak, Ali Mokdad, Maziar Moradi Lakeh, Mohsen Naghavi, Joseph Salama, Theo Vos, GBD 2015 Obesity Collaborators, Christopher Murray. Obesity and overweight and their health impact 1990-2015 in 195 countries. June 2017. *New England Journal of Medicine*.
 12. **GBD 2019 Risk Factors Collaborators**. The unfulfilled promise of prevention: the global burden of 86 risk factors, 1990-2019: a systematic analysis for the Global Burden of Disease Study 2019. October 2020. *The Lancet*.
 11. **GBD 2019 Diseases and Injuries Collaborators**. Global burden of 302 diseases, injuries, and impairments, 1990-2019: a systematic analysis for the Global Burden of Disease Study 2019. October 2020 *The Lancet*.
 10. Luisa S. Flor, ...**Marissa B. Reitsma**, ... Emmanuela Gakidou. Community-based interventions for detection and management of diabetes and hypertension in underserved communities: a mixed-methods evaluation in Brazil, India, South Africa and the USA. June 2020. *BMJ Global Health*.
 9. **GBD 2017 Risk Factors Collaborators**. Global, regional, and national comparative risk assessment of 84 behavioural, environmental and occupational, and metabolic risks or clusters of risks for 195 countries and territories, 1990-2017: a systematic analysis for the Global Burden of Disease Study 2017. November 2018. *The Lancet*.
 8. Kantor R, DeLong A, Schreier L, **Reitsma M**, Kemboi E, Orido M, Obonge S, Boinett R, Rono M, Emonyi W, Brooks K, Coetzer M, Buziba N, Hogan J, Diero L. HIV-1 second-line failure and drug resistance at high-level and low-level viremia in Western Kenya. November 2018. *AIDS*.
 7. Kyle Foreman,... **Marissa Reitsma**,... Christopher JL Murray. Forecasting life expectancy, years of life lost, and all-cause and cause-specific mortality for 250 causes of death: reference and alternative scenarios for 2016-40 for 195 countries and territories. October 2018. *The Lancet*.

6. Rose Gabbert,... **Marissa Reitsma**,... Herbert Duber. Identifying gaps in the continuum of care for hypertension and diabetes in two Indian communities. December 2017. *BMC Health Services Research*.
5. **GBD 2016 Risk Factors Collaborators**. Global, regional, and national comparative risk assessment of 84 behavioural, environmental and occupational, and metabolic risks or clusters of risks, 1990 to 2016: a systematic analysis for the Global Burden of Disease Study 2016. September 2017. *The Lancet*.
4. **GBD 2015 Risk Factors Collaborators**. Global, regional, and national comparative risk assessment of 79 behavioural, environmental and occupational, and metabolic risks, 1990-2015: a systematic analysis for the Global Burden of Disease Study 2015. October 2016. *The Lancet*.
3. Katherine Brooks, Lameck Diero, Allison DeLong, Maya Balamane, **Marissa Reitsma**, Emmanuel Kemboi, Millicent Orido, Mia Coetzer, Joseph Hogan, Rami Kantor. Treatment Failure, Drug Resistance and High K65R in HIV-infected Patients on Tenofovir-Based 1st-Line Antiretroviral Therapy in Western Kenya. May 2016. *Journal of the International AIDS Society*.
2. Rami Kantor,... **Marissa Reitsma**,... Susan Eshleman. Pretreatment HIV Drug Resistance and HIV-1 Subtype C Are Independently Associated With Virologic Failure: Results From the Multinational PEARLS (ACTG A5175) Clinical Trial. February 2015. *Clinical Infectious Diseases*.
1. Philip Chan, **Marissa Reitsma**, Allison DeLong, Bruce Boucek, Marco Salemi, Amy Nunn, Rami Kantor. Phylogenetic and Geospatial Evaluation of HIV-1 Subtype Diversity at the Largest HIV Center in Rhode Island. April 2014. *Infection, Genetics and Evolution*.

INVITED LECTURES AND TEACHING

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| Guest Lecturer Introduction to Decision Sciences
<i>Advancing Health Equity and Diversity Summer Research Program, Stanford University</i> | Jul. 2021, Jul. 2022 |
| Guest Lecturer Descriptive Epidemiology and Global Health
<i>Advancing Health Equity and Diversity Summer Research Program, Stanford University</i> | Jul. 2021, Jul. 2022 |
| Guest Lecturer Global Burden of Disease: Methods and Results
<i>University of Washington, Seattle</i> | Jan. 2021, Jan. 2022 |
| Graduate Teaching Assistant Analysis of Costs, Risks, and Benefits of Health Care
<i>Stanford University</i>
Evaluation of effectiveness of instruction: 4.9/5 | Fall 2021 |
| Invited Speaker Strategies to reduce racial/ethnic disparities in the COVID-19 vaccination campaign
<i>Center for Population Health Sciences, Stanford University</i> | April 2021 |

Guest Lecturer Principles of Health Metrics <i>University of Washington, Seattle</i>	October 2020
Invited Speaker Quantifying the Global Health Impacts of Smoking <i>Johns Hopkins University, Baltimore</i>	October 2019
Invited Speaker Path to a Tobacco-Free Taiwan <i>Taipei Medical University, Taiwan</i>	November 2018
Lead Instructor Introduction to Research <i>Institute for Health Metrics and Evaluation, Seattle</i>	September 2018
Invited Lecturer Tobacco control in Mexico and Latin America <i>Instituto Nacional de Salud Pública, Mexico</i>	August 2018
Guest Lecturer Global Burden of Disease <i>University of Washington, Seattle</i>	Jul. 2017, Aug. 2018
Instructor Global Burden of Disease Technical Training Workshop <i>Institute for Health Metrics and Evaluation, Greece</i>	Apr. 2017, Apr. 2018
Guest Lecturer Tobacco and Public Health <i>University of Washington, Seattle</i>	May 2017
Undergraduate Teaching Assistant Burden of Disease in Developing Countries <i>Brown University, Providence</i>	Fall 2013

SERVICE

Committee: Stanford Department of Health Policy's Justice, Equity, Diversity, and Inclusion Committee [2021-Present]; Society for Medical Decision Making Career Development Committee [2022-Present]

Ad Hoc Reviewer: Health Affairs, BMJ Open, Tobacco Control, Tobacco Use Insights, International Journal of Cancer, American Journal of Public Health, Value in Health, The Lancet Global Health, JAMA Network Open

Mentor: Advancing Health Equity and Diversity Summer Research Program [2022]; Inclusive Mentorship in Data Science [2022-2023]; Stanford Biosciences Student Association First Mentorship Program [2020-2022]; Upward Scholars [2019-2021]

Relevant previous service: Founded and led IHME's Staff Feedback and Improvement Group [2018-2019], volunteer at County Doctor Free Clinic (primarily serving homeless and street involved youth, majority LGBTQ population) [2016-2019].

ADDITIONAL WORK AND RESEARCH EXPERIENCE

Research Scientist

September 2016 - Present*

Institute for Health Metrics and Evaluation, University of Washington

*Part-time beginning September 2019

Seattle, WA

- Lead research on estimating the burden of disease attributable to alcohol use and tobacco use (smoking, secondhand smoke, and smokeless tobacco)
- Support development of a multi-modal tobacco surveillance system for use in diverse settings
 - Piloted in Lusaka, Accra, and Nairobi
- Forecast the health effects of smoking under different policy scenarios
- Responsible for adding two new risk factors to the global burden of disease study (childhood obesity and chewing tobacco use), as well as a major methodological overhaul for the approach to estimating smoking attributable burden
- Train, supervise, and mentor Post-Bachelor Fellows

Post-Bachelor Fellow

September 2014 - September 2016

Institute for Health Metrics and Evaluation, University of Washington

Seattle, WA

- Developed statistical models to estimate the burden of disease attributable to tobacco use and high-body mass index
- Supported a prospective impact evaluation of community-based interventions for non-communicable diseases in the United States, India, South Africa, and Brazil
- Modeled key covariates, including various categories of food consumption, smoking prevalence, obesity and overweight prevalence, temperature, and precipitation
- **Visiting Researcher at the University of Zambia, July 2016 - August 2016:**
 - Assessed equity in coverage of childhood vaccinations by wealth and performed a decomposition of the drivers of inequity

Research Assistant

January 2012 - August 2014

Brown University Center for AIDS Research

Providence, RI

- Clinical Research: Extracted clinical, behavioral, and demographic data in order to analyze HIV transmission networks among high-risk individuals in Rhode Island
- Bioinformatics Research: Investigated the diversity of HIV subtypes circulating in Rhode Island, and the concordance of various bioinformatics tools used to determine viral subtypes
- Statistical Research: Analyzed the prevalence and correlates of second-line antiretroviral treatment failure, patterns of second-line drug resistance, and impacts on future treatment options
- Laboratory Research: Compared viral sequences from different analytes (plasma, peripheral blood mononuclear cells, and dried blood spots) in order to assess the feasibility of expanding access to viral genotyping in low-resource settings
 - Extracted proviral DNA and viral RNA, ran gel electrophoresis and PCR, and completed viral sequencing

Visiting Researcher

July 2013 - August 2013

Moi Teaching and Referral Hospital

Eldoret, Kenya

- Investigated associations between tribal affiliation and transmission of HIV, adherence to clinic

appointments and medication, and risk of failing antiretroviral therapy through mixed-methods research involving chart review, qualitative interviews, and phylogenetic analysis

Last Updated: June 2, 2023