

## CONTACT

@ antilloninsights@icloud.com

in marinaantillon

4410 Liestal, Switzerland

## ONLINE

marina-antillon.github.io

Marina-Antillon

0000-0002-0235-6030

## INTERESTS

- Disease simulation
- Decision analysis
- Global health priority-setting

## DISEASE AREAS

Typhoid fever 10+ yrs

gHAT elimination 6+ yrs

RSV in infants 5 yrs

## OTHER

Cholera, Covid-19, Tuberculosis

## SKILLS

- Mathematical & probabilistic simulation modelling
- Cost-effectiveness analysis
- Meta-analysis
- Parametric & semi-parametric statistical modelling
- Cluster computing
- R (intermediate), Matlab (basic/intermediate), JAGS (intermediate), Stan (intermediate), Latex (intermediate)
- Microsoft Office Suite (Word, PowerPoint, Excel)
- English (native), Spanish (native), French (A1/A2), German (A1/A2).

# MARINA ANTILLÓN

Epidemiologic Modeller & Health Economist

## EDUCATION

**PhD: Public Health (Epi. of Microbial Diseases)**

2012 - 2017

Yale University, New Haven, CT, USA

Dissertation: "Synthesizing evidence on typhoid fever epidemiology to inform policy on novel conjugate vaccines."

Advisor: Prof. Virginia Pitzer

**BA: Environmental Studies; Minor: Statistics**

2006 - 2010

University of Chicago, Chicago, IL, USA

Thesis: "Season as a modifier of social disparities in adult mortality."

Advisor: Prof. Diane Lauderdale

## PROFESSIONAL EXPERIENCE

**Project Leader**

05/2023 - 03/2024

**Senior Scientific Collaborator**

05/2021 - 04/2023

**Post-doctoral Research Collaborator**

05/2018 - 04/2021

Swiss TPH, Allschwil, Switzerland

Household Economics and Health Systems Research Unit

- Leading a team of 3 research collaborators; mentoring 2 interns, 2 MS students, 1 PhD student; student assistants
- Acquiring projects and funding; assembling teams
- Managing project budgets, timelines, deliverables
- CEA of human African trypanosomiasis elimination campaigns to support national programs in Chad and the Democratic Republic of Congo and the Bill and Melinda Gates Foundation
- CEA and dynamic modeling of the impact of a novel vaccine delivery product (micro-array patch) against typhoid fever to advise strategic planning at Gavi, the Vaccine Alliance
- Costing and out-of-pocket cost surveys of tuberculosis patients

**Post-doctoral Fellow**

10/2017 - 05/2018

University of Antwerp, Antwerp, Belgium

Center for Health Economics Research and Modeling Infectious Diseases

- HTA of a novel typhoid vaccine for Gavi-eligible countries
- Semi-parametric meta-regression modeling of RSV burden in infants and economic evaluations of RSV prophylaxis

**Graduate Research Assistant**

09/2012 - 08/2017

Yale School of Public Health, CT, USA

Department of Epidemiology of Microbial Diseases

- Economic evaluation and dynamic modeling of vaccine interventions against typhoid fever
- Assisting in dynamic modeling projects of cholera and statistical analysis of cystic echinococcosis

**Research Assistant**

07/2010 - 07/2012

University of Chicago, Chicago, IL, USA

Department of Health Studies; Department of Human Genetics

- Data collection and analysis, lymphoma epidemiology, social epidemiology of sleep behaviours, asthma genetics, and Mendelian diseases in a founder population.

## CONSULTING

### Gavi Vaccine Unit

10/2017

Gavi, the Vaccine Alliance, Geneva, Switzerland

- Epidemiological impact of strategies employing conjugate vaccines against typhoid fever for the board meeting of the Programming and Policy Committee (PPC).

### Center for Science and Social Science Information (CSSSI)

10/2015 - 08/2017

Yale University, New Haven, CT, USA

- Assisted researchers in medicine and public health on study design, data management, and statistics.
- Troubleshooting analysis on R, Stata, Matlab, and ArcGIS.

## SUPERVISION OF JUNIOR RESEARCHERS

Laura van der Linde: Master's of Health Policy thesis - University of Bologna

01/2023 – Present

F. Asabe Maiyaki: Master's intern - Bocconi University & Swiss TPH

07/2022 – 12/2022

Team of two Research Collaborators - Swiss TPH

05/2022 – Present

Yuling Lin: Masters of Science thesis - University of Geneva & Swiss TPH

01/2022 – 01/2023

Rian Snijders: PhD student - ITM-Antwerp & Swiss TPH

01/2022 – 01/2023

Maria Paulina Echandi: MPH student thesis - Yale University

01/2015 - 04/2015

## TEACHING

Topics in Global Public Health (Prof. Fabrizio Tediosi)

10/2022

Graduate level, 1-day guest lecturer. University of Bologna

Module on version control and Git. Research data management. (Dr. Marek Kwiatkowski & Prof. Manuel Hetzel)

05/2022 & 05/2023

Graduate level, guest teaching assistant. Swiss TPH

Advances in Infection Biology, Epidemiology and Global Public Health. (Prof. Jürg Utzinger & Dr. Stefanie Knopp)

05/2022

Graduate level, 1-day guest lecturer. Swiss TPH

Cost-effectiveness analyses for decision-making

05/2019 & 10/2020

1-day workshop. Warwick University & Swiss TPH

Epidemiology & Population Health: Global Health Sciences (Prof. Diane Lauderdale)

01/2018

Undergraduate-level; 1-day guest lecturer. University of Chicago Paris Center

Public Health Surveillance (Prof. Daniel Weinberger)

Spring 2015 & Spring 2014

Graduate level. Semester-long graduate assistantship. Yale University.

Ethics and Methods: Global Health Research (Prof. Leslie A. Curry)

Fall 2014

Undergraduate level. Semester-long graduate assistantship. Yale University.

Ecoepidemiology (Prof. María Diuk-Wasser)

Fall 2013

Graduate level. Semester-long graduate assistantship. Yale University.

# PUBLICATIONS

1. Yuling Lin, Alexandra Walker, Marguerite Batta, Sierra Otilie-Kovelman, Anna Duchenko, Curdin Brugger, Olivia Keiser, Robert S. Wallis, Klaus Reither, Fabrizio Tediosi, **Marina Antillon**. *The economic burden of chronic obstructive pulmonary disease and post-tuberculosis sequelae in low- and middle-income countries: a database compiled from a systematic review and meta-analysis*. *BMJ Public Health* 2024;2:e000441.
2. Lukas Meier, **Marina Antillon**, Christian Burri, Nakul Chitnis, Yvette Endriss, Jennifer Keiser, Sarah Moore, Pie Müller, Melissa Penny, Till S Voss, Pascale Mäser & Jürg Utzinger. *Repurposing Know-how for Drug Development: Case Studies from the Swiss Tropical and Public Health Institute*. *Chimia* 77, no. 9 (2023): 582-592.
3. **Marina Antillon**, Ching-I Huang, Samuel A. Sutherland, Ronald E. Crump, Paul R. Bessell, Alexandra P.M. Shaw, Iñaki Tirados, Albert Picado, Sylvain Biéler, Paul E. Brown, Philippe Solano, Severin Mbainda, Justin Darnas, Xia Wang-Steverding, Emily H. Crowley, Mallaye Peka, Fabrizio Tediosi, Kat S. Rock. *Health economic evaluation of strategies to eliminate gambiense human African trypanosomiasis in the Mandoul disease focus of Chad*. *PLoS Neglected Tropical Diseases*, no. 7 (2023): e0011396.
4. **Marina Antillon**, Xiao Li, Lander Willem, Joke Bilcke, Mark Jit, Philippe Beutels. *The burden of respiratory syncytial virus in infants of low- and middle-income countries: A semi-parametric, meta-regression approach*. *PLoS Medicine* 20(7): e1004250.
5. Mihaly Koltai, Jocelyn Moyes, Bryan Nyawanda, Joyce Nyiro, Patrick Munywoki, Stefano Tempia, Xiao Li, **Marina Antillon**, Joke Bilcke, Stefan Flasche, Philippe Beutels, D. James Nokes, Cheryl Cohen, Mark Jit. *Estimating the cost-effectiveness of maternal vaccination and monoclonal antibodies for respiratory syncytial virus in Kenya and South Africa*. *BMC Medicine* 21, no. 1 (2023): 1-15.
6. Maile T. Phillips, **Marina Antillon**, Joke Bilcke, Naor Bar-Zeev, Fumbani Limani, Frédéric Debellut, Clint Pecenka, Kathleen M. Neuzil, Melita A. Gordon, Deus Thindwa, A. David Paltiel, Reza Yaesoubi, Virginia E. Pitzer. *Cost-effectiveness analysis of typhoid conjugate vaccines in an outbreak setting: a modeling study*. *BMC Infectious Diseases* 23, no. 1 (2023): 1-15.
7. Holly Burrows, **Marina Antillón**, Jillian S. Gauld, Jong-Hoon Kim, Vittal Mogasale, Theresa Ryckman, Jason R. Andrews, Nathan C. Lo, and Virginia E. Pitzer. *Comparison of model predictions of typhoid conjugate vaccine public health impact and cost-effectiveness*. *Vaccine* 41, no. 4 (2023): 965-975.
8. Carmen Sant Fruchtmán, Fabienne Beatrice Fischer, Laura Monzón Llamas, Maryam Tavakkoli, Daniel Cobos Muñoz, **Marina Antillon**. *Did COVID-19 Policies Have the Same Effect on COVID-19 Incidence Among Women and Men? Evidence From Spain and Switzerland*. *Int J Public Health* 67 (2022): 1604994
9. Maryam Tavakkoli, Aliya Karim, Fabienne B Fischer, Laura Monzon, Assam Raoofi, Shamsa Zafar, Carmen Sant Fruchtmán, Donald De Savigny, Amirhossein Takian A, **Marina Antillon\***, Daniel Cobos\*. *From public health policy to impact for COVID-19: A multi-country case study in Switzerland, Spain, Iran and Pakistan*. *International Journal of Public Health* (2022) 67:1604969.  
\*Shared senior authorship
10. **Marina Antillón**, Ching-I. Huang, Ronald E. Crump, Paul E. Brown, Rian Snijders, Erick Mwamba Miaka, Matt J. Keeling, Kat S. Rock, and Fabrizio Tediosi. *Economic evaluation of gambiense human African trypanosomiasis elimination campaigns in five distinct transmission settings in the Democratic Republic of Congo*. *Nature Communications* 13, 1051 (2022).
11. Kat S Rock, Ching-I Huang, Ronald E Crump, Paul R Bessell, Paul E Brown, Inaki Tirados, Philippe Solano, **Marina Antillon**, Albert Picado, Severin Mbainda, Justin Darnas, Emily H Crowley, Steve J Torr, Mallaye Peka. *Update of transmission modelling and projections of gambiense human African trypanosomiasis in the Mandoul focus, Chad*. *Infectious Diseases of Poverty* 11, 11 (2022).
12. Ruthie Birger, **Marina Antillón** Joke Bilcke, Christiane Dolecek, Gordon Dougan, Andrew Pollard, Kathleen M. Neuzil, Isabel Frost, Ramanan Laxminarayan, and Virginia E. Pitzer. *Estimating the Impact of Vaccination on Antimicrobial-Resistant Typhoid Fever in Gavi-73 Countries*. *The Lancet Infectious Diseases* 22 (2022): 679–91.
13. **Marina Antillon**, Ching-I Huang, Kat S. Rock, Fabrizio Tediosi. *Economic evaluation of disease elimination: An extension to the net-benefit framework and application to human African trypanosomiasis*. *Proceedings of the National Academy of Sciences* 118 (50) (Dec 2021): e2026797118.
14. Christopher N. Davis, Kat S. Rock, **Marina Antillon**, Erick Mwamba Miaka, and Matt J. Keeling. *Cost-effectiveness modelling to optimise active screening strategy for gambiense human African trypanosomiasis in the Democratic Republic of Congo*. *BMC Medicine* 19,86 (2021).

15. Sequoia I. Leuba, Reza Yaesoubi, **Marina Antillon**, Ted Cohen, and Christoph Zimmer. *Tracking and predicting US influenza activity with a real-time surveillance network*. PLoS Computational Biology 16, no. 11 (2020): e1008180.
16. NTD Modelling Consortium Discussion Group on gambiense Human African Trypanosomiasis. *Insights from quantitative and mathematical modelling on the proposed 2030 goal for gambiense human African trypanosomiasis (gHAT)*. Gates Open Research 2020, 3:1553.
17. Ranju Baral, Xiao Li, Lander Willem, **Marina Antillon**, Alba Vilajeliu, Mark Jit, Philippe Beutels, and Clint Pecenko. *The impact of maternal RSV vaccine to protect infants in Gavi-supported countries: Estimates from two models*. Vaccine 38, no. 33 (2020): 5139-5147.
18. Xiao Li, Lander Willem, **Marina Antillon**, Joke Bilcke, Mark Jit, and Philippe Beutels. *Health and economic burden of respiratory syncytial virus (RSV) disease and the cost-effectiveness of potential interventions against RSV among children under 5 years in 72 Gavi-eligible countries*. BMC Medicine 18 (2020): 1-16.
19. Joke Bilcke, **Marina Antillón**, Zoë Pieters, Elise Kuylen, Linda Abboud, Kathleen M Neuzil, Andrew J Pollard, A. David Paltiel, Virginia E. Pitzer. *Cost-effectiveness of routine and campaign use of typhoid Vi-conjugate vaccine in Gavi-eligible countries: a modelling study*. The Lancet Infectious Diseases 19, no. 7 (2019): 728-739.
20. Jason R. Andrews, Stephen Baker, Florian Marks, Marcella Alsan, Denise Garrett, Bruce G. Gellin, Samir K. Saha, Farah Naz Qamar, Mohammad Tahir Yousafzai, Isaac I. Bogoch, **Marina Antillón**, Virginia E. Pitzer, Jong-Hoon Kim, Jacob John, Jillian Gauld, Vittal Mogasale, Edward T. Ryan, Stephen P. Luby, Nathan C. Lo. *Typhoid conjugate vaccines: a new tool in the fight against antimicrobial resistance*. The Lancet Infectious Diseases 19, no. 1 (2019) e26-30.
21. **Marina Antillón**, Neil J. Saad, Stephen Baker, Andrew J. Pollard, Virginia E. Pitzer. *Relationship between blood volume and diagnostic sensitivity of blood culture for typhoid and paratyphoid fever: a systematic review and meta-analysis*. The Journal of Infectious Diseases 218, no. suppl. 4 (2018): S255-S267.
22. Neil J. Saad, Victoria D. Lynch, **Marina Antillón**, Chongguang Yang, John A. Crump, and Virginia E. Pitzer. *Seasonal dynamics of typhoid and paratyphoid fever*. Scientific Reports 8, no. 1 (2018): 6870.
23. Zoë Pieters, Neil J. Saad, **Marina Antillón**, Virginia E. Pitzer, and Joke Bilcke. *Case fatality rate of enteric fever in endemic countries: A systematic review and meta-analysis*. Clinical Infectious Diseases 67, no. 4 (2018): 628-638.
24. Matthew Phelps, Andrew S. Azman, Joseph A. Lewnard, **Marina Antillón**, Lone Simonsen, Viggo Andreassen, Peter K. M. Jensen, Virginia E. Pitzer. *The importance of thinking beyond the water-supply in cholera epidemics: a historical urban case-study*. PLoS Neglected Tropical Diseases 11, no. 11 (2017): e0006103.
25. Soledad Colombe, Eri Togami, Fkadu Gelaw, **Marina Antillón**, Rodrigo Fuentes, Daniel M. Weinberger. *Trends and correlates of cystic echinococcosis in Chile: 2001-2012*. PLoS Neglected Tropical Diseases 11, no. 9 (2017): e0005911.
26. **Marina Antillón**, Joke Bilcke, A. David Paltiel, Virginia E. Pitzer. *Cost-effectiveness analysis of typhoid conjugate vaccines in five endemic low- and medium-income settings*. Vaccine 35, no. 27 (2017): 3506-3514.
27. **Marina Antillón**, Joshua L. Warren, Forrest W. Crawford, Daniel M. Weinberger, Esra Kürüm, Gi Deok Pak, Florian Marks, Virginia E. Pitzer. *The burden of typhoid fever in low- and middle-income countries: a meta-regression approach*. PLoS Neglected Tropical Diseases 11, no. 2 (2017): e0005376.
28. Joseph A. Lewnard, **Marina Antillón**, Gregg Gonsalves, Alice M. Miller, Albert I. Ko, and Virginia E. Pitzer. *Strategies to prevent cholera introduction during international personnel deployments: a computational modeling analysis based on the 2010 Haiti outbreak*. PLoS Medicine 13, no. 1 (2016): e1001947.
29. Rebecca L. Anderson, Kathleen Murray, Jessica X. Chong, Rebecca Ouwenga, **Marina Antillón**, Peixian Chen, Lorena Diaz de Leon, Kathryn J. Swoboda, Lucille A. Lester, Soma Das, Carole Ober, Darrel J. Waggoner. *Disclosure of Genetic Research Results to Members of a Founder Population*. Journal of Genetic Counseling 23, no. 6 (2014): 984-991.
30. **Marina Antillón**, Diane S. Lauderdale, and John Mullahy. *Sleep behavior and unemployment conditions*. Economics & Human Biology 14 (2014): 22-32.
31. Andrew M. Evans, **Marina Antillón**, Briseis Aschebrook-Kilfoy, and Brian C-H. Chiu. *Racial disparities in Hodgkin's lymphoma: a comprehensive population-based analysis*. Annals of Oncology 23, no. 8 (2012): 2128-2137.