NINA MASTERS
CURRICULUM VITAE

mastersn@umich.edu

EDUCATION

2021 (Expected) **The University of Michigan,** Ann Arbor, MI
PhD Candidate in Epidemiologic Science
Dissertation: Understanding the Resurgence of an Eliminated Disease: Legislative, Attitudinal, and Spatial Factors

2018 **The University of Michigan,** Ann Arbor, MI
Phi Kappa Phi
MPH in Global Health Epidemiology, GPA 4.00
Capstone: Vaccine Hesitancy Among Caregivers and Association with Childhood Vaccination Timeliness in Addis Ababa, Ethiopia

2014 **Princeton University,** Princeton, NJ
Summa Cum Laude, Phi Beta Kappa, Sigma Xi
A.B. in Chemistry, Certificate in Materials Science Engineering, GPA 3.97
Thesis: Plasmonic Colloidosomes: Photothermally Activated Core-shell Particles for Stimulated Release of Biomolecules

Spring 2013 **The University of Queensland,** Brisbane, Queensland, Australia
Princeton Semester Abroad, GPA 4.00, Dean's List
Junior Paper Research: Synthesis of Octapeptin C4 Fluorescent Probes: Investigation into a Novel Antibiotic to Treat NDM 1 Bacteria

RESEARCH EXPERIENCE

2016 – Present **University of Michigan,** Ann Arbor, MI
Graduate Student Research Assistant, Lab of Professor Matthew Boulton

Summer 2017 **St. Paul's Hospital Millennium Medical College,** Addis Ababa, Ethiopia
Summer Research Intern, Public Health Department

2013 – 2014 **Princeton University, Mechanical & Aerospace Engineering,** Princeton, NJ
Undergraduate Senior Thesis Researcher, Nanotechnology and Materials Lab of Professor Michael McAlpine

Spring 2013 **University of Queensland, Institute for Molecular Bioscience,** Brisbane, AUS
Researcher, Drug Discovery Lab of Professor Matthew Cooper

TEACHING EXPERIENCE

Fall 2019 **University of Michigan,** Ann Arbor, MI
Graduate Student Instructor
PUBHLTH 350: Global Public Health: Challenges and Transformations

Fall 2018	**University of Michigan,** Ann Arbor, MI
	Graduate Student Instructor
	PUBHLTH 401: Exploring The Public Health Spectrum Of Cancer: From Prevention To Survivorship

PROFESSIONAL EXPERIENCE

| 2018 – Present | **KnowYourVax: Science Blog** (http://knowyourvax.com) |
| | *Science Communication and Vaccine Blogger* |

| 2015- 2016 | **Recombine,** New York, NY |
| | *Bioinformatics Research Analyst* |

| 2014- 2015 | **Huron Consulting Group,** New York, NY |
| | *Life Sciences Strategy Analyst* |

LEADERSHIP AND VOLUNTEER EXPERIENCE

2019 – Present	**Board Member of Epidemiology Doctoral Student Organization**, Ann Arbor, MI
	First Year Student Contact
	Graduate Employees Organization Representative

| 2019 – Present | **Epidemiology Comprehensive Exam Tutor**, Ann Arbor, MI |
| | *University of Michigan, Department of Epidemiology* |

| 2018 – Present | **Biostatistics Tutor**, Ann Arbor, MI |
| | *University of Michigan, Department of Epidemiology* |

| 2018 - Present | **Undergraduate Public Health Mentor**, Ann Arbor, MI |
| | *University of Michigan, School of Public Health* |

| 2016 – 2017 | **Innovation in Action, University of Michigan**, Ann Arbor, MI |

| 2014 – 2016 | **New York Cares: Lego Mindstorms Volunteer,** New York, NY |

HONORS AND AWARDS

| 2020 | **David J. Sencer Scholarship Award for EIS Conference Travel** |
| | *Epidemic Intelligence Service, Centers for Disease Control and Prevention* |

| 2020 | **Student Travel Grant for Conference Presentation** |
| | *Department of Epidemiology, University of Michigan* |

| 2020 | **Rackham Graduate Student Travel Grant** |
| | *Rackham Graduate School, University of Michigan* |

| 2019 | **Global Public Health Pre-Dissertation Travel Award** |
| | *Office of Global Public Health, University of Michigan* |

| 2019 | **Summer Training Fund Award** |
| | *Department of Epidemiology, University of Michigan* |

2019	**Rackham Graduate Student Research Grant (Pre-Candidate Award)**
	Rackham Graduate School, University of Michigan
2017	**Summer Travel Award for Independent Research**
	International Institute, University of Michigan
2017	**Summer Travel Award for Independent Research**
	Office of Global Public Health, University of Michigan
2016	**Dean's Award MPH Full Tuition Scholarship in Global Epidemiology**
	Dean's Office, University of Michigan
2014	**Merck Index Prize for Outstanding Senior Research in Chemistry**
	Dept. of Chemistry, Princeton University
2013	**Finalist for Marshall Scholarship, New York Region**
2013	**William Foster Memorial Prize for Outstanding Academic and Research Ability in Chemistry**
	Dept. of Chemistry, Princeton University

PUBLICATIONS

Peer-Reviewed Manuscripts

1. Janusz CB, Wagner AL, **Masters NB,** et al. Measles vaccination of young infants in China: A cost-effectiveness analysis. Vaccine. 2020;38(29):4616-4624. http://doi.org/10.1016/j.vaccine.2020.04.079.

2. Wagner AL, **Masters NB**, Boulton ML, et al. Vaccine Hesitancy Across Five Low- and Middle-Income Countries. *Vaccines*. 2019; 7(4): 155. *Epub ahead of print.* http://doi.org/10.3390/vaccines7040155.

3. **Masters NB**, Wagner AL, Boulton ML. Vaccination timeliness and delay in low- and middle-income countries: a systematic review of the literature, 2007-2017. *Human Vaccines & Immunotherapeutics.* 2019; *15(12): 2790-2805.* http://doi.org/10.1080/21645515.2019.1616503.

4. **Masters NB**, Wagner AL, Ding Y, Zhang Y, Boulton ML. Assessing Measles Vaccine Failure in Tianjin, China, 2009 – 2013. Vaccine. 2019; *37(25): 3251-3254.* http://doi.org/10.1016/j.vaccine.2019.05.005.

5. **Masters NB**, Wagner AL, Carlson BF, Muuo SW, Mutua MK, Boulton ML. Childhood Vaccination in Kenya: Socio-Economic Determinants and Disparities Among the Somali Ethnic Minority. *IJPH.* 2019; 64(3): 313-322*.* http://doi.org/10.1007/s00038-018-1187-2.

6. **Masters NB**, Abeje Y, Wagner AL, Boulton ML. Vaccine Hesitancy Among Caregivers and Association with Childhood Vaccination Timeliness in Addis Ababa, Ethiopia. *Human Vaccines & Immunotherapeutics.* 2018; 14(10): 2340-2347.

http://doi.org/10.1080/21645515.2018.1480242.

7 Brouwer AF, **Masters NB,** Eisenberg JNS. Quantitative microbial risk assessment and transmission modeling of waterborne pathogens. *CEHR*. 2018; 5(2): 293-304. http://doi.org/10.1007/s40572-018-0196-x.

8 **Masters NB,** Wagner AL, Carlson BF, Boulton ML. Vaccination timeliness and co-administration among Kenyan Children. *Vaccine*. 2018;36(11): 1353-1360. http://doi.org/10.1016/j.vaccine.2018.02.001.

9 Shenton LM, Wagner, AL, Bettampadi D, **Masters NB,** Carlson B, Boulton ML. Factors Associated with Vaccination Status of Children Aged 12-48 Months in India, 2012-2013. *Maternal and Child Health Journal.* 2018; 22(3):419-428. http://doi.org/10.1007/s10995-017-2409-6.

10 Joseph E, Manoharan A, Kania K, **Masters N**, Shraga R, Patel B, Pollock A, Wisotzkey R, Jaremko M, Parets S, Fox R, Kumar N, Bisignano A., Puig O. Comprehensive Next Generation Sequencing Assay for Identifying Pathogenic Variants Associated with Cardiovascular Diseases. *Journal of the American College of Cardiology*. 2017;69(11):929. http://doi.org/10.1016/S0735-1097(17)34318-8.

11 Gupta MK, Meng F, Johnson BN, Kong YL, Tian L, Yeh Y, **Masters N,** Singamaneni S, McAlpine M. 3D Printed Programmable Release Capsules. *Nano Letters*. 2015;15(8): 5321-5329. http://doi.org/10.1021/acs.nanolett.5b01688.

Manuscripts Under Review

1 Shih SH, Wagner AL, **Masters NB,** Prosser LA, Zikmund-Fisher B. Vaccine hesitancy and rejection of a vaccine for the novel coronavirus (COVID-19) in the United States*. Frontiers in Public Health (under review)*

2 **Masters NB,** Eisenberg M, Delamater P, Kay M, Boulton ML, Zelner J. Spatial heterogeneity in measles vaccination overage: How does clustering of non-vaccination impact outbreak risk? PNAS *(under review)*

3 **Masters NB,** Delamater P, Boulton ML, Zelner J. Measuring multiple dimensions and indices of non-vaccination clustering in Michigan. AJE *(under review)*

4 **Masters NB**, Wagner AL, Bukoff A, Akel K, Kobayashi L, Miller AL, Harapan H, Lu Y, Shih SH. Social distancing in response to the novel coronavirus (COVID-19) in the United States. Journal of Health and Social Behavior *(under review)*

Other Articles and Media

1 ***Population Healthy (Podcast)* From University of Michigan School of Public Health.** (August, 2019) Interviewed for first episode of new podcast produced by University of Michigan School of Public Health regarding vaccines, vaccine hesitancy, and herd immunity.

2	**Masters NB.** (October 2018) FDA Approves HPV Vaccine for those up to age 45. *The Pursuit (University of Michigan).* https://sph.umich.edu/pursuit/2018posts/fda-approves-hpv-vaccine.html

Conference Presentations

1	**Masters NB**, Zelner J, Eisenberg M, Kay M, Delamater P, Boulton M. (June, 2020). *Exploring the impact of clustering of unvaccinated individuals on risk of measles infection at herd-immunity vaccination levels.* Oral Abstract Presentation at Society for Epidemiologic Research (SER), Boston, MA - POSTPONED DUE TO COVID-19.
2	**Masters NB**, Zelner J, Delamater P, Boulton M. (February, 2020). *Identifying spatial heterogeneity in vaccination coverage in Michigan from 2008-2018: Evaluating the impact of a 2015 policy change on measles risk.* Poster Presentation at International Congress on Infectious Disease (ICID), Kuala Lumpur, Malaysia – POSTPONED DUE TO COVID-19.
3	**Masters NB** & Abeje Y. (July, 2017). *Evaluating Perceptions of Vaccine Necessity in Health Centers in Addis Ababa.* Presentation at Ethiopian Futures Symposium, Addis Ababa, Ethiopia.

Invited Guest Lectures

1	*Migration and Global Public Health – Impacts of Population Migration through a Public Health Lens* (October, 2019). Presentation in Public Health 350 at the University of Michigan.
2	*Introduction to Complex Systems Modeling – Measles Heterogeneity as a Case Study* (October and December, 2018). Presentation for required MPH course at University of Michigan, EPID 644.

TRAININGS AND CERTIFICATIONS

2019	11th Summer Institute in Statistics and Modeling in Infectious Diseases (SISMID), University of Washington, Seattle: Simulation-Based Inference for Epidemiological Dynamics
2019	11th Summer Institute in Statistics and Modeling in Infectious Diseases (SISMID), University of Washington, Seattle: Spatial Statistics in Epidemiology and Public Health

COMPUTATIONAL SKILLS

LaTeX, Python, SQL, Github, SAS, R, & Matlab
Dynamic transmission modeling techniques: agent based models, compartmental models, stochastic models, and spatial models of infectious disease processes