

**Elizabeth C. Chase**  
Curriculum Vitae

University of Michigan  
Department of Biostatistics  
SPH II  
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Ann Arbor, MI, 48109

Updated: 2/1/2022  
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**EDUCATION**

- 2017-2023 (anticipated)      Ph.D. in Biostatistics  
University of Michigan (U-M), Ann Arbor, MI  
M.S. awarded in May 2019  
Advisors: Drs. Philip S. Boonstra and Jeremy M. G. Taylor
- 2013-2017      B.S.P.H. in Biostatistics  
B.A. in History  
University of North Carolina (UNC-Chapel Hill), Chapel Hill, NC  
Advisors: Drs. Jane Monaco and Molly Worthen  
*Thesis: Disease and Distrust: Mandatory Premarital HIV Testing in Illinois*

**RESEARCH EXPERIENCE**

- 2020 - 2021      Statistical Consultant  
Cornell University, Africana Studies and Research Center  
Collaborator: Dr. Jerel Ezell
- 2019 - 2021      Research Assistant  
University of Michigan, Department of Radiation Oncology  
Advisors: Drs. Matthew Schipper, Robert Dess, and Daniel Spratt
- 2018-2020      Research Assistant  
University of Michigan, Department of Sociology  
U-M University Responses to Sexual Assault (URSA)  
Advisors: Drs. Elizabeth Armstrong and Sandra Levitsky
- 2016      Summer Intern  
National Cancer Institute, Division of Cancer Epidemiology and Genetics, Biostatistics Branch  
Advisor: Dr. Barry Graubard
- 2015-2017      Research Assistant  
Carolina Center for Women's Health Research, UNC-Chapel Hill  
Advisor: Dr. Wendy Brewster

**HONORS AND AWARDS**

- 2021      Gertrude M. Cox Scholarship  
2019      U-M Biostatistics Outstanding Citizenship Award  
2019      Rackham Conference Travel Grant (U-M)  
2018      Richard G. Cornell Fellowship for Best Biostatistics PhD Student

2017-2022	National Science Foundation Graduate Research Fellow
2017-2018	U-M NIH Biostatistics in Cancer Training Program Trainee
2017	Delta Omega Theta Undergraduate Excellence Award
2016	Summer Undergraduate Research Fellow (UNC-Chapel Hill)
2015	Phi Beta Kappa
2015	Phi Alpha Theta
2014	Colonel Robinson Summer Fellow (UNC-Chapel Hill)
2013-2017	Colonel Robinson Scholar (UNC-Chapel Hill)
2013	National Merit Scholar
2013-2017	Dean's List (UNC-Chapel Hill)
2013-2017	Honors Carolina (UNC-Chapel Hill)

## PUBLICATIONS

### Peer Reviewed Manuscripts

1. Ezell, Jerel M; Bhardwaj, Sanvi; **Chase, Elizabeth C.** "Child lead screening behaviors and health outcomes following the Flint Water Crisis: a cross-sectional analysis." *Journal of Racial and Ethnic Health Disparities*. Jan. 2022. DOI: <https://doi.org/10.1007/s40615-022-01233-6>
2. Ezell, Jerel M; Griswold, Delilah; **Chase, Elizabeth C**; Carver, Evan. "The blueprint of disaster: COVID-19, the Flint water crisis, and unequal ecological impacts." *Lancet Planetary Health*. May 2021. DOI: [https://doi.org/10.1016/S2542-5196\(21\)00076-0](https://doi.org/10.1016/S2542-5196(21)00076-0)
3. Ezell, Jerel M; **Chase, Elizabeth C.** "A population-based assessment of physical symptoms and mental health outcomes among adults following the Flint Water Crisis." *Journal of Urban Health*. Apr. 2021. PMCID: PMC8566686
4. Ezell, Jerel M; Salari, Samira; Rooker, John C; **Chase, Elizabeth.** "Intersectional Trauma: COVID-19, the Psychosocial Contract, and America's Racialized Public Health Lineage." *Traumatology*. Feb. 2021. DOI: <http://dx.doi.org/10.1037/trm0000302>
5. Boonstra, Philip; Braun, Thomas; **Chase, Elizabeth.** "A modular framework for seamless oncology trials." *Clinical Trials*. Jan. 21, 2021. PMCID: PMC8382494
6. Hartman, Holly; Sun, Yilun; Devasia, Theresa; **Chase, Elizabeth**; Jairath, Neil; Dess, Robert; Jackson, William; Morris, Emi; Li, Pin; Hochstedler, Kim; Abbott, Madeline; Kidwell, Kelley; Walter, Vonn; Wang, Ming; Wang, Xi; Zaorsky, Nicholas; Schipper, Matthew; Spratt, Daniel. "Integrated Survival Estimates for Cancer Treatment Delay Among Adults With Cancer During the Coronavirus Disease 2019 (COVID-19) Pandemic." *JAMA Oncology* 6.12 (2020): 1881-1889. PMCID: PMC7596687
7. **Chase, Elizabeth** and Philip Boonstra. "Accounting for established predictors with the multi-step elastic net." *Statistics in Medicine* 38.23 (October 2019): 4534-4544. PMCID: PMC6736688
8. **Chase, Elizabeth.** "Doctor Knows Best: Informed Consent and Medical Misconduct in the 1960s." *Georgetown Journal of History*. Fall 2017.
9. **Chase, Elizabeth.** "'They Know Not What They Do': Evil in the Anti-Smallpox Vaccine Movement." *Harvard Synthesis*. Fall 2016.
10. **Chase, Elizabeth.** "Writing Woman: Caroline Gordon's Struggle with Catholicism and Gender." *Traces: UNC Undergraduate Journal of History*. Spring 2016.

## Submitted

11. Shreves, Alaina H; Buller, Ian D; **Chase, Elizabeth C**; Creutzfeldt, Hannah; Fisher, Jared A; Graubard, Barry I; Hoover, Robert N; Silverman, Debra T; Devesa, Susan S; Jones, Rena R. "Geographic patterns in U.S. lung cancer mortality and cigarette smoking."
12. Shelton, Jenna D; **Chase, Elizabeth C**; Lee, Andrew; Ezell, Jerel M. "Gender, health, and social networks during public health disasters: an evaluation of the Flint Water Crisis."
13. Ezell, Jerel M; **Chase, Elizabeth C**. "Neo Public Assistance and Austerity Governance in the 21st Century: Stratification in Civic Uptake of Resources Following Public Health Crises."
14. **Chase, Elizabeth C**; Dess, Robert T; Bryant, Alex K; Sun, Yilun; Jackson, William C; Spratt, Daniel E; Schipper, Matthew J. "Development and Validation of an Other-Cause Comorbidity-Adjusted Mortality Model in Prostate Cancer Patients."
15. Ezell, Jerel M; **Chase, Elizabeth C**. "Forming a critical race theory of disaster: a macro-social assessment of attitudes, beliefs, and health after the Flint Water Crisis."
16. Spratt, Daniel E; Weiner, Adam B; Alshalalfa, Mohammed; Vince, Randy; Liu, Yang; Zhao, Xin; Li, Ziwen; Freedland, Stephen J; Karnes, R Jeffery; Dess, Robert T; Jackson, William C; Osborne, Joseph; Rayford, Walter; Feng, Felix; Sandler, Howard; Roach, Mack; Pisansky, Thomas; Mahal, Brandon; Nguyen, Paul; Mehra, Rohit; Salami, Simpa; Morgan, Todd; Giret, Teresa; Punnen, Sanoj; Pollack, Allan; Stoyanova, Radka; Davicioni, Elai; Lotan, Tamara L; Schipper, Matthew J; Sun, Yilun; **Chase, Elizabeth C**; Chinnaiyan, Arul M; Schaeffer, Edward M. "The Transcriptional Diversity of Prostate Cancer in Black Men."

## In Preparation

17. **Chase, Elizabeth C**; Taylor, Jeremy MG; Boonstra, Philip S. "Modeling data using horseshoe processes."

## Not Peer Reviewed

1. **Chase, Elizabeth**; Bowen, Claire McKay; Director, Hannah; Bowen, Baladandayuthapani, Veera; Pierson, Steve. "Panel shares advice on applying for NSF fellowships." *Amstat News*, Nov. 2020.
2. Armstrong, Elizabeth A; Levitsky, Sandra; Porter, Kamaria; Gleckman-Krut, Miriam; **Chase, Elizabeth**; Garrick, Jessica. "Defining Sexual Consent on Campus: What's in Media vs. What's in the Policies." *2019 Defining Consent Symposium*, Council on Contemporary Families, University of Texas-Austin, Oct. 21, 2019.
3. Brewster, Wendy; Rumbach, Jennifer; Tippet, Rebecca; Smith, Jennifer; Wasser, Heather; **Chase, Elizabeth**; Boggess, Kim; Corbie-Smith, Giselle; Girdler, Susan; Gourlay, Margaret; Jones, Hendree; Meltzer-Brody, Samantha; Nicholson, Wanda; Stuebe, Alison. "2016 North Carolina Women's Health Report Card: A progress report on women's health and their health care needs." Center for Women's Health Research, UNC-Chapel Hill. May 2016.
4. **Chase, Elizabeth**. "Interview with Molly Worthen." *Traces: UNC Undergraduate Journal of History*. Spring 2016.

## GRANTS

U-M Rogel Cancer Center Blue Boxer Grant  
“Incorporating Other-Cause Mortality to Improve Prostate Cancer Care”  
\$50,000 (awarded 05/01/2021)  
Co-investigator (PI Dr. Matthew J. Schipper)

## ABSTRACTS

1. Armstrong, Elizabeth; Porter, Kamaria; Johnson, Lanora; **Chase, Elizabeth**. “Sexual Misconduct Adjudication under the DCL.” University of Kentucky Center for Research On Violence Against Women: 2018 National Conference on Campus Responses to Sexual Misconduct, Oct. 4, 2018.

## PRESENTATIONS

### Invited - Oral

1. “Data Integration to Improve Prostate Cancer Mortality Prediction.” Guest Lecture, BIOSTAT 803, University of Michigan, Ann Arbor, MI. Oct. 22, 2021.
2. “Development of a Clinically Usable Prediction Model for Other-Cause Mortality in Men with Prostate Cancer.” U-M Radiation Oncology Biostatistics Division Meeting, Ann Arbor, MI. Sept. 29, 2020.
3. “NSF Graduate and Postdoctoral Fellowships: Opportunities and Advice.” ASA Webinar. Sept. 14, 2020.

### Contributed - Oral

1. “Horseshoe processes in partial linear models.” ENAR, Houston, TX. Mar. 28, 2022.
2. “Modeling data using horseshoe processes.” Joint Statistical Meetings, Seattle, WA (moved to virtual for COVID-19). Aug. 8, 2021.

### Poster

1. “Development and Validation of a Clinically Usable Prediction Model for Other-Cause Mortality in Men with Prostate Cancer using Two Prospective National Cohorts.” American Society for Radiation Oncology Annual Meeting, Miami, FL (moved to virtual for COVID-19). Oct. 24, 2020.
2. “Policy predictors of domestic violence shooting incidence in the United States, 2014-2018.” Data Science for Public Good Symposium, Ann Arbor, MI. Feb. 25, 2020.
3. “Accounting for established predictors with the multi-step elastic net.” Joint Statistical Meetings, Denver, CO. July 29, 2019.
4. “Penalized regression with prior research support: the multi-step elastic net.” Michigan Student Symposium for Interdisciplinary Statistical Sciences, Ann Arbor, MI. April 2, 2018.
5. “Trends and Geographic Patterns in U.S. Lung Cancer Rates and Cigarette Smoking.” NIH Summer Research Program Poster Day, Shady Grove, MD. July 29, 2016.

## **SOFTWARE**

1. HPR (<https://github.com/elizabethchase/HPR>). R package to implement horseshoe process regression from Chase, Taylor, and Boonstra (2022+).
2. seamlessssim (<https://github.com/elizabethchase/seamlessssim>). R package to implement seamless trial designs from Boonstra, Braun, and Chase (2021).
3. STAR-CAP ([star-cap.org](http://star-cap.org)). R Shiny app to provide predictions from the STAR-CAP model of Dess, Suresh, et al. (2020) for use by clinicians. Development code at <https://github.com/elizabethchase/STAR-CAP-app>
4. OCCAM ([https://elizabethchase.shinyapps.io/ocm\\_app/](https://elizabethchase.shinyapps.io/ocm_app/)). R Shiny app to provide predictions from the OCCAM model of Chase, Dess, et al. (submitted) for use by clinicians. Development code at <https://github.com/elizabethchase/PCOtherCause>

## **TEACHING EXPERIENCE**

Statistical Inference, U-M Biostatistics, Tutor (2020)  
Introduction to R Workshop, U-M URSA, Developer and Instructor (2019)

## **SERVICE**

2021-2022	Short Courses Chair, ASA Symposium on Data Science and Statistics
2020-2022	U-M Biostatistics Student Diversity, Equity, Inclusion Committee
2020-2021	U-M Biostatistics Student Conflict Resolution Committee
2019-2020	SafeHouse Child and Youth Volunteer
2018-2021	Biostatistics Graduate Student Working Group, Founder and Co-Chair
2018-2022	U-M Biostatistics Peer Mentor
2018-2020	U-M Undergraduate-Graduate Mentoring Program Mentor
2018-2020	U-M Biostatistics Peer Mentoring Committee
2018-2019	U-M Biostatistics Curriculum Committee, Student Representative
2018	U-M Biostatistics Student Summer Journal Club, Co-Chair
2015-2016	<i>Traces</i> Editorial Board
2014-2017	Compass Center for Women and Families, Referral Volunteer
2013-2017	Friends of the University Library Board, Student Representative

## **ADDITIONAL TRAINING**

2020-2021	Rackham Professional Development DEI Certificate University of Michigan, Ann Arbor, MI
2015	Summer Institute for Training in Biostatistics (SIBS) North Carolina State University and Duke University, Raleigh, NC

## **REVIEWING**

Red Journal (2021-Present)  
Scientific Reports (2021)  
PREPSS (2020-Present)  
PLOS One (2018-Present)  
U-M Undergraduate Journal of Public Health (2018-2019)

## **PROFESSIONAL MEMBERSHIPS**

Eastern North American Region of the International Biometrics Society (2018-Present)  
American Statistical Association (2017-Present)