

Education

MS , Statistics, University of Minnesota College of Liberal Arts, Plan B Project: Using Linear Regression to Evaluate Managerial Strategies	<i>11/2007</i>
BA , Biology with Honors, University of Chicago	<i>6/1992</i>

Teaching Experience

University of Minnesota School of Public Health, Biostatistics Division*Lecturer* *8/2017-present*

PubH 6414: Biostatistical Literacy (online)

Review weekly concepts with students

Oversee and assist with concept practice

Address questions and clarify through weekly announcements and Q&A forums

Work with students to provide flexibility to meet mental health needs

Grade weekly quiz assessments

Oversee teaching assistants

PubH 6450: Biostatistics I (in person and online)

Create a clear course structure with regular feedback for student well-being

Assign students to study groups with an eye toward inclusion

Create lecture slides and deliver lectures to introduce statistical concepts

Create problem sets to practice concepts and assist students with concept practice

Assess student progress through both quiz and analysis assessments

Address questions and clarify through weekly announcements and Q&A forums

Provide mental health resources and strategies in weekly announcements

Provide all information in multiple formats to meet student learning needs

Work with students to provide flexibility to meet mental health needs

Supervise teaching assistants

Hold office hours

PubH 6451: Biostatistics II (online)

Review weekly concepts with students

Oversee and assist with concept practice

Address questions and clarify through weekly announcements and Q&A forums

Work with students to provide flexibility to meet mental health needs

Oversee teaching assistants

PubH 7264: Data Visualization in R (in person)

Create a clear course structure with regular feedback for student well-being

Create lecture slides and deliver lectures to introduce programming concepts

Create assignments to practice concepts

Assign students to study groups to practice concepts

Create and grade cumulative assessments of progress

Work with students on flexibility for mental health

PubH 7461: Explore and Visualize Data in R (in person)

Created and gave lectures on data wrangling and graphing in base R

Prepared activities and assessments to practice R coding

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PubH 7462: Advanced Programming and Data Analysis in R (in person)

- Create lecture slides and assignments to practice concepts
- Create and grade cumulative assessments of progress
- Give lectures and assist students with concept practice
- Supervise a teaching assistant
- Hold office hours

University of Minnesota School of Statistics

Teaching Specialist

1/2013-1/2016

Statistics 4893W: Communication and Consultation for Statisticians

- Coordinate consulting project
- Mentor and supervise students as they consult on research design
- Teach effective writing techniques for different types of clients and writing
- Teach effective oral presentation skills
- Create assignments to test their communication and statistical skills
- Arrange for students to meet with career preparation experts
- Create opportunities for students to network with working statisticians

Statistics 3022: Data Analysis

- Teach students how to use the statistical software R for data analysis
- Teach students experimental design, linear regression, and logistic regression
- Select books and supplemental materials for student use
- Create and maintain course website with assignments, resources, and grades
- Measure students' ability to both perform and interpret the appropriate analysis
- Supervise teaching assistants and mentor graduate student instructors

Adjunct Instructor

1/2008-12/2012

Statistics 1001: Introduction to the Ideas of Statistics (statistical concepts for non-majors)

Statistics 3011: Introduction to Statistical Analysis (introduction to statistical methods)

Statistics 3021: Introduction to Probability and Statistics (calculus-based statistics)

- Created lecture notes and activities tailored to the students' mathematical abilities
- Created and maintained course website with all resources and grades
- Created effective assignments to measure student progress and understanding
- Gave timely feedback about student progress
- Supervised teaching assistants

Teaching Assistant

9/2005-6/2006

- Led discussion sections
- Graded homework assignments and exams
- Met regularly and coordinated with the lecturer

University of Minnesota College of Biological Sciences

Research Assistant

8/2006-6/2007

- Co-designed a statistics seminar for first-year undergraduates in biology
- Created learning module on survival analysis
- Created learning module for chi-square test of independence

Professional Service

University of Minnesota SPH, Biostatistics Division

8/2017-present

Co-Chair, BHDS Community Outreach and Engagement Committee

4/2020-present

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- Coordinate team meetings
- Coordinate and participate in career fairs
- Coordinate team participation as consultants for Coon Rapids high school students
- Coordinate and guide course resources for St Paul Public Schools
- Arrange and supervise internship for high school students to aid in resource development
- Coordinate presentations and articles promoting our work
- Present on SPPS and Coon Rapids

Member, Biostatistics Diversity Climate and Inclusion Committee 2019-present

- Coordinated periodic meetings
- Created and supervised implementation of bias in statistics learning modules
- Supervised monthly DEI lunch discussions and lead book clubs some months
- Liaise with DEI work in School of Public Health
- Serve as a DEI representative to meetings with job candidates and students

Mental Health Advocate 2019-present

- Completed training as an advocate
- Completed teaching for student well-being training through College for Educational Innovation
- Coordinated grief counseling for PhD cohort and for the division after loss of one of our graduate students, Sharon Ling
- Coordinated gear sale to support Sharon Ling's family
- Coordinate monthly check in meeting for Mental Health Advocates in School of Public Health
- Coordinate mental health resources for faculty and students
- Helped students connect to basic needs resources on campus

Other committees

- Women's Faculty cabinet 9/2023-present
- SPAR P&A subcommittee 9/2023-3/2024
- School of Public Health representative, P&A senate 9/2020-5/2023
- Member, DEI action alignment team 9/2021-12/2023
- Member, Public Health Undergraduate major: operations committee 2020
- Member, SPH EDIT team

Miscellaneous

- Write recommendations for graduate school and employment for students
- Serve on master's committee for students in PHAP, CHP, and Environmental Health
- Assist in outreach and documentation for preventing sexual misconduct
- Provide informal statistical advising for former students
- Assisted in creation of memorial award for Sharon Ling

Environmental consulting service 1/2017-7/2020

- Served on MPCA advisory committee on water nutrient trends progress report
- Reviewed ITRC soil background standards writing committee documents

University of Minnesota CLA, School of Statistics

Undergraduate Academic Adviser 1/2013-7/2015

- Advised majors about coursework to meet graduation requirements and career goals
- Coordinated with nonacademic advisers about graduation requirements for students
- Collaborated with faculty to redesign the major and minor requirements

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- Updated course descriptions and outcomes to align with education standards
- Created and supervised the undergraduate statistics club
- Serve as a liaison between alumni and undergraduates
- Advised students about work and graduate school opportunities
- Recommended undergraduates for employment opportunities within the university
- Wrote recommendations for graduate school and for employment
- Mentored graduate student instructors on university teaching policy and procedures

Statistical Analysis Experience

Feed My Brain Hamline University

Statistical Analyst

7/2018 – 9/2022

- Consult on survey questions and format
- Clean survey data
- Perform statistical analyses on survey data
- Build statistical models
- Create figures for presentation
- Assist in writing manuscript

Minnesota Pollution Control Agency

Research Analysis Specialist

10/2015-7/2017

- Found models to predict protective levels of pollutants
- Found error rates (false positives and negatives) for pollutant standards
- Used odds ratios to show relationships between binary measures
- Wrote R code for finding nonparametric seasonal trends over time
- Created maps and data visualizations using Tableau
- Provided statistical and R coding assistance to researchers
- Recommended sampling techniques that best preserve data reliability
- Wrote reports and give presentations on statistical findings
- Assisted in guidance document preparation
- Provided figures and edits for manuscripts
- Mentored interns and new staff

University of Minnesota College of Biological Sciences

Statistical Consultant

1/2013-12/2014

- Cleaned survey data for analysis
- Performed latent variable analysis to ensure survey reliability
- Built statistical models
- Created figures for publication
- Assisted in writing manuscript

University of Minnesota School of Journalism and Mass Communication

Statistical Consultant

1/2009-7/2009

- Reviewed previous work in field
- Cleaned survey data for analyses
- Performed latent variable analysis to confirm validity and identify core concepts
- Created statistical models
- Created figures for publication

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St. Louis Cardinals

Master's project to predict outcome of an at-bat

1/2007-10/2007

Retrieved team-specific data from a database for all of MLB

Cleaned data

Created statistical models

Presented results in an oral defense and a master's thesis

Awards

SPH Excellence in Collaboration and Creativity Group Award 5/2024
(with CeCe Altenhofen, Jennifer Porter, and Amy Pleimling)

UMN President's Award for Outstanding Service 5/2023

Thank a Teacher:

- 5 separate thank you notes in 2019
- 13 separate thank you notes in 2020
- 7 separate thank you notes in 2021
- 5 separate thank you notes in 2022
- 5 separate thank you notes in 2023
- 3 separate thank you notes in 2024 (so far)

SPH Excellence in Collaboration and Creativity Group Award 5/2019
(with Ann Brearley and Laura Le)

Employee Recognition Award, Minnesota Pollution Control Agency 2016

Press

[How do we make health data more equitable? video](#), SPH SPAR animated videos, spring 2023

Accompanying list of equitable research by CCBR

[An Individual and Collective Commitment to Change](#) video, SPH YouTube Channel, November 2021

[Agents of Change](#) profile, School of Public Health Website, Fall 2021

Featured in K Billstein. [Biostatistics Goes to High School](#). Advances Magazine, Fall 2021.

Featured in [Teaching During a Pandemic](#). Advances Magazine, Winter 2020

Presentations

M Shore. [Beyond career panels: promoting biostatistics in high schools](#). Presentation at the SPAR Anniversary Celebration: Two Years of Advancing Antiracism, Equity, and Justice. 2023 October 2; Minneapolis, MN

Czachura J, and **M Shore**. Antiracist teaching in an introductory biostatistics course. Contributed Paper Session "Data for Good: Bringing Social and Professional Responsibility into the Statistics Classroom" at MAA MathFest, 2022 August 4; Philadelphia, PA.

Eaton A, Haine L, Masotti M, Samorodnitsky S, Zilinskas R, and **M Shore**. K-12 Community Partnerships: a Method of Biostatistics Promotion. Concurrent presentation at Women in Statistics and Data Science, 2021 October 7; virtual.

Eldridge L, Smaller G, Bebee T, Mastrud M, Neumark-Sztainer D, and **M Shore**. SPH Community Forum: Launching our Strategic Plan for Antiracism. Presentation at: SPH Community Forum, 2021 July 27; virtual.

Shore M, Keefe S, Garagiola-Bernier A, Schmitt S, Kiley E, and J England. Demographic inclusivity illuminates unique food insecurity issues for non-binary students. Poster presentation presented at: Women in Statistics and Data Science, 2020 October 1-2; virtual.

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Shore M, Le L, and Gorman K. 3 Strategies to Incorporate Timely Feedback that Aids Students and Improves the Course. Poster session presented at: Health Science Education Day; 2019 May 2; University of Minnesota Twin Cities.

Dykhuizen Shore M, Pollman CD, Swain EB, Bael D, and Monson P. Statistical Models Predicting Porewater Sulfide from Sulfate. Presentation at: SETAC, 2017 November 16; Minneapolis, MN.

Publications

Samorodnitsky S, Masotti M, Zilinskas R, Neher A, Gliddon A, Gliddon L, **Shore M**, Eaton A, Brearley A, and Le L. in submission. Leveraging a Community Partnership to Provide Statistical Consulting to Graduate Student Trainees. *Journal of Statistics and Data Science Education*.

Samorodnitsky S and **Shore M** (2023). UMN Committee, Local Schools Create Mutually Beneficial Collaboration. *Amstat News*. 550: 20-21

Keefe S, Bernier A, England J, Kiley E, Schmidt S, and **Shore M**. (2020). Campus Food Insecurity: Bringing Private Institutions into Conversations on Basic Needs. *Journal of Hunger and Environmental Nutrition*, DOI: 10.1080/19320248.2020.1838984

Pollman CD, Swain EB, Bael D, Myrbo A, Monson P, and **Shore, MD**. (2017). The evolution of sulfide in shallow aquatic ecosystem sediments: An analysis of the roles of sulfate, organic carbon, and iron and feedback constraints using structural equation modeling. *Journal of Geophysical Research: Biogeosciences*. 122: 2719-2735.

Myrbo A, Swain EB, Engstrom DR, Coleman Wasik J, Brenner J, **Dykhuizen Shore M**, Peters EB and Blaha G, (2017). Sulfide generated by sulfate reduction is a primary controller of the occurrence of wild rice (*Zizania palustris*) in shallow aquatic ecosystems. *Journal of Geophysical Research: Biogeosciences*. 122: 2736-2753.

Myrbo A, Swain EB, Johnson NW, Engstrom DR, Pastor J, Dewey B, Monson P, Brenner J, **Dykhuizen Shore M**, and Peters EB. (2017). Increase in nutrients, mercury, and methylmercury as a consequence of elevated sulfate reduction to sulfide in experimental wetland mesocosms. *Journal of Geophysical Research: Biogeosciences*. 122: 2769-2785.

Kundra J, **Shore M**, Wassenberg D. (2015). Considering the Role of Need for Cognition in Students' Acceptance of Climate Change & Evolution. *The American Biology Teacher*. 77(4): 250-257.

Kanihan SF, Hansen KA, Blair S, **Shore M**, Myers J. (2013). Communication managers in the dominant coalition: Power attributes and communication practices. *Journal of Communication Management*. 17(2):140-156.

Miller CJ, Li Q, Abel K, Kim E-Y, Ma Z-M, Wietgreffe S, La Franco-Scheuch L, Compton L, Duan L, **Dykhuizen Shore M**, Zupancic M, Busch M, Carlis J, Wolinsky S, Haase AT. (2005). Propagation and dissemination of infection after vaginal transmission of simian immunodeficiency virus. *The Journal of Virology*. 79(14):9217.

Zhang Z-Q, Wietgreffe SW, Li Q, **Dykhuizen Shore M**, Duan L, Reilly C, Lifson JL, Haase AT. (2004). Role of substrate availability and infection of resting and activated CD4+ T cells in transmission and acute simian immunodeficiency virus infection. *Proceedings of the National Academy of Sciences*. 101(15):5640-5645.

Rakasz E, MacDougall AV, Zayas MT, Helgelund JL, Ruckward TJ, Hatfield G, **Dykhuizen M**, Mitchen JL, Evans PS, Pauza CD. (2000). Gammadelta T cell receptor repertoire in blood and colonic mucosa of rhesus macaques. *Journal of Medical Primatology*. 29(6):387-96.

Dykhuizen M, Ceman J, Mitchen J, Zayas M, MacDougall A, Helgeland J, Rakasz E, Pauza CD. (2000). Importance of the CD3 marker for evaluating changes in rhesus macaque CD4/CD8 T-cell ratios. *Cytometry*. 40(1):69-75.

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Evans DT, Knapp LA, Jing P, Mitchen JL, **Dykhuizen M**, Montefiori DC, Pauza CD, Watkins DI. (1999). Rapid and slow progressors differ by a single MHC class I haplotype in a family of MHC-defined rhesus macaques infected with SIV. *Immunology Letters*. 66(1-3):53-9.

Wallace M, Waterman PM, Mitchen JL, Djavani M, Brown C, Trivedi P, Horejsh D, **Dykhuizen M**, Kitabwalla M, Pauza CD. (1999). Lymphocyte activation during acute simian/human immunodeficiency virus SHIV(89.6PD) infection in macaques. *Journal of Virology*. 73(12):10236-44.

Dykhuizen M, Mitchen JL, Montefiori DC, Thomson J, Acker L, Lardy H, Pauza CD. (1998). Determinants of disease in the simian immunodeficiency virus-infected rhesus macaque: characterizing animals with low antibody responses and rapid progression. *Journal of General Virology*. 79(10):2461-7.

Steger KK, **Dykhuizen M**, Mitchen JL, Hinds PW, Preuninger BL, Wallace M, Thomson J, Montefiori DC, Lu Y, Pauza CD. (1998). CD4+-T-cell and CD20+-B-cell changes predict rapid disease progression after simian-human immunodeficiency virus infection in macaques. *Journal of Virology*. 72(2):1600-5.

Professional Memberships

American Association for the Advancement of Science
American Statistical Association

Community Service

Crop Art and Scarecrow Assistant Superintendent, Minnesota State Fair	3/2024-present
Business Mentor, FRC team 2823 The Automatons	9/2019-1/2022
President, HP Robotics Parent Org	9/2019-1/2022
Member, Education Equity Coalition	1/2018-7/2021
Treasurer, HP Robotics Parent Org	9/2017-9/2019
Member, Budget & Finance Advisory Cmte, Saint Paul Public Schools	1/2017-6/2019
Treasurer, MAPE local 0301	12/2016-7/2017
Yearbook order coordinator, Expo Elementary	9/2015-6/2019
Coordinator of reading volunteers, Expo Elementary	9/2014-6/2016
Co-chair, St Paul ECFE Parent Advisory Council	9/2010-5/2012
Advocacy co-chair, St Paul ECFE Parent Advisory Council	9/2009-5/2012
Co-leader of Girl Scout Troop 53761	10/2008-12/2011