Ngoc Duong

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EDUCATION

Columbia University Mailman School of Public Health 09/2019 – 05/2021

- MS in Biostatistics, Theory & Methods Track

Vassar College, Poughkeepsie, NY 08/2014 – 05/2018

- BA in Economics and Chinese, General Honors, Phi Beta Kappa

RESEARCH EXPERIENCE

Sensitivity Analysis for transportability in multi-study, multi-outcome settings 04/2022 – Present

Research Advisor: Caleb Miles, PhD

• Parameterized the violation of the assumption for transportability of estimated effects across studies using bias functions and propose sensitivity analysis strategies during estimation
• Conducted simulations to examine how sensitivity parameter adjustment affects the average treatment effect estimates and resulting inferences in the presence of assumption violation
• Drafted the manuscript (current version available on website)

Cognitive Remediation in Schizophrenia – Applications of Machine Learning in Exploring Treatment Effect Heterogeneity to Improve Treatment Success 12/2020 – 07/2021

Research Advisor: Caleb Miles, PhD

• Created a predictive model for total socio-behavioral scale score outcome at follow-up and identified important prognostic factors using packages SuperLearner and Dalex
• Estimated the conditional average treatment effects to explore treatment effect heterogeneity
• Estimated the optimal individualized treatment rule and examined the expected value of this rule

Identifying shared biological pathways between Alzheimer's Disease and Cataracts in Individuals with Down Syndrome using Metabolomic Data 11/2019 – 05/2021

Research Supervisor: Joseph Lee, DrPH

- Performed data cleaning and statistical analyses using weighted GEE and Cox proportional-hazards model to assess associations between cataracts and Alzheimer's Disease (AD) onset
- Conducted differential expression analyses, built machine learning models to classify AD and cataracts using metabolomic data, and performed pathway analysis

JOB EXPERIENCE

Department of Pediatrics, Columbia University 05/2020 – Present

- Data Analyst 05/2021 – Present
  - Perform data cleaning, visualizations, analyses, and interpret simple and complex analyses for research projects involving different study designs
  - Summarize and present analyses and results to investigators as requested
  - Make recommendations and prepare statistical analysis plans for research projects; utilizing statistical knowledge to propose and perform additional analyses when appropriate

- Collaborate on preparation of grants, presentations and research manuscripts

• Graduate Research Assistant 05/2020 – 05/2021
  - Assisted with data cleaning, visualizations, and descriptive summaries for ongoing research studies
  - Performed analyses for a block randomized trial and an observational study with guidance from principal investigator and study biostatistician, and presented results at data update meetings

Department of Biostatistics, Columbia University
Graduate Teaching Assistant, Introduction to Biostatistics 09/2020 – 12/2020
• Held weekly office hours to help students understand lecture materials and biostatistical concepts
• Prepared and led discussions and demonstrations on applications of statistics and data analysis in R

Fashion Institute of Technology 01/2019 – 05/2020
Mathematics and Statistics Tutor
• Assisted undergraduate students with understanding and applying concepts in Mathematics and Statistics
• Guided students on practice problems, assignments, and exam reviews for the following courses: Calculus I-II, Introduction to Statistics, Mathematical Modeling, and Machine Learning and Data Mining

Center for Talent Innovation, New York, NY
Research Assistant 11/2018 – 08/2019
• Assisted with research projects on advancing Black talent in the corporate workplace through statistical analyses and interpretation of survey data, and analyzing qualitative data from focus groups and interviews

QUALIFICATIONS

Programming Skills: R (advanced), SAS (intermediate), Stata (intermediate), Python (intermediate)
Languages: Vietnamese (fluent), English (fluent), Mandarin Chinese (proficient)

PUBLICATIONS & PRESENTATIONS

1. Woo Baidal, J. A., **Duong, N.**, Goldsmith, J., Hur, C., Lauren, B., Partida, I., Rosenthal, A., Hulse, E., Shea, S., Cheung, K., Meyer, D. (2022). Association of a Primary Care-Based Food Pantry and Child Body Mass Index: a Propensity Score-Matched Study. *Under Review* at *Pediatric Obesity*
2. Woo Baidal, J. A., Meyer, D., Partida, I., **Duong, N.**, Rosenthal, A., Hulse, E., Nieto, A. & HERALD Collaborative. (2022). Feasibility of Food FARMacia: Mobile Food Pantry to Reduce Household Food Insecurity in Pediatric Primary Care. *Nutrients, 14*(5), 1059.
3. Woo Baidal, J. A., Nichols, K., Charles, N., Chernick, L., **Duong, N.**, Finkel, M. A., Falbe, J., Valeri, L. (2021). Text Messages to Curb Sugar-Sweetened Beverage Consumption among Pregnant Women and Mothers: A Mobile Health Randomized Controlled Trial. *Nutrients, 13*(12), 4367.
4. Woo Baidal, J. A, **Duong, N.**, Goldsmith, J., Hur, C., Lauren, B., Partida, I., Rosenthal, A., Hulse, E., Shea, S., Cheung, K., Meyer, D. Association of the Food FARMacia Primary Care-Based Mobile Food Pantry with Child Body Mass Index. Poster presentation at Obesity Week; 2022 Nov; San Diego, CA
5. Cornett, J., Partida, I., **Duong N.**, Wang Q., Shen, W., Goldsmith, J., Remotti, H., Lee, C., Woo Baidal J. Associations Between Histopathology, Transient Elastography, and Magnetic Resonance Measures of Steatosis and Fibrosis Among a Pediatric Cohort Undergoing Liver Biopsy. Poster. Pediatric Academic Societies Meeting; 2022 April 23-25; Denver, CO.
6. Ihemeremadu N, Cruz Herrera E, Zumwalt K, Hernandez A, **Duong N**, Bien-Aime C, Peretz P, Martinez E, Meyer D, Woo Baidal J. Examining Use of a Social Needs Screening and Referral System Among Pediatric Patients. Poster presented at: NASPGHAN/CPNP/APGNN 2022 Annual Meeting; 2022 October 13-15, Orlando, FL