EMILY C. VOLDAL

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Department of Biostatistics ⋄ University of Washington
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EDUCATION

University of Washington, Seattle, WA *September 2016 - Present*
Ph.D., Biostatistics
Advisor: Dr. James P. Hughes

St. Olaf College, Northfield, MN *September 2012 - May 2016*
B.A., summa cum laude, with distinction
Majors: Math and Biology
Concentrations: Statistics and Mathematical Biology

RESEARCH EXPERIENCE

Center for Biomedical Statistics January 2020 - Present
Research Assistant *Seattle, WA*

- Advisors: Dr. Patrick Heagerty and Bryan Comstock
- Assist with data analysis and manuscript preparation, attend weekly meetings to present and discuss findings
- Comparison of Outcomes of antibiotic Drugs and Appendectomy (CODA) trial (January 2020 - Present): support preparation of 12 papers, contribute to materials for presentations (including for the American College of Surgeons Clinical Congress 2020 & 2021) and disseminating results to patients and physicians (including an online interactive decision support tool)
- High-dose Erythropoietin for Asphyxia and Encephalopathy (HEAL) trial (January 2022 - Present): support preparation of several papers with focus on predictive value of biomarkers and other early findings for longer term neurodevelopment

University of Washington September 2017 - September 2019
Research Assistant *Seattle, WA*

- Advisor: Dr. Patrick Heagerty, with Dr. James Hughes
- Studied the design and analysis of stepped wedge trials
- Updated the swCRTdesign R package and documentation; developed a supplemental shiny app

Seattle Children's Research Institute September 2016 - September 2017
Research Assistant *Seattle, WA*

- Advisor: Dr. Michele Shaffer
- Modeled risks and benefits of accepting a liver transplant in pediatric patients

CONSULTING AND TEACHING EXPERIENCE

StatCom November 2019 - March 2020 & February 2021 - May 2021
Lead Consultant *Seattle, WA*

- Led consulting teams for two separate StatCom (Statistics in the Community) projects, providing pro bono statistical consulting to two nonprofit organizations
- Supported six less experienced student volunteers, provided guidance and information about statistical consulting and data analysis, and delegated appropriate tasks to team members

University of Washington September - December, 2018 & 2019
Teaching Assistant *Seattle, WA*

- Biostatistics 536: Categorical Data Analysis in Epidemiology with Dr. Barbara McKnight
- Developed and updated materials for discussions sections on R; held office hours, discussion sections, and review sessions

Biostatistical Consulting (Biost 590) September 2019 - December 2019
Consultant *Seattle, WA*

- Under the supervision of Dr. Katie Kerr and Dr. Michele Shaffer, participated in and led consulting sessions, and provided detailed summaries of meetings
- Collaborated with a physician to examine infection rates in patients using methamphetamine

Center for Interdisciplinary Research September - May, 2014 - 2015 & 2015 - 2016
Research Fellow *Northfield, MN*

- Developed curriculum and supplementary materials to guide exercise science students through research projects
- Collaborated with seven students on randomized trials, including the design, analysis, and presentation of results
- Collaborated with two professors on a long-term project, studying the randomness of neurons in rat brains under anesthesia

Tutor (University of Washington School of Public Health): October 2017 - Present

Consultant (Fix The Mask, International Care Ministries, and others): Intermittent

Workshop Presenter (University of Washington Behavioral Research Center for HIV): February 2022

Teaching Assistant (University of Washington Summer Institute in Biostatistics): July 2021

OTHER WORK AND VOLUNTEER EXPERIENCE

StatCom September 2019 - Present
Moderator & Client Liaison *Seattle, WA*

- Provide pro bono statistical consulting to nonprofit organizations
- Recruit clients and volunteers, manage volunteer lists and project requests
- Organized nine StatCom projects executed by 26 student volunteers
- Started an annual StatCom statistical consulting panel discussion; organized event and led discussion twice (January 25th 2021 and February 22nd 2022)

Advanced Training Volunteer and Volunteer (PAWS Lynnwood): June 2017 - October 2020

Summer Institute in Biostatistics (SIBS) (University of Minnesota): June 2015 - July 2015

Writing Tutor (St. Olaf College): September 2013 - May 2016

Secretary (St. Olaf College Norseman Band): September 2013 - May 2016

Teacher (Quarry Hill Nature Center): May - August, 2010 - 2016

POSTERS AND PUBLICATIONS

Voldal, E., Hakhu, N., Xia, F., Heagerty, P., & Hughes, J. (2020). swCRTdesign: an R package for stepped wedge trial design and analysis. *Computer Methods and Programs in Biomedicine, 196,* 105514. https://doi.org/10.1016/j.cmpb.2020.105514

Non-author collaborator: The CODA Collaborative (2020). A randomized trial comparing antibiotics with appendectomy for appendicitis. *The New England Journal of Medicine, 383,* 1907-19. https://doi.org/10.1056/NEJMoa2014320

Xia, F., Hughes, J., **Voldal, E.**, & Heagerty, P. (2021). Power and sample size calculation for stepped-wedge designs with discrete outcomes. *Trials, 22*, 598. https://doi.org/10.1186/s13063-021-05542-9

The CODA Collaborative. (2021). Antibiotics versus appendectomy for acute appendicitis - longer-term outcomes [correspondence]. *The New England Journal of Medicine, 385*(25), 2395-2397. https://doi.org/10.1056/NEJMc2116018

Writing Group for the CODA Collaborative (Monsell, S., **Voldal, E.**, ...). (2022). Patient factors associated with appendectomy within 30 days of initiating antibiotic treatment for appendicitis. *JAMA Surgery, 157*(3), e216900. https://doi.org/10.1001/jamasurg.2021.6900

Accepted: **Voldal, E.**, Xia, F., Kenny, A., Heagerty, P., & Hughes, J. (2022). Model misspecification in stepped wedge trials: Random effects for time or treatment. *Statistics in Medicine*. https://doi.org/10.1002/sim.9326

Accepted: **Voldal, E.**, Xia, F., Kenny, A., Heagerty, P., & Hughes, J. (2022). Random effect misspecification in stepped wedge designs. *Clinical Trials*. https://doi.org/10.1177/17407745221084702

Accepted: **The CODA Collaborative** (Thompson, C., **Voldal, E.**, ...). (2022). Perception of treatment success and impact on function with antibiotics or appendectomy for appendicitis: A randomized clinical trial with an observational cohort. *Annals of Surgery*.

Accepted: **The CODA Collaborative**. (2022). Self-selection versus randomized assignment of treatment for appendicitis. *JAMA Surgery*.

Manuscript under review: Kenny, A., **Voldal, E.**, Xia, F., Heagerty, P., & Hughes, J. (2022). Analysis of stepped wedge cluster randomized trials in the presence of a time-varying treatment effect. Submitted to *Statistics in Medicine*.

Voldal, E. & Wakefield, J. (2017). Spatial prediction methods in R. Poster presented November 2017 UW Biostatistics Department Retreat.

PROFESSIONAL AFFILIATIONS

American Statistical Association

The International Biometric Society

TECHNICAL SKILLS

Proficient in R, LaTeX, and Mathematica

Familiarity with SAS and Python