Erin I. McDonnell

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Date of Preparation: October 10, 2018

EDUCATION

Columbia University   New York, NY
Doctor of Philosophy in Biostatistics   Anticipated: May 2021
Current research interests: Functional data analysis and statistical learning

Harvard University   Boston, MA
Master of Science in Biostatistics   March 2014

Christopher Newport University   Newport News, VA
Bachelor of Science in Mathematics, Minor in Leadership Studies   December 2011

AWARDS AND RECOGNITION

Harvard School of Public Health Central Grant	December 2013
Magna cum Laude	December 2011
President's Leadership Program Scholar	August 2008-December 2011
Alpha Chi National Honor Society	Inducted November 2010
Pi Mu Epsilon National Mathematics Honor Society	Inducted March 2010

EXPERIENCE

Analysis Group   Boston, MA
Analyst, Health Economics and Outcomes Research practice   June 2016-September 2017
- Designed several interactive web applications using R Shiny, allowing clients to modify parameters of our analyses and view updated results in real time.
- Applied causal inference techniques to estimate treatment effects on survival amidst informative censoring.
- Applied recurrent-event survival techniques to identify predictors of progression of a chronic disease.
- Conducted several systematic literature reviews in preparation for network meta-analyses.
- Analyzed health care costs and utilization from a large cloud-based insurance claims database.

Massachusetts General Hospital Biostatistics Center   Boston, MA
Biostatistician / Bioinformatics Specialist   January 2014-December 2017
- Performed complex analyses primarily in both oncology and autism research, including:
    - Competing risk techniques when analyzing survival endpoints
    - Inverse probability weighting to correct for attrition in analyses of longitudinal registry data.
- Reviewed and endorsed industry-sponsored study protocols as a member of the Dana Farber / Harvard Cancer Center (DF/HCC) Scientific Review Committee.
- Provided data management support for over 10 studies, including 2 large multi-institutional pediatric registries.

Masters Level Intern Biostatistician   May 2013-December 2013
- Thesis project under the guidance of David Schoenfeld, PhD: Fit structural nested models to estimate the causal effects of feeding tube placement on survival in ALS patients in the presence of confounding by indication.

Suffolk Partnership for a Healthy Community   Suffolk, VA
Non-Profit Consultant   September 2014-October 2014
- Analyzed compliance and outcomes for Healthy People Healthy Suffolk's "Million Steps" fitness initiative.

Summer Institute for Training in Biostatistics, University of South Florida   Tampa, FL
Biostatistics Trainee   May 2011-June 2011
·   Designed a mock clinical trial at Jaeb Center for Health Research and honed SAS and R programming skills.

TEACHING

Columbia University   New York, NY
Lead Teaching Assistant, P8105: Data Science I (graduate level)   August 2018-Present
Lead Teaching Assistant, P8144: Pharmaceutical Statistics (graduate level)   January 2018-May 2018

PUBLICATIONS

- Neumeyer AM, Cano Sokoloff N, **McDonnell EI**, Macklin, EA, McDougle CJ, Holmes TM, et al. Nutrition and Bone Density in Boys with Autism Spectrum Disorder. *Journal of the Academy of Nutrition and Dietetics*. 2018; 118(5):865-877.
- Nicholson K, Murphy A, **McDonnell E**, Shapiro J, Simpson E, Glass J, et al. Improving symptom management for people with amyotrophic lateral sclerosis. *Muscle & Nerve*. 2018; 57(1):20-24.
- Kuhlthau, KA, **McDonnell E**, Coury DL, Payakachat N, Macklin E. Associations of quality of life with health-related characteristics among children with autism. *Autism*. 2018; 22(7):804-813.
- Paganoni S, **McDonnell E**, Schoenfeld D, Yu H, Deng J, Atassi H, et al. Functional Decline is Associated with Hopelessness in Amyotrophic Lateral Sclerosis (ALS). *Journal of Neurology and Neurophysiology*. 2017; 8(2).
- Mruzek DW, McAleavey S, Loring WA, Butter E, Smith T, **McDonnell E**, et al. A pilot investigation of an iOS-based app for toilet training children with autism spectrum disorder. *Autism*. 2017. [Epub ahead of print].
- **McDonnell E**, Schoenfeld D, Paganoni S, Atassi N. Causal inference methods to study gastric tube use in amyotrophic lateral sclerosis. *Neurology*. 2017; 89(14), 1483-1489.
- Hong TS, Wo JY, Borger DR, Yeap BY, **McDonnell EI**, Willers H, et al. Phase II Study of Proton-Based Stereotactic Body Radiation Therapy for Liver Metastases: Importance of Tumor Genotype. *Journal of the National Cancer Institute*. 2017; 109(9).
- Marler S, Ferguson, BJ, Lee EB, Peters B, Williams KC, **McDonnell E**, et al. Association of Rigid-Compulsive Behavior with Functional Constipation in Autism Spectrum Disorder. *Journal of Autism and Developmental Disorders*. 2017; 47(6), 1673-1681.
- Neumeyer AM, Cano Sokoloff N, **McDonnell E**, Macklin EA, McDougle CJ. Bone microarchitecture in adolescent boys with autism spectrum disorder. *Bone*. 2017; 97:139-146.
- Neumeyer AM, Cano Sokoloff N, **McDonnell EI**, Macklin EA, McDougle CJ, Misra M. Bone accrual of males with autism spectrum disorder. *Journal of Pediatrics*. 2017; 181:195-201.
- Ferguson BJ, Marler S, Altstein LL, Lee EB, Akers J, Sohl K, McLaughlin A, Hartnett K, Kille B, Mazurek M, Macklin EA, **McDonnell E**, et al. Psychophysiological associations with gastrointestinal symptomatology in autism spectrum disorder. *Autism Research*. 2017; 10(2):276-288.
- Ferguson BJ, Marler S, Altstein LL, Lee EB, Mazurek MO, McLaughlin A, Macklin EA, **McDonnell E**, et al. Associations between cytokines, endocrine stress response, and gastrointestinal symptoms in autism spectrum disorder. *Brain, Behavior and Immunity*. 2016; 58:57-62.
- Redjal N, Reinshagen C, Le A, Walcott BP, **McDonnell E**, Dietrich J, et al. Valproic acid, compared to other antiepileptic drugs, is associated with improved overall and progression-free survival in glioblastoma but worse outcome in grade II/III gliomas treated with temozolomide. *Journal of Neuro-Oncology*. 2016; 127(3):505-14.
- Hong TS, Wo JY, Yeap BY, Ben-Josef E, **McDonnell EI**, Blaszkowsky LS, et al. Multi-institutional phase II study of high-dose hypofractionated proton beam therapy in patients with localized, unresectable hepatocellular carcinoma and intrahepatic cholangiocarcinoma. *Journal of Clinical Oncology*. 2016; 34(5):460-8.
- Marler S, Ferguson BJ, Lee EB, Peters B, Williams KC, **McDonnell E**, et al. Brief report: Whole blood serotonin levels and gastrointestinal symptoms in autism spectrum disorder. *Journal of Autism and Developmental Disorders*. 2016; 46(3):1124-30.
- Fournier CN, Murphy A, Loci L, Mitsumoto H, Lomen-Hoerth C, Kisanuki Y, Simmons Z, Margakis NA, McVey AL, Al-Lahham T, Heiman-Patterson TD, Andrews J, **McDonnell E**, et al. Primary lateral sclerosis and

early upper motor neuron disease: Characteristics of a cross-sectional population. *Journal of Clinical Neuromuscular Disease*. 2016; 17(3):99-105.

- Ferrone CR, Marchegiani G, Hong TS, Ryan DP, Deshpande V, **McDonnell EI**, et al. Radiological and surgical implications of neoadjuvant treatment with FOLFIRINOX for locally advanced and borderline resectable pancreatic cancer. *Annals of Surgery*. 2015; 261(1):12-7.

CONFERENCE ABSTRACTS AND PRESENTATIONS

- Dyer MA, **McDonnell EI**, Yeap BY, Depauw N, Wolfgang JA, Wo JY, et al. Change in platelet count and normal liver dosimetry in patients receiving proton radiation therapy for unresectable hepatocellular carcinoma or intrahepatic cholangiocarcinoma [Abstract]. Presented at the *American Society for Radiation Oncology (ASTRO) Annual Meeting*, Boston, MA, 2016.
- Hong T, Wo J, McDonnell E, Yeap B, Drapek L, Wolfgang J, et al. A single arm phase 2 study of individualized proton-based stereotactic body radiation therapy (P-SBRT) of liver metastases [Abstract]. Presented at the *American Society for Radiation Oncology (ASTRO) Annual Meeting*; San Antonio, TX 2015.
- Wo J, Zhu A, **McDonnell E**, Yeap B, Borger D, Iafrate A, et al. Clinical and molecular predictors of local failure after SBRT for liver metastases: A secondary analysis of a prospective phase II trial [Abstract]. Presented at the *American Society for Radiation Oncology (ASTRO) Annual Meeting*; San Antonio, TX 2015.
- Hong T, Wo J, Yeap B, Ben-Josef E, **McDonnell E**, Drapek L, et al. Multi-institutional phase II study of high dose, hypofractionated proton beam therapy (HF-PBT) for unresectable primary liver cancers: Long term outcomes in patients (pts) with intrahepatic cholangiocarcinoma (ICC) [Abstract]. Presented at the *American Society of Clinical Oncology (ASCO) Annual Meeting*; Chicago, IL 2015.
- Kuhlthau K, **McDonnell E**, Payakachat N, Coury D, Delahaye J, Macklin E, editors. Correlates of cross-sectional and longitudinal health-related quality of life among children with autism spectrum disorders [Abstract]. Presented at the *International Meeting for Autism Research (IMFAR)*; 2015; Salt Lake City, UT.
- Marler S, Lee E, Anderson G, Ferguson B, **McDonnell E**, Beversdorf D, et al. Gastrointestinal symptoms, whole blood serotonin levels, and behavioral symptoms in children and adolescents with autism spectrum disorder [Abstract]. Presented at the *International Meeting for Autism Research (IMFAR)*; Salt Lake City, UT 2015.
- Ferguson B, Marler S, Lee E, Akers J, Mazurek M, Sohl K, Hartnett K, Macklin EA, **McDonnell E**, et al. Psychophysiological predictors of gastrointestinal symptomatology in autism spectrum disorder [Abstract]. Presented at the *International Meeting for Autism Research (IMFAR)*; Salt Lake City, UT 2015.
- **McDonnell E**. Analyzing supportive care in ALS [Oral presentation]. Presented at *Statistical Issues in the Analysis of Neurological Studies: A Harvard Catalyst Biostatistics Symposium*; Boston, MA 2014.
- Murphy A, **McDonnell E**, Wolff J, Shapiro J, Simpson E, Glass J, et al. Improving symptom management for people with amyotrophic lateral sclerosis (ALS) [Abstract]. Presented at the *Northeast Amyotrophic Lateral Sclerosis Consortium (NEALS) Annual Meeting*; Clearwater Beach, FL 2013.
- Paganoni S, **McDonnell E**, Schoenfeld D, Yu H, Deng J, Atassi H, et al. Longitudinal study of mood in ALS [Abstract]. Presented at the *Northeast Amyotrophic Lateral Sclerosis Consortium Annual Meeting*; Clearwater Beach, FL 2013.

LEADERSHIP AND VOLUNTEER WORK

Co-organizer, monthly Graduate Student Research Seminar for Columbia Biostatistics   August 2018-Present
Volunteer, American Statistical Association Conference on Statistical Learning and Data Science   June 2018
Mathematics Tutor, Roxbury Preparatory Charter School, Boston, MA   February 2013-September 2013
President, Rotary International Collegiate Chapter of Christopher Newport University   March 2010-March 2011

PROFICIENCIES

Statistical software: SAS, R (including Shiny), Excel, Stata, LaTeX, Impala, PASS, G*Power, East.
Electronic data capture (EDC) systems: StudyTRAX, REDCap, and Inform.