

JESS MARDEN, SC.D.
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Dr. Marden specializes in applying her knowledge of epidemiology and biostatistics to questions in the field of health economics and outcomes research (HEOR). Her experience supporting pharmaceutical and biotech companies has spanned early-phase clinical studies to post-launch real-world evidence (RWE) generation. She has experience applying novel epidemiologic methods to multiple disease areas, including rare diseases, multiple types of cancer, and neurological and cardiovascular diseases. Dr. Marden's work also includes applying inverse probability weights to complex longitudinal data in order to assess disease etiology, collecting natural history data prospectively to inform trial design and understanding of disease progression, estimating the comparative efficacy of alternative therapies, and analyzing treatment patterns. Her work has been used to inform regulatory decisions in US and global markets, published in peer-reviewed journals, and presented at clinical and economic research conferences. Prior to joining Analysis Group, Dr. Marden was a postdoctoral research fellow at the Broad Institute of MIT and Harvard.

EDUCATION

2016 Sc.D., social epidemiology, Harvard T.H. Chan School of Public Health
2011 M.P.H., epidemiology and biostatistics, Tufts University School of Medicine
2010 B.A., international relations, Tufts University

PROFESSIONAL EXPERIENCE

2018–Present Analysis Group, Inc.
 Vice President (2024–Present)
 Manager (2021–2023)
 Associate (2018–2020)

2012–2017 Harvard T.H. Chan School of Public Health
 Postdoctoral Fellow (2016–2017)
 Research Assistant (2012–2016)

ARTICLES AND PUBLICATIONS

“Implications of Delayed Testosterone Recovery in Patients with Prostate Cancer.” Preston MA, Hong A, Dufour R, **Marden JR**, Kirson NY, Gatoulis SC, Kongara S, Gandhi R, Morgans AK. *European Urology Open Science* 2024 Feb 1;60:32-5. DOI: 10.1016/j.euros.2023.12.003.

“Burden of Illness and Treatment Patterns Among Patients With von Willebrand Disease in US Clinical Practice.” Swallow E, **Marden JR**, Billmyer E, Yim E, Sun SX *Clinical and Applied Thrombosis/Hemostasis* 2023 (29). DOI: 10760296231177023.

“Costs of pediatric liver transplantation among commercially and Medicaid-insured patients with cholestasis in the United States.” Miloh T, Goldstein A, Howard R, Mogul DB, **Marden JR**, Anderson A, Gaburo K, Kirson N, Rosenthal P. *Liver Transplantation: Official Publication of the American Association for the Study of Liver Diseases and the International Liver Transplantation Society* 2023. DOI: 10.1097/LVT.0000000000000082.

“Disease progression rates in ambulatory Duchenne muscular dystrophy by steroid type, patient age and functional status.” McDonald CM, **Marden JR**, Shieh PB, Wong BL, Lane H, Zhang A, Nguyen H, Frean M, Trifillis P, Koladycz K, Signorovitch J. *Journal of Comparative Effectiveness Research* 2023 (0), DOI: e220190.

“Maralixibat treatment response in Alagille syndrome is associated with improved health-related quality of life.” Kamath BM, Goldstein A, Howard R, Garner W, Vig P, **Marden JR**, Billmyer E, Anderson A, Kirson N, Jacquemin E, Gonzales E. (2023). *The Journal of Pediatrics* 2023 (252), 68-75. DOI: 10.1016/j.jpeds.2022.09.001.

“Functional and Clinical Outcomes Associated with Steroid Treatment among Non-ambulatory Patients with Duchenne Muscular Dystrophy.” McDonald CM, Mayer OH, Hor KN, Miller D, Goemans N, Henricson EK, **Marden JR**, Freimark J, Lane H, Zhang A, Frean M. (2022) *Journal of Neuromuscular Diseases (Preprint)* 2022 1-13. DOI: 10.3233/JND-221575.

“The Economic Burden of Schizophrenia in the United States.” Kadakia A, Catillon M, Fan Q, Williams GR, **Marden JR**, Anderson A, Kirson N, Dembek C. *The Journal of Clinical Psychiatry* 2022 83(6), 43278. DOI: 10.4088/JCP.22m14458.

“Health care resource utilization by patients with Alagille syndrome.” Ebel NH, Goldstein A, Howard R, Mogul DB, **Marden JR**, Anderson A, Gaburo K, Kirson N, Rosenthal P. *The Journal of Pediatrics* 2022. DOI: 10.1016/j.jpeds.2022.09.033.

“Impact of the COVID-19 pandemic on adolescent vaccinations: projected time to reverse deficits in routine adolescent vaccination in the United States.” Saxena K, **Marden JR**, Carias C, Bhatti A, Patterson-Lomba O, Gomez-Lievano A, Yao L and Chen YT. *Current Medical Research and Opinion* 2021 37(12), 2077-2087. DOI: 10.1080/03007995.2021.1981842.

“Steroid switching in dystrophinopathy treatment: a US chart review of patient characteristics and clinical outcomes.” **Marden JR**, Santos C, Pfister B, Able R, Lane H, Somma M, Zhao J, Signorovitch J, Parsons J and Apkon S. *Journal of Comparative Effectiveness Research* 2021 10(14), 1065-1078. DOI: 10.2217/cer-2021-0110.

“Real-world outcomes of long-term prednisone and deflazacort use in patients with Duchenne muscular dystrophy: experience at a single, large care center.” **Marden JR**, Freimark J, Yao Z, Signorovitch J, Tian C, Wong BL. *Journal of Comparative Effectiveness Research* 2020 Feb 9(3):177-189. DOI: 10.2217/cer-2019-0170.

“Initiation of antidepressant medication and risk of incident stroke: Using the Adult Changes in Thought cohort to address time-varying confounding.” Glymour MM, Gibbons L, Gilsanz P, Gross A, Mez J, Brewster P, **Marden JR**, Nho K, Hamilton J, Zahodne L, Mukherjee S, Li G, Larsen E, Crane P. *Annals of Epidemiology* 2019 Jul;35:42-47. DOI: 10.1097/EDE.0000000000000811.

“Mother’s education and late-life disparities in memory and dementia risk among US military veterans and non-veterans.” Vable AM, Eng CW, Mayeda ER, Basu S, **Marden JR**, Hamad R, Glymour MM. *Journal of Epidemiology and Community Health* 2018 Dec;72(12):1162-1167. DOI: 10.1136/jech-2018-210771.

“Can survival bias explain the age attenuation of racial inequalities in stroke incidence? A simulation study.” Mayeda ER, Banack H, Bibbins-Domingo K, Al Hazzouri AZ, **Marden JR**, Whitmer RA, Glymour MM. *Epidemiology* 2018 Jul;29(4):525-532. DOI: 10.1097/EDE.0000000000000834.

“Implementation of Instrumental Variable Bounds for Data Missing not at Random.” **Marden JR**, Tchetgen EJT, Walter S, Glymour MM, Wirth K. *Epidemiology* 2018 May;29(3):364-368. DOI: 10.1097/EDE.0000000000000811.

“Cardiometabolic Risks Associated with Work-to-Family Conflict: Findings from the Work Family Health Network.” O’Donnell E, Berkman LF, Moen P, Hammer L, **Marden JR**, Buxton OM. *Community, Work & Family* 2018 Mar;22(2):203-228. DOI: 10.1080/13668803.2018.1440193.

“Contribution of Lifecourse Socioeconomic Status at Three Lifecourse Periods to Late Life Memory Function and Decline: Early and Late Predictors of Dementia Risk.” **Marden JR**, Tchetgen EJT, Kawachi I, Glymour MM. *American Journal of Epidemiology* 2017 Oct 1;186(7):805-814. DOI: 10.1093/aje/kwx155.

“Alzheimer’s Disease Genetic Risk Variants Beyond APOEε4 Predict Mortality.” **Marden JR**, Mez J, Zahodne L, Gilsanz P, Gross A, Mukherjee S, Brewster P, Gibbons L, Nho K, Hamilton J, Crane P, Larsen E, Li G, Glymour MM. *Alzheimer’s & Dementia* 2017 Aug 14;8:188-195. DOI: 10.1016/j.dadm.2017.07.002.

“Comparing variability, severity, and persistence of depressive symptoms as predictors of future stroke risk.” Zahodne LB, Gilsanz P, Glymour MM, Gibbons LE, Brewster P, Hamilton J, Mez J, **Marden JR**, Nho K, Larsen EB, Crane PK, Gross AL. *The American Journal of Geriatric Psychiatry* 2017 Feb;25(2):120-128. DOI: 10.1016/j.jagp.2016.10.009.

“High blood glucose and diabetes predict memory decline in the Health and Retirement Study.” **Marden JR**, Tchetgen EJT, Kawachi I, Mayeda ER, Glymour MM. *Alzheimer Disease & Associated Disorders* Jan-Mar 2017;31(1):48-54. DOI: 10.1097/WAD.0000000000000182.

“A simulation platform to quantify survival bias: an application to research on determinants of cognitive decline.” Mayeda ER, Tchetgen EJT, Power MC, Weuve J, Jacqmin-Gadda H, **Marden JR**, Vittinghoff E, Keiding N, Glymour MM. *American Journal of Epidemiology* 2016 Sep 1;184(5):378-87. DOI: 10.1093/aje/kwv451.

“Using an Alzheimer’s Disease polygenic risk score to predict memory decline in black and white Americans over 14 years of follow-up.” **Marden JR**, Mayeda ER, Walter S, Vivot A, Tchetgen EJT, Kawachi I, Glymour MM. *Alzheimer Disease & Associated Disorders* Jul-Sep 2016;30(3):195-202. DOI: 10.1097/WAD.000000000000137.

“Diabetic Phenotypes and Late Life Dementia Risk: A Mechanism-Specific Mendelian Randomization Study. Walter S, **Marden JR**, Kubzansky LD, Chang S, Mayeda ER, Cornelis MC, Rehkopf DH, Crane P, Mukherjee S, Glymour MM. *Alzheimer Disease & Associated Disorders* Jan-Mar 2016;30(1):15-20. DOI: 10.1097/WAD.000000000000128.

“African Ancestry, Social Factors, and Hypertension in the Health and Retirement Study.” **Marden JR**, Walter S, Kaufman JS, Glymour MM. *Biodemography and Social Biology* 2016;62(1):19-35. DOI: 10.1080/19485565.2015.1108836.

“Changes in depressive symptoms and incidence of first stroke.” Gilsanz P, Walter S, Tchetgen EJT, Patton KK, Moon R, Capistrant B, **Marden JR**, Kubzansky L, Kawachi I, Glymour MM. *Journal of the American Heart Association* 2015 May 13;4(5):e001923. DOI: 10.1161/JAHA.115.001923.

“Genetic vulnerability to diabetes and obesity: does education offset the risk?” Liu SY, Walter S, **Marden JR**, Rehkopf DH, Kubzansky LE, Nguyen T, Glymour MM. *Social Science & Medicine* 2015 Feb;127:150-8. DOI: 10.1016/j.socscimed.2014.09.009.

“Do Physical Activity, Smoking, Drinking, or Depression Modify Transitions from Cognitive Impairment to Functional Disability?” Rist PM, **Marden JR**, Capistrant BD, Wu Q, Glymour MM. *Journal of Alzheimer’s Disease* 2015;44(4):1171-80. DOI: 10.3233/JAD-141866.

“Validation of a polygenic genetic risk score for dementia in black and white individuals.” **Marden JR**, Walter S, Tchetgen EJT, Kawachi I, Glymour MM. *Brain and Behavior* 2014 Sep;4(5):687-97. DOI: 10.1002/brb3.248.

“Dementia and dependence: do modifiable risk factors delay disability?” Rist PM, Capistrant BD, Wu Q, **Marden JR**, Glymour MM. *Neurology* 2014 Apr 29;82(17):1543-50. DOI: 10.1212/WNL.0000000000000357.

“The role of the environment over the life course in the etiology of psychiatric disorders.” Gilman S, **Marden JR**. In Koenen K, et al. eds, *Life Course Epidemiology of Mental Disorders* (2013). ISBN: 9780199657018.

PRESENTATIONS AND SPEAKING ENGAGEMENTS

“CO32 Heterotopic Ossification in Palovarotene-Treated and Untreated Individuals with Fibrodysplasia Ossificans Progressiva: Matched and Weighted Analyses,” ISPOR, Boston, MA, *Value in Health* (May 2023)

“P138 Development and evaluation of a composite time-to-progression endpoint that spans ambulatory and non-ambulatory stages of Duchenne muscular dystrophy (DMD),” International Hybrid Annual Congress of the World Muscle Society, Charleston, SC, *Neuromuscular Disorders* (October 2023)

“Development and evaluation of a time to event endpoint for clinical trials in Duchenne muscular dystrophy (DMD),” International Hybrid Annual Congress of the World Muscle Society, Halifax, Nova Scotia, Canada (October 2022)

Economic Burden of Congenital Cytomegalovirus Infection in Commercially-and Medicaid-insured Patients in the United States,” poster presentation, IDWeek, Washington, DC, *Open Forum Infectious Diseases* (October 2022)

“Steroid Switching in the Treatment of Dystrophinopathies in the US: a Nationwide Chart Review of Patient Characteristics and Clinical Outcomes,” poster presentation, Muscular Dystrophy Association Virtual Clinical and Scientific Conference (March 16, 2021)

“Deflazacort Or Prednisone Treatment for Duchenne Muscular Dystrophy (DMD) Real-World Outcomes at Cincinnati Children’s Hospital Medical Center (CCHMC),” 24th International Annual Congress of the World Muscle Society, Copenhagen, DE (October 4, 2019)

“Mechanisms of Racial Disparities in Cognitive Aging: Use of Causal Mediation in Neuropsychology Research,” International Neuropsychological Society Annual Meeting, New Orleans, LA (February 2017)

“Contribution of lifecourse socioeconomic status and adult cardiovascular disease on memory decline among diverse older adults,” oral presentation, Society for Epidemiologic Research Annual Meeting, Seattle, WA (June 2017)

“Meta-analysis of changes in depressive symptoms and incident stroke risk in 3 cohorts of older US adults,” oral presentation, Society for Epidemiologic Research Annual Meeting, Seattle, WA (June 2017)

“Alzheimer’s disease genetic risk variants beyond APOE ϵ 4 predict mortality in the Adult Changes in Thought (ACT) Study,” Alzheimer’s Association International Conference, Toronto, ON (July 2016)

“Diabetes and Blood Glucose predict Memory Decline in the Health and Retirement Study,” oral presentation, Society for Epidemiologic Research Annual Meeting, Miami, FL (June 2016)

“Racial disparities in stroke incidence: Evaluating the role of survival bias in age attenuation with a simulation study,” oral presentation, Society for Epidemiologic Research Annual Meeting, Miami, FL (June 2016)

“Does education modify the association between an Alzheimer’s disease polygenic risk score and memory decline?” oral presentation, Integrating Genetics and the Social Sciences Conference, Boulder, CO (October 2015)

“Lifecourse Socioeconomic Status as a predictor of Cognitive Function and Decline,” oral presentation, Society for Epidemiologic Research Annual Meeting, Denver, CO (June 2015)

“Changes in Depressive Symptoms and Hypertension Risk,” poster presentation, Society for Epidemiologic Research Annual Meeting, Denver, CO (June 2015)

“Effects of an Intervention to Improve Workplace Flexibility on Employee Biomarkers of Inflammation,” oral presentation, Population Association of America Annual Meeting, San Diego, CA (April 2015)

“Race vs. Genetic Ancestry: Investigating the Social and Biological Contributions to Disease Etiology,” oral presentation, Center for Population and Development Studies at Harvard University, Cambridge, MA (September 2014)

“Genetic vulnerability to diabetes and obesity: Does education offset the risk?” poster presentation, 20th IEA World Congress of Epidemiology, Anchorage, AK (August 2014)

“Using an Alzheimer’s Disease Polygenic Risk Score to Predict Memory Decline,” poster presentation, Society for Epidemiologic Research Annual Meeting, Seattle, WA (June 2014)

“Race versus ancestry: Does socially or genetically defined race predict dementia risk in older Americans?” poster presentation, Society for Epidemiologic Research Annual Meeting, Seattle, WA (June 2014)

“Forgetful but not disabled: Predictors of incident IADL limitations,” poster presentation, American Academy of Neurology Annual Meeting, Philadelphia, PA (April 2014)

“Validation of a polygenic risk score for dementia in black and white individuals,” oral presentation, Neurostatistics Working Group Seminar at the Harvard School of Public Health, Boston, MA (February 2014)

“Associations between lifetime experiences of discrimination and lifetime suicide attempts among a cross-sectional sample of adult Latino males: Findings from the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC),” oral presentation, American Public Health Association Conference, Boston, MA (November 2013)

“Leveraging genetic information to assess the effect of diabetes on memory scores in the Health and Retirement Study.” poster presentation, Annual Meeting of the American Society of Human Genetics, Boston, MA (October 2013)

“Validation of a polygenic genetic risk score for dementia in the Health and Retirement Study,” poster presentation, Alzheimer’s Association International Conference, Boston, MA (July 2013)

“Memory Functioning and 2-Year Mortality Risk: Comparing Conventional and Genetic Instrumental Variable Estimates,” poster presentation, Society for Epidemiologic Research Annual Meeting, Boston, MA (June 2013)

“Does Educational Attainment Narrow Social Inequalities in Mortality After Stroke? Comparing Educational Inequalities in Stroke-Free and Post-Stroke Populations,” poster presentation, Society for Epidemiologic Research Annual Meeting, Boston, MA (June 2013)

“Remitted Depressive Symptoms and Subsequent Stroke Risk: Contrasting Marginal Structural Models and Conventional Models,” poster presentation, Society for Epidemiologic Research Annual Meeting, Boston, MA (June 2013)

“Methods and lessons learned in community based participatory research as an academic process: A student’s perspective,” roundtable presentation, American Public Health Association Annual Conference, Philadelphia, PA (November 2009)

SELECTED HONORS AND AWARDS

- 2017 Article of the Year, *American Journal of Epidemiology*
- 2016 Finalist for the Tyroler Student Prize Paper Award, 2016 Epidemiology Congress of the Americas
- 2014 Second Place Winner, Society for Epidemiologic Research Annual Meeting
- 2013 Student Abstract Award, Epidemiology Section, American Public Health Association Annual Meeting