

MATTHEW J MAENNER

**Education & Training**

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- 2003 BS, Psychology, University of Wisconsin-Madison
- 2011 PhD, Population Health, Option: Epidemiology  
University of Wisconsin School of Medicine and Public Health
- Dissertation: The epidemiology of developmental disabilities: incorporating measures of impairment, activity limitations, and participation restrictions in population-based studies.  
Committee: Maureen Durkin (chair), Mark Albanese, Ruth Benedict, Patrick Remington, Marsha Mailick Seltzer
- 2011—13 Postdoctoral Training Program in Developmental Disabilities Research (NICHD T32HD07489), Waisman Center, University of Wisconsin-Madison (Mentor: Marsha R Mailick)
- 2013—15 Epidemic Intelligence Service. Assigned to Developmental Disabilities Branch, National Center on Birth Defects and Developmental Disabilities, US Centers for Disease Control and Prevention

**Employment and Academic Positions**

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- 2004—06 Associate Research Specialist, Wisconsin Surveillance of Autism and Other Developmental Disabilities System, Waisman Center, University of Wisconsin-Madison
- 2006—11 Epidemiologist & Data Manager, Project/Research Assistant, Wisconsin Surveillance of Autism and Other Developmental Disabilities System, Waisman Center, University of Wisconsin-Madison
- 2007—08 Co-Investigator, Analysis of UNICEF Multi-Indicator Cluster Survey Round 3 Developmental Disability Module
- 2008 Teaching Assistant, Principles of Population Medicine and Epidemiology, University of Wisconsin School of Medicine
- 2009 Teaching Assistant, Quantitative Methods in Population Health II, Population Health Sciences, University of Wisconsin-Madison
- 2010—11 Fellow, Project title: Phenotypic Heterogeneity of Autism Spectrum Disorder in the United States, University of Wisconsin-Madison
- 2011—13 T32 Postdoctoral Trainee, Waisman Center, University of Wisconsin-Madison
- 2013— Honorary Fellow, Waisman Center, University of Wisconsin-Madison
- 2013—15 Epidemic Intelligence Service Officer, National Center on Birth Defects and Developmental Disabilities, Centers for Disease Control and Prevention
- 2013—15 Lieutenant (Scientist Category), United States Public Health Service Commissioned Corps
- 2015— Epidemiologist, National Center on Birth Defects and Developmental Disabilities, Centers for Disease Control and Prevention
- Principal Investigator, Georgia Study to Explore Early Development
  - Project Lead, Rapid Classification of Autism for Public Health Surveillance

## Awards & Honors

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- 1998 Eagle Scout, Boy Scouts of America
- 2008 Catherine Allen Memorial Outstanding Student Poster Award, Poster Presented at 7th annual Population Health Sciences Poster Session, Madison, WI
- 2009 Best Student Oral Presentation Award, Population Health Sciences 50th Anniversary Symposium
- 2010 [co-author with Paul Shattuck et al] Autism Speaks' Top 10 Science Achievements of 2009
- 2010—11 Autism Science Foundation Doctoral Training Award, Autism Science Foundation (*One of six doctoral students awarded \$30,000*)
- 2010 Alvin L. Berman and Ruth Bleier Memorial Research Award, Friends of the Waisman Center
- 2011 [co-author with David Feldstein et al] Association of Program Directors in Internal Medicine Research Poster Award, Alliance for Academic Internal Medicine annual meeting, Anaheim CA
- 2012 [co-author with Laura Schieve et al] Nominated for Charles C Shephard Award (Data Methods and Study Design), Centers for Disease Control and Prevention
- 2014 J. Virgil Peavy Award, 63rd Epidemic Intelligence Service Conference, Atlanta GA (*Award for most innovative or effective application of statistics and epidemiologic methods*)
- 2016 CDC Innovation Fund Awardee (*Project lead; Received competitive internal funding for "Reinventing Autism Surveillance with machine learning"*)
- 2016 HHS Secretary's Ventures Program (*Project lead; Received competitive growth-stage funding for project, "Automated Autism Classification for Public Health Surveillance"*)
- 2016 Philip M Farrell Distinguished Alumni Lecture, Department of Population Health Sciences, University of Wisconsin School of Medicine and Public Health
- 2017 Nominated for Charles C Shepard Award (Data Methods and Study Design)

## Published Manuscripts

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- | # | Year | Publication  |
|---|------|--|
| 1 | 2008 | Durkin MS, <b>Maenner MJ</b> , Newschaffer CJ, Lee LC, Cunniff CM, Daniels JL, Kirby RS, Leavitt L, Miller L, Zahorodny W, Schieve LA Advanced Parental Age and the Risk of Autism Spectrum Disorder, <i>American Journal of Epidemiology</i> . 2008; 168(11):1268-1276            |
| 2 | 2009 | Shattuck PT, Durkin M, <b>Maenner M</b> , Newschaffer C, Mandell DS, Wiggins L, et al. Timing of identification among children with an autism spectrum disorder: findings from a population-based surveillance study. <i>J Am Acad Child Adolesc Psychiatry</i> 2009;48(5):474-83. |
| 3 | 2009 | <b>Maenner MJ</b> , Arneson CL, Durkin MS. Socioeconomic Disparities in the Prevalence of Autism Spectrum Disorder in Wisconsin. <i>Wisconsin Medical Journal</i> . 2009; 108(5):253-255.  |
| 4 | 2009 | <b>Maenner MJ</b> , Denlinger LC, Langton A, Meyers KJ, Engelman CD, and Skinner HG. Detecting Gene by Smoking Interactions in a Genome-wide Association Study of Early Onset Coronary Heart Disease Using Random Forests. <i>BMC Proceedings</i> . 2009. 3(Suppl 7):S88           |

- 5 2009 Yao L, Zhong W, Zhang Z, **Maenner MJ**, Engelman CD. Classification Tree for Detection of SNP by SNP Interactions Related to Heart Disease: Framingham Heart Study. *BMC Proceedings* 2009. 3(Suppl 7):S83
- 6 2009 Engelman CE, Baurley JW, Chiu YF, Joubert BR, Lewinger JP, **Maenner MJ**, Murcay CE, Shi G, and Gauderman WJ on behalf of Group 10. Detecting Gene-Environment Interactions in Genome-Wide Association Data. *Genetic Epidemiology*. 2009. 33(S1):S68-S73.
- 7 2009 Gottlieb CA, **Maenner MJ**, Cappa C, Durkin MS. Child Disability Screening, Nutrition, and Early Learning in 18 Low and Middle Income Countries: Data from UNICEF's Multiple Indicator Cluster Survey - round 3 (2005-2006). *Lancet*. 2009, 374(9704):1831-1839.
- 8 2010 Durkin MS, **Maenner MJ**, Meaney FJ, Levy SE, DiGuseppi C, Nicholas, JS, Kirby RS, Pinto-Martin JA, Schieve LA. Socioeconomic Variation in the Prevalence of Autism Spectrum Disorders. *PLoS ONE*, 2010, 5, e11551
- 9 2010 Feldstein DA, **Maenner MJ**, Srisurichan R, Roach MA, Vogelman B. Evidence-Based Medicine Training During Residency: A Randomized Controlled Trial of Efficacy. *BMC Medical Education*. 2010, 10:59
- 10 2010 **Maenner MJ**, Durkin MS. Trends in the Prevalence of Autism on the Basis of Special Education Data. *Pediatrics*. 2010; 126; e1018-25
- 11 2010 Benedict RE, Patz J, **Maenner MJ**, Arneson CL, Yeargin-Allsopp M, Doernberg NS, Van Naarden Braun K, Kirby RS, Durkin MS. Gross Motor level function among children with cerebral palsy: Feasibility and reliability of surveillance through record review in a Wisconsin Population. *Paediatric and Perinatal Epidemiology* 2011;25(1): 88–96.
- 12 2011 Kirby RS, Wingate MS, Van Naarden Braun K, Doernberg NS, Arneson CL, Benedict RE, Mulvihill B, Durkin MS, Fitzgerald RT, **Maenner MJ**, Patz JA, Yeargin-Allsopp M. Prevalence and Functioning of Children with Cerebral Palsy in Four Areas of the United States in 2006: A Report from the Autism and Developmental Disabilities Monitoring Network. *Research in Developmental Disabilities* 2011;32(2):462-469
- 13 2011 Bueno Filho JS, Morota G, Tran Q, **Maenner MJ**, Vera-Cala LN, Engelman CD, Meyers KJ. Analysis of human mini-exome sequencing data using a Bayesian hierarchical mixture model: Genetic Analysis Workshop 17. *BMC Proceedings* 2011, 5(Suppl 9):S93
- 14 2011 Schieve LA, Rice C, Devine O, **Maenner MJ**, Lee LC, Fitzgerald R, Wingate MS, Schendel D, Pettygrove S, Van Naarden Braun K, Durkin M. Have Secular Changes in Perinatal Risk Factors Contributed to the Recent Autism Prevalence Increase? Development and Application of a Mathematical Assessment Model. *Annals of Epidemiology* 2011;21(12):930-945
- 15 2012 **Maenner MJ**, Benedict RE, Arneson CL, Yeargin-Allsopp M, Wingate MS, Kirby RS, Van Naarden Braun K, Durkin MS. Children with Cerebral Palsy: Racial Disparities in Functional Limitations. *Epidemiology* 2012;23(1):35-43
- 16 2012 Shattuck PT, Roux AM, Hudson LE, Taylor JL, **Maenner MJ**, Trani JF. Services for adults with an autism spectrum disorder. *Can J Psychiat*. 2012 May;57(5):284-91.

- 17 2012 **Maenner MJ**, Arneson CL, Levy S, Nicholas J, Kirby RS. Brief Report: Association between behavioral features and gastrointestinal problems among children with autism spectrum disorder. *Journal of Autism and Developmental Disorders* 2012;42(7):1520-5.
- 18 2012 Smith LE, **Maenner MJ**, Seltzer MS. Developmental Trajectories in Adolescents and Adults with Autism: The Case of Daily Living Skills. *J Am Acad Child Adolesc Psychiatry* 2012;51(6):622-31.
- 19 2012 Kalkbrenner AE, Braun JM, Durkin MS, **Maenner MJ**, Cunniff C, Lee LC, Pettygrove S, Nicholas JS, Daniels JL. Maternal Smoking During PRegnancy and the Prevalence of Autism Spectrum Disorders Using Data from the Autism and Developmental Disabilities Monitoring Network. *Environmental Health Perspectives* 2012;120(7):1042-8.
- 20 2012 Seltzer MM, Baker MW, Hong J, **Maenner MJ**, Greenberg JS, Mandel D. Prevalence of CGG expansions of the FMR1 Gene in a US Population-Based Sample. *Am J Med Genet Part B* 2012;159B(5):589-97.
- 21 2013 **Maenner MJ**, Smith LE, Hong J, Makuch R, Greenberg JS, Seltzer MM. Evaluation of an Activities of Daily Living Scale for Adolescents and Adults with Developmental Disabilities. *Disability and Health Journal*. 2013;6(1):8-17.
- 22 2013 Van Naarden Braun K, **Maenner MJ**, Christensen D, Doernberg NS, Durkin MS, Kirby RS, Yeargin-Allsopp M. Role of migration and choice of denominator on the prevalence of cerebral palsy. *Developmental Medicine & Child Neurology (in Press)*
- 23 2013 **Maenner MJ**, Schieve LA, Rice CE, Cunniff C, Giarelli E, Kirby RS, Nicholas JS, Wingate M, Durkin MS. Frequency and pattern of documented diagnostic features and the age of autism identification *J Am Acad Child Adolesc Psychiatry*. 2013;52(4):401-413.e8
- 24 2013 Van Sickle D, Magzamen S, **Maenner MJ**, Crane J, Corden TE. Variability in the labeling of asthma among pediatricians. *PLOS ONE* 2013;8(4):e62398
- 25 2013 **Maenner MJ**, Baker MW, Broman KW, Tian J, Barnes J, Atkins A, McPherson E, Hong J, Brilliant MH, Mailick MR. FMR1 CGG Expansions: Prevalence and Sex Ratios. *Am J Med Genet Part B: Neuropsychiatric Genetics* 2013;8(4):e62398. doi: 10.1371/journal.pone.0062398.
- 26 2013 Christensen D, Van Naarden Braun K, Doernberg NS, **Maenner MJ**, Arneson CL, Durkin MS, Benedict RE, Kirby RS, Wingate MS, Fitzgerald R, Yeargin-Allsopp M. Prevalence of cerebral palsy, co-occurring autism spectrum disorders, and motor functioning–Autism and Developmental Disabilities Monitoring Network, USA, 2008. *Developmental Medicine and Child Neurology*. (published online ahead of print) doi: 10.1111/dmcn.12268
- 27 2014 **Maenner MJ**, Rice CE, Arneson CL, Cunniff C, Schieve LA, Carpenter LA, Van Naarden Braun K, Kirby RS, Bakian AV, Durkin MS. Potential Impact of DSM-5 Criteria on Autism Spectrum Disorder (ASD) Prevalence Estimates. *JAMA Psychiatry* 2014 Mar;71(3):292-300. doi: 10.1001/jamapsychiatry.2013.3893.

- 28 2014 Schieve LA, Tian MD, Baio J, Rankin K, Rosenberg D, Wiggins L, **Maenner MJ**, Yeargin-Allsopp M, Durkin M, Rice C, King L, Kirby RS, Wingate MS, Devine O. Population Attributable Fractions for Three Perinatal Risk Factors for Autism Spectrum Disorders, 2002 and 2008 Autism and Developmental Disabilities Monitoring Network. *Annals of Epidemiology* 2014 Apr;24(4):260-6. doi: 10.1016/j.annepidem.2013.12.014. Epub 2014 Jan 15.
- 29 2014 Mailick MR, Hong J, Rathouz P, Baker MW, Greenberg JS, Smith L, **Maenner M**. Low-normal FMR1 CGG repeat length: phenotypic associations. *Front Genet* 2014 Sep 9;5:309 doi: 10.3389/fgene.2014.00309. eCollection 2014.
- 30 2015 **Maenner MJ**, Greenberg JS, Mailick MR. Association between mild intellectual disability and early mortality in men and women: evidence from a population-based cohort study. *American Journal of Intellectual and Developmental Disabilities*. 2015 May;120(3):244-57. doi: 10.1352/1944-7558-120.3.244.
- 31 2015 Durkin MS, Allerton L., **Maenner MJ**, Inter-Pregnancy Intervals and the Risk of Autism Spectrum Disorder: Results of a Population-Based Study. *J Autism Dev Disord*. 2015 Jul;45(7):2056-66. doi: 10.1007/s10803-015-2368-y.
- 32 2015 Crowe S, Hertz D, **Maenner M**, Ratnayake R, Baker P, Lash RR, Klena J, Lee-Kwan SH, Williams C, Jonnie GT, Gorina Y, Anderson A, Saffa G, Carr D, Tuma J, Miller L, Turay A, Belay E; Centers for Disease Control and Prevention (CDC). A plan for community event-based surveillance to reduce Ebola transmission - Sierra Leone, 2014-2015. *MMWR Morb Mortal Wkly Rep*. 2015 Jan 30;64(3):70-3.
- 33 2015 Durkin MS, **Maenner MJ**, Benedict RE, Van Naarden Braun K, Christensen D, Kirby RS, Wingate M, Yeargin-Allsopp M. The role of socio-economic status and perinatal factors in racial disparities in the risk of cerebral palsy. *Dev Med Child Neurol*. 2015 Sep;57(9):835-43. doi: 10.1111/dmcn.12746. Epub 2015 Mar 23.
- 34 2015 Zablotsky B, Black LI, **Maenner MJ**, Schieve LA, Blumberg SJ. Estimated Prevalence of Autism and Other Developmental Disabilities Following Questionnaire Changes in the 2014 National Health Interview Survey.
- 35 2016 Crowe SJ\*, **Maenner MJ\***, Kuah, S, Erickson BR, Coffee M, Knust B, Klena J, Foday J, Hertz D, Hermans V, Achar J, Caleo GM, Van Herp M, Albarino CG, Amman B, Basile AJ, Bearden S, Belser JA, Bergeron E, Blau D, Brault AC, Campbell S, Flint M, Gibbons A, Goodman C, McMullan L, Paddock C, Russell B, Salzer JS, Sanchez A, Sealy T, Wang D, Saffa G, Turay A, Nichol ST, Towner JS. Prognostic Indicators for Ebola Patient Survival. *Emerging Infectious Diseases*. 2016 22(2) (epub) \*co-first authors
- 36 2016 **Maenner MJ**, Blumberg SJ, Kogan MD, Christensen D, Yeargin-Allsopp M, Schieve LA. : Prevalence of cerebral palsy and intellectual disability among children identified in two U.S. national surveys, 2011-2013. *Annals of Epidemiology (in press)*
- 37 2016 Umscheid CA, **Maenner MJ**, Mull N, Veessenmeyer AF, Farrar JT, Goldfarb S, Morrison G, Albanese MA, Frohna JG, Feldstein DA. Using educational prescriptions to teach medical students evidence-based medicine. *Med Teach* 2016 Apr 13:1-6

- 38 2016 Durkin MS, Benedict RE, Christensen D, Dubois LA, Fitzgerald RT, Kirby RS, **Maenner MJ**, Van Naarden Braun K, Wingate MS, Yeargin-Allsopp M. Prevalence of Cerebral Palsy among 8-Year-Old Children in 2010 and Preliminary Evidence of Trends in Its Relationship to Low Birthweight. *Paediatr Perinat Epidemiol*. 2016 Sep;30(5):496-510. doi: 10.1111/ppe.12299. Epub 2016 May 23.
- 39 2016 Ratnayake R, Crowe SJ, Jasperse J, Privette G, Stone E, Miller L, Hertz D, Fu C, **Maenner MJ**, Jambai A, Morgan O. Assessment of Community Event-Based Surveillance for Ebola Virus Disease, Sierra Leone, 2015. *Emerg Infect Dis*. 2016 Aug;22(8):1431-7. doi: 10.3201/eid2208.160205.
- 40 2016 Erickson BR, Sealy TK, Flietstra T, Morgan L, Kargbo B, Matt-Lebby VE, Gibbons A, Chakrabarti AK, Graziano J, Presser L, Flint M, Bird BH, Brown S, Klena JD, Blau DM, Brault AC, Belser JA, Salzer JS, Schuh AJ, Lo M, Zivcec M, Priestley RA, Pyle M, Goodman C, Bearden S, Amman BR, Basile A, Bergeron É, Bowen MD, Dodd KA, Freeman MM, McMullan LK, Paddock CD, Russell BJ, Sanchez AJ, Towner JS, Wang D, Zemtsova GE, Stoddard RA, Turnsek M, Guerrero LW, Emery SL, Stovall J, Kainulainen MH, Perniciaro JL, Mijatovic-Rustempasic S, Shakirova G, Winter J, Sexton C, Liu F, Slater K, Anderson R, Andersen L, Chiang CF, Tzeng WP, Crowe SJ, **Maenner MJ**, Spiropoulou CF, Nichol ST, Ströher U. Ebola Virus Disease Diagnostics, Sierra Leone: Analysis of Real-time Reverse Transcription-Polymerase Chain Reaction Values for Clinical Blood and Oral Swab Specimens. *J Infect Dis*. 2016 Oct 15;214(suppl 3):S258-S262.
- 41 2016 Sumner SA, **Maenner MJ**, Socias CM, Mercy JA, Silverman P, Medinilla SP, Martin S, Xu L, Hillis SD. Sentinel Events Preceding the Commission of Firearm Violence among Urban Youth: An Exploration of City-Wide Administrative Data in Delaware *Am J Preventive Medicine* 2016 Sep 8. pii: S0749-3797(16)30307-5. doi: 10.1016/j.amepre.2016.08.002. [Epub ahead of print]
- 43 2016 **Maenner MJ**, Yeargin-Allsopp M, Van Naarden Braun K, Christensen DL, Schieve LA. Development of a Machine Learning Algorithm for the Surveillance of Autism Spectrum Disorder. *PLoS One*. 2016 Dec 21;11(12):e0168224. doi: 10.1371/journal.pone.0168224. eCollection 2016.
- 44 2017 Marcewicz LH, Clayton J, **Maenner M**, Odom E, Okoroh E, Christensen D, Goodman A, Warren MD, Traylor J, Miller A, Jones T, Dunn J, Schaffner W, Grant A. Parental Refusal of Vitamin K and Neonatal Preventive Services: A Need for Surveillance. *Matern Child Health J*. 2017 May;21(5):1079-1084. doi: 10.1007/s10995-016-2205-8.
- 45 2017 Soke GN, **Maenner MJ**, Christensen D, Kurzius-Spencer M, Schieve LA. Brief Report: Estimated Prevalence of a Community Diagnosis of Autism Spectrum Disorder by Age 4 Years in Children from Selected Areas in the United States in 2010: Evaluation of Birth Cohort Effects. *J Autism Dev Disord*. 2017 Jun;47(6):1917-1922. doi: 10.1007/s10803-017-3094-4.

## Reports, Letters & Other Works

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- 2008 Durkin MS, Gottlieb C, **Maenner MJ**, Cappa C, Loaiza E, et al, Monitoring Child Disability in Developing Countries: Results from the Multiple Indicator Cluster Surveys. 2008, New York: UNICEF (Available at [www.childinfo.org](http://www.childinfo.org))

- 2009 Durkin MS, **Maenner MJ**, Cunniff CM, Schieve LA, Albanese MA. The Authors Reply. *American Journal of Epidemiology*. 169(11):1406-1407
- 2010 Durkin MS, **Maenner MJ**, Newschaffer CJ. Response to King, et al, Estimated autism risk and older reproductive age. *American Journal of Public Health* 2010 Mar;100(3):389-90; author reply 390
- 2010 **Maenner MJ**, Durkin MS. Re: Autism, ethnicity and maternal immigration. *British Journal of Psychiatry*. June 2, 2010 [e-letter: <http://bjp.rcpsych.org/cgi/eletters/196/4/274>]
- 2012 Autism and Developmental Disabilities Monitoring Network Surveillance Year 2008 Principal Investigators; Centers for Disease Control and Prevention Prevalence of autism spectrum disorders Autism and Developmental Disabilities Monitoring Network, 14 sites, United States, 2008. *MMWR* 2012;61(SS03):1-19.
- 2012 Kalkbrenner AE, Braun JM, Durkin MS, **Maenner MJ**, Cunniff C, Daniels JL. Presentation of Study Results: Kalkbrenner et al. Respond. *Environmental Health Perspectives*. 2012. 120(9) a344
- 2013 Durkin MS, **Maenner MJ**. Screening for Developmental Disabilities in Epidemiologic Studies in Low and Middle Income Countries (Book chapter, in press)
- 2013 created **[www.DisabilityMeasures.org](http://www.DisabilityMeasures.org)**
- 2013 Van Sickle D, **Maenner MJ**, Barrett MA, Marcus JE. Monitoring and Improving Compliance and Asthma Control: Mapping Inhaler Use for Feedback to Patients, Physicians and Payers. *RDD Europe 2013*. 2013;1:119-130
- 2013 Centers for Disease Control and Prevention (CDC). Notes from the field: late vitamin K deficiency bleeding in infants whose parents declined vitamin K prophylaxis—Tennessee, 2013. *MMWR* 2013; 62(45):901-2.
- 2015 Sumner S, Mercy J, Hillis S, **Maenner M**, Socias C. Elevated Rates of Urban Firearm Violence and Opportunities for Prevention—Wilmington, Delaware. Report presented to the Delaware Dept of Health and Human Services. Nov 3 2015

### Public Health Response Efforts

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- 2013 Vitamin K deficient bleeding among infants in Tennessee - analytic support and data management. October 2013.
- 2014 MERS-CoV - Rapidly developed a data collection tool for assessing MERS exposure among health care workers at a hospital in Jeddah, Saudi Arabia. April 2014.
- 2014 Rapid increase in firearm violence in Wilmington, DE - deployed to Wilmington DE; data management, statistical analysis, data collection, and medical record abstraction. June-July 2014.
- 2014 Ebola - District Epidemiologist for Bo District, Sierra Leone Oct-Nov 2014; data management, analysis, coordinating local response efforts, coordinating patient transport.

### Professional Service & Training Activities

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- 2006 Graduate Summer Session in Epidemiology, University of Michigan
- 2007 Enumeration Pilot Project, Survey of Health of Wisconsin, University of Wisconsin-Madison

- 2007—08 President, Population Health Sciences Student Organization, University of Wisconsin-Madison
- 2008—11 Trainee, University Center for Excellence in Developmental Disabilities (UCEDD), Waisman Center, University of Wisconsin-Madison
- 2008 Participant in 16th Genetic Analysis Workshop, University of Wisconsin-Madison
- 2008 Guest Lecture on the epidemiology and surveillance of autism spectrum disorders, Maternal and Child Health Leadership Education in Neurodevelopmental & related Disabilities (MCH LEND) Program, Waisman Center, University of Wisconsin
- 2009—10 UW Human Genetics Journal Club, University of Wisconsin.
- 2008—10 Epidemiology Journal Club, Population Health Sciences, University of Wisconsin
- 2009— Member, International Society for Autism Research
- 2009—11 Preliminary Stage Judge, Young Epidemiology Scholars Competition, College Board
- 2009 Consultant for Course: Principles of Population Medicine and Epidemiology, University of Wisconsin School of Medicine
- 2010 Attended R Workshop lead by John Fox, University of Wisconsin
- 2010 Participant in 17th Genetic Analysis Workshop, University of Wisconsin-Madison
- 2010— Global Partnerships in the Epidemiology of Developmental Disabilities (GPEDD)
- 2011 Panelist for CDC/Autism Speaks Workshop on U.S. Data to Evaluate Changes in Prevalence of the Autism Spectrum Disorders, CDC, Atlanta, GA
- 2011 Attended Analysis of Genetic Association Data Workshop by Matt McGue and Mike Miller, University of Wisconsin
- 2011 Participated in the Wisconsin Health and Disabilities Data Plan Meeting, June 30, Madison, WI
- 2012 Attended “Doing Bayesian Data Analysis” Workshop by John Kruschke, July 11-13 Madison, WI
- 2012 A Crash Course in R: Learn to make amazing figures and graphs. (co-presented seminar with BG Travers). Waisman Center Ethics and Professional Development Seminar Series
- 2013 Ethics of Population Screening (co-presented seminar with MS Durkin). Waisman Center Ethics and Professional Development Seminar Series
- 2013 Attended EIS Summer Course. July 2013, Centers for Disease Control and Prevention
- 2013 Attended EIS Fall Course, October 2013, Centers for Disease Control and Prevention
- 2014 Taught introduction to R. presented at post-Tuesday Morning Seminar. CDC, February 2014
- 2014 Attended “Basic Bayes” mini-course by Owen Devine. NCBDDD, 2014
- 2014 Participant, Future of Fragile X Meeting. CDC, May 2014.
- 2016 NCBDDD Subject Matter Expert for GAO Engagement – Services for Youth with ASD Transitioning to Adulthood
- 2016 Served as “teaching assistant” for 2-day R training, sponsored by CDC Statistical Advisory Group

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### Scientific Consultancies & Other Collaborations



- 2007—08 Data management consultant for study on the Epidemiology of SBCADD Deficiency in Hmong-Americans, Waisman Center, University of Wisconsin-Madison (PI: Maureen Durkin)
- 2009— Collaborator, Educational Prescription Validation Study, University of Wisconsin-Madison School of Medicine (PI: David Feldstein)
- 2009—10 Data analysis consultant, Evidence-Based Medicine Training Efficacy Study, University of Wisconsin School of Medicine (PI: David Feldstein)
- 2010 Data management, geocoding, mapping, and analysis., Wisconsin Medical Home ASD Connections Initiative (Connections). Wisconsin Dept of Health and Family Services
- 2010 Consulted to evaluate data capture solutions and interview applicants for National Children’s Study Waukesha Vanguard Center, University of Wisconsin (PI: Maureen Durkin)
- 2012—13 Statistical and epidemiological consulting, Asthmapolis (now Propeller Health)
- 2013 Developed guidelines for data manipulation and analysis of disability screening data, UNICEF

### Invited Presentations

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- 2011 “The Epidemiology of Autism Spectrum Disorders: New approaches to Prevalence and Monitoring.” (Presenters: Law P, **Maenner M**, Rice C, Schieve L) Maternal and Child Health Beureau Dataspeak Web Conference. Nov 15, 2011.  
Archive of Presentations: <http://mchb.hrsa.gov/mchirc/dataspeak/events/2011/1115/archive.htm>
- 2014 **Maenner M**. Introduction to R and RStudio. CDC Informatics Training in Place Program, Seminar 15 (Web). February 2014
- 2014 **Maenner M**. Development of a machine learning algorithm for autism surveillance: lessons learned. National Center on Birth Defects and Developmental Disabilities. Senior Scientist Seminar. July, 2014
- 2014 **Maenner M**. Evaluation of an automated algorithm for the surveillance of autism spectrum disorder. Presentation at 2014 Epidemic Intelligence Summer Course. July, 2014
- 2015 **Maenner MJ**. Using R for Population Health. Informatics Training in Place Program / SHINE Fellows (web - multiple locations). October 2015
- 2015 **Maenner M**. Using R for Public Health Surveillance. Kennesaw State R Day. Nov 20, 2015
- 2015 **Maenner M**. Lessons learned from an applied machine learning project. Presented at First-year and 2nd-year EIS Fall Course. Nov 18 and Dec 8 2015
- 2016 **Maenner M**. Laws, Sausages, and the Autism Diagnosis: Measuring Disability for Public Health Surveillance. Philip M Farrell Population Health Distinguished Alumni Lecture 2016. University of Wisconsin School of Medicine and Public Health
- 2017 **Maenner M**, Machine learning classificaiton for autism surveillance: progress and current plans. Vanderbilt University, April 2017
- 2017 **Maenner M**, Rapid Classification of Autism for Public Health Surveillance. Public Health Innovators Speaker Series. CDC, June 2017
- 2017 **Maenner M**. Rapid Classification of Autism for Public Health Surveillance: Is there such a thing as a free lunch? NCBDDD Science Forum, June 21 2017

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**Conference Abstracts (Peer Reviewed)**


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- 2007 **Maenner MJ** & Durkin MS. Socioeconomic Disparities in the Prevalence of Autism. Poster Presented at 2007 Society for Pediatric Epidemiology Research. Boston, MA.
- 2008 Gottlieb C, Durkin M, and **Maenner M** in conjunction with UNICEF. Estimating the prevalence of childhood disability in developing countries: data from UNICEF's Multiple Cluster Indicator Survey – round 3 (MICS-3). 4th Annual Global Health Symposium, University of Wisconsin-Madison.
- 2008 **Maenner MJ**, Durkin MS. Racial disparity in the prevalence of cerebral palsy increases with maternal education: a retrospective birth cohort study. Poster Presented at 2008 Society for Pediatric Epidemiologic Research. Chicago, IL.
- 2009 **Maenner M**, Durkin M, Benedict R, Kirby R, Van Naarden-Braun KN, Doernberg, N, Yeargin-Allsopp M. Racial Disparity in the Prevalence of Cerebral Palsy Explained by Perinatal Risk Factors but not by Maternal Education: Results from a U.S. Birth Cohort Study. Presentation at the International Cerebral Palsy Conference, Sydney Australia. *Developmental Medicine & Child Neurology* 51(Suppl. 2):32.
- 2009 Benedict RE, Patz J, Arneson C, **Maenner M**, Durkin MS, Yeargin-Allsopp M, Doernberg NS, Van Naarden Braun K, Kirby RS, York S. Surveillance of Gross Motor Level of Function Among Children with Cerebral Palsy: Feasibility and Reliability in a United States Cohort. International Cerebral Palsy Conference, World Cerebral Palsy Congress. Sydney Australia.
- 2009 **Maenner MJ** What can we infer from geographic variability in time trends of autism prevalence based on educational data? Presented at the Population Health Sciences 50th Anniversary Symposium, Madison, WI.
- 2010 Feldstein DA, **Maenner MJ**, Mead S, Meyers D, Albanese MA. A Web-based EBM Educational Prescription to Evaluate Residency Competency. Society of General Internal Medicine 30th annual meeting, Minneapolis, MN.
- 2010 Kirby RS, Wingate MS, Mulvihill BA, Doernberg N, Van Naarden Braun, K, Yeargin-Allsopp M, Arneson C, Durkin M, **Maenner M**. Prevalence and Characteristics of Cerebral Palsy in Four Areas of the United States in 2006. American Academy for Cerebral Palsy and Developmental Medicine, 64th Annual Meeting. Sept 22-25 2010. Washington DC
- 2010 Yeargin-Allsopp M, Kirby RS, Wingate MS, Mulvihill BA, Doernberg N, Van Naarden Braun K, Arneson C, Durkin M, Benedict R, **Maenner M**. Prevalence and characteristics of cerebral palsy in four areas of the United States in 2006: An update from the Autism and Developmental Disabilities Monitoring Network. Scientific poster at: American Academy for Cerebral Palsy and Developmental Medicine (AAPDM) 64th Annual Meeting; September 23, 2010; Washington, DC.
- 2011 Feldstein D, **Maenner M**, Allen E, Baumann Kreuziger LM, Kaatz S, Nicholson LJ, Smith MEB, Albanese M. A Web-based EBM Educational Prescription to Evaluate Resident EBM Competency. Association of Program Directors in Internal Medicine Annual Meeting. Las Vegas, NV, April 2011.
- 2011 Feldstein D, **Maenner M**, Allen E, Baumann Kreuziger LM, Kaatz S, Nicholson LJ, Smith MEB, Albanese M. A Web-based EBM Educational Prescription to Evaluate Resident EBM Competency. Society of General Internal Medicine Annual Meeting, Phoenix Arizona, May 2011.
- 2011 **Maenner MJ**, Cunniff CJ, Giarelli E, Lee LC, Nicholas JS, Rice CE, Schieve LA, Wingate MS, Durkin MS. Phenotypic Heterogeneity and Early Identification of Autism Spectrum Disorders in a US Population-Based Study. International Meeting for Autism Research. San Diego, CA. May 2011

- 2011 Durkin MS, **Maenner MJ**, Arneson CL. Increasing Socioeconomic Disparity in the Prevalence of Autism Spectrum Disorder in Wisconsin. International Meeting for Autism Research. San Diego, CA. May 2011
- 2011 Feldstein D, **Maenner M**, Allen E, Baumann Kreuziger LM, Kaatz S, Nicholson LJ, Smith MEB, Albanese M. A Web-based EBM Educational Prescription to Evaluate Resident EBM Competency. Alliance for Academic Internal Medicine's (AAIM) Academic Internal Medicine Week 2011. October 19-23 2011, Anaheim, CA.
- 2012 **Maenner M**, Smith L, Hong J, Makuch R, Greenberg J, Seltzer MM. An Evaluation of the Measurement Properties of an Activities of Daily Living Scale for Adults with Autism, Down Syndrome, Fragile X, and Other Intellectual Disabilities. 45th annual Gatlinburg Conference. Annapolis MD. March 2012.
- 2012 Seltzer MM, Baker MW, Hong J, **Maenner M**, Greenberg J, Mandel D. Prevalence of CGG Expansions of the FMR1 Gene in a U.S Population-Based Sample. 45th annual Gatlinburg Conference. Annapolis MD. March 2012.
- 2012 **Maenner MJ**, Smith LE, Hong J, Makuch R, Greenberg J, Seltzer MM. Evaluation of an Activities of Daily Living Scale for Adults with Autism, Down Syndrome, Fragile X, and Other Intellectual Disabilities. International Meeting for Autism Research. Toronto, Canada. May 2012.
- 2012 Feldstein D, Umscheid CA, **Maenner M**, Farrar JT, Albanese M. Improving A Medical Student EBM Curriculum with a Web-Based Educational Prescription. Society of General Internal Medicine Annual Meeting, Orlando, Florida. May 2012.
- 2012 Smith LE, **Maenner MJ**, Seltzer MM. Daily Living Skills of Adolescents and Adults with Autism Spectrum Disorders: Growth Curve Trajectories Over a 10-Year Period. International Meeting for Autism Research. Toronto, Canada. May 2012.
- 2012 **Maenner MJ**, Rice CE, Arneson CL, Bakian AV, Carpenter LA, Cunniff CM, Fitzgerald RT, Kirby RS, Miller L, Robinson C, Schieve LA, Van Naarden Braun K, Durkin MS. Potential Effect of DSM-5 Diagnostic Criteria on ASD Prevalence Estimates. International Meeting for Autism Research. Toronto, Canada. May 2012.
- 2012 Durkin MS, **Maenner MJ**, Arneson CL, DiGuseppi C, Wingate MS, Rice CE, Pettygrove S, Lee LC, Constantino JN, Fitzgerald R, Nicholas J, Schieve LA. Evidence of Increasing Socioeconomic Disparity in the Prevalence of Autism Spectrum Disorder Among U.S. Children. International Meeting for Autism Research. Toronto, Canada. May 2012.
- 2012 Seltzer MM, **Maenner MJ** (co-presenters). Prevalence of CGG Expansions of the FMR1 Gene in a US Population-Based Sample. International Fragile X Conference, Miami, Florida. July 2012
- 2013 Allerton L, **Maenner MJ**, Durkin M. Inter-Pregnancy Intervals and Risk of Autism in a Population-Based Study. International Meeting for Autism Research. San Sebastian, Spain. May 2013.
- 2014 **Maenner MJ** Schieve LA, Christensen D, Yeargin-Allsopp M. An Automated Classification Algorithm for the Surveillance of Autism Spectrum Disorder. 63rd EIS Conference, Atlanta, GA, Apr-May 2014
- 2014 Wu TY, **Maenner MJ**, Wiggins LD, Rice CE, Bradley CC, Lopez ML, Kirby RS, Lee LC. Sex Differences in Diagnosis Retention of an Autism Spectrum Disorder. International Meeting for Autism Research. Atlanta GA, May 2014.
- 2014 Wiggins LD, Tian LH, Van Naarden Braun K, Baio J, Schieve LA, **Maenner M**, Clayton H, DiRienzo M, Goodman AB, Yeargin-Allsopp M. Understanding Associated Features of Autism Spectrum Disorder and Their Relationship to DSM Diagnostic Criteria. International Meeting for Autism Research. Atlanta GA, May 2014.

- 2014 **Maenner MJ**, Arneson C, Carpenter LA, Kirby RS, Rice CE, Schieve LA, Van Naarden Braun K, Wiggins LD, Zahorodny W, Durkin MS. Concordance Between DSM-5 ASD Criteria and Community ASD Identification Under DSM-IV-TR in a Population-Based Study.
- 2015 Sumner S, **Maenner M**, Socias C, Silverman P, Mercy J, Hillis S. Predicting Gun Violence Perpetration through Administrative Data – Wilmington, Delaware, 2014. 64th EIS Conference
- 2016 Gnakub N. Soke, **M. Maenner**, D. Christensen, M. Kurzius-Spencer, L. Schieve. Prevalence of Early Diagnosis of Autism Spectrum Disorder and Co-Occurring Conditions Among Children in Five Sites in the United States, 2010. EIS Conference Atlanta, GA, April 2016
- 2016 Samuel J. Crowe, **M. Maenner**, S. Kuah, B. Erickson, M. Coffee, B. Knust, J. Klena, J. Foday, D. Hertz, V. Hermans, J. Achar, G. Caleo, M. Van Herp, C. Albariño, B. Amman, A. Basile, S. Bear-den, J. Belser, E. Bergeron, D. Blau, A. Brault, S. Campbell, M. Flint, A. Gibbons, C. Goodman, L. McMullan, C. Paddock, B. Russell, J. Salzer, A. Sanchez, T. Sealy, D. Wang, G. Saffa, A. Turay, S. Nichol, J. Towner. Prognostic Indicators for Ebola Virus Disease Survival — Bo District, Sierra Leone, 2014–2015. EIS Conference Atlanta, GA, April 2016
- 2016 M. S. Durkin, **M. J. Maenner**, D. Christensen, L. C. Lee, R. Fitzgerald, M. Wingate, J. L. Daniels, C. L. Arneson, K. Van Naarden Braun, and M. H. Yeargin-Allsopp. Socioeconomic, Racial and Ethnic Disparities in the Prevalence of Autism Spectrum Disorder Among US Children. International Meeting for Autism Research. Baltimore MD, May 2016
- 2016 **M. J. Maenner**, M. H. Yeargin-Allsopp, K. Van Naarden Braun, D. Christensen, L. A. Schieve. Development of an Automated Classification Algorithm for the Surveillance of Autism Spectrum Disorder. International Meeting for Autism Research. Baltimore MD, May 2016
- 2017 L. D. Wiggins, J. Baio, K. R. Kast, R. S. Kirby, **M. J. Maenner**, C. E. Rice, K. Van Naarden Braun, W. W. Zahorodny and M. Wingate. The Influence of Clinical Judgment in a Record-Review Surveillance System on Autism Spectrum Disorder Prevalence Estimates. International Meeting for Autism Research. San Francisco, 2017
- 2017 G. N. Soke, **M. J. Maenner**, E. Moody, G. C. Windham, C. DiGuseppi and L. A. Schieve. Association Between Breastfeeding and Autism Spectrum Disorder in Preschool Children: An Analysis of Data from the Study to Explore Early Development (SEED). International Meeting for Autism Research. San Francisco, 2017

#### Other Presentations & Abstracts

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- 2007 **Maenner M.** & Durkin M. Does the prevalence of autism vary by socioeconomic status? 6th annual Population Health Sciences Poster Session, Madison, WI.
- 2007 **Maenner M.** Confidentiality and Identifiability Issues in Public-Use Datasets. Population Health Wednesday Seminar, Population Health Sciences, University of Wisconsin-Madison.
- 2008 **Maenner M.** & Durkin M. Does maternal education explain the racial disparity in the prevalence of cerebral palsy in the US? 7th annual Population Health Sciences Poster Session, Madison, WI.
- 2008 Gottlieb C., **Maenner M**, Durkin M. Estimating the frequency and distribution of child disability in developing countries: data from UNICEF's Multiple Indicator Cluster Survey, round 3 (MICS3). 7th annual Population Health Sciences Poster Session, Madison, WI.
- 2008 Durkin MS, Gottlieb CA, **Maenner MJ**. MICS3 Disability Module: Preliminary Results and Evaluating Data Quality Across Countries. Presentation at UNICEF. New York, NY.

- 2009 **Maenner MJ** & Durkin MS. Using Census-Based Indicators of Socioeconomic Status (SES) in Analyses of ADDM Network Data. Presented on July 22, 2009 All States conference call for the CDC ADDM Network.
- 2010 **Maenner MJ** & Durkin MS. Study area changes in ADDM analyses across multiple study years & Time trends in parental age and parity. Presentation at Centers for Disease Control and Prevention ADDM Meeting. Atlanta, GA.
- 2010 **Maenner MJ** & Durkin MS. Children at risk for disability in developing countries: evidence of discrimination based on UNICEF's Multiple Indicator Cluster Survey, round 3. Population Health Sciences Poster Session, University of Wisconsin-Madison
- 2010 **Maenner MJ**. Phenotypic Heterogeneity and Early Identification of Autism Spectrum Disorders in the US. Presented at Autism Science Foundation. "Sandwiches and Science" event at the International Meeting for Autism Research. Philadelphia, PA.
- 2010 **Maenner MJ**. Trends in the prevalence of autism on the basis of special education data. Presented on Nov 10, 2010 All States conference call for the CDC Autism and Developmental Disabilities Monitoring Network.
- 2011 **Maenner MJ** Changing Boundaries of ADDM Study Areas: Analytic Challenges. CDC ADDM Meeting. Atlanta, GA.
- 2011 Benedict RE, **Maenner MJ**. (Co-presenters) Surveillance of Function among Children with Cerebral Palsy: Reliability, feasibility & child characteristics. Presented to BioPop group at UW-Madison.
- 2011 **Maenner MJ**, Cunniff CJ, Giarelli E, Lee LC, Nicholas JS, Rice CE, Schieve LA, Wingate MS, Durkin MS. Phenotypic Heterogeneity and Early Identification of Autism Spectrum Disorders in a US Population-Based Study. IMFAR poster displayed at Atlanta Autism Consortium May 2011 meeting.
- 2012 Mailick MR, Brilliant M, Baker M, **Maenner MJ**. (Co-presenters) A Collaborative Effort to Characterize the Fragile X Premutation in a Large Population. Fall Research Learning Series. UW Institute for Clinical and Translational Research. Madison, WI. Oct 03, 2012. (poster displayed on Oct 22 at ICTR Resource Fair, UW-Madison)
- 2013 **Maenner MJ**. FMR1 CGG Repeat Expansions: Prevalence and Sex Ratios. T32 Postdoc Captstone Seminar; Waisman Center, UW-Madison
- 2013 **Maenner MJ** Evaluation of an Automated Classification Algorithm for the Surveillance of Autism Spectrum Disorder. EIS Fall Course. Atlanta, GA. Oct 2013.
- 2014 **Maenner MJ** Potential Impact of DSM-5 ASD Diagnostic Criteria on Prevalence Estimates. Fulton County Schools, March 2014.
- 2014 **Maenner MJ**. Introduction to R and RStudio. NCIRD Bioinformatics group. June 2014.2014
- 2014 **Maenner M**. Evaluation of an automated algorithm for the surveillance of autism spectrum disorder. Presentation at 2014 Epidemic Intelligence Summer Course. July, 2014
- 2014 **Maenner MJ** Laws, Sausages, and the Autism Diagnosis: Measuring Disability for Public Health Surveillance. Tuesday Morning Seminar, CDC. June 2014.
- 2014 **Maenner MJ**. Introduction to R for epidemiologists. NCBDDD Quantitative Analysis Group, Sept 2014.
- 2015 **Maenner MJ**. Introduction to Git for scientists. NCBDDD Quantitative Analysis Group

- 2015 **Maenner MJ.** R Tutorial for NCBDDD/DBDDD/DDB Fellows
- 2016 **Maenner MJ,** Heilig CM, Lee SH. Reinventing autism surveillance with machine learning. HHS Ventures Pitch to the Board. Washington DC, Feb 2016
- 2016 **Maenner MJ,** Heilig CM, Lee SH. Reinventing autism surveillance with machine learning. CDC Innovation Fund Final Pitch. Atlanta GA, Feb 2016
- 2016 **Maenner MJ,** Durkin MS, Yeargin-Allsopp M. Disabilitymeasures.org: An open platform for developmental disability measurement and assessment tools. International Meeting for Autism Research Cultural Diversity Meeting, Baltimore MD, May 2016
- 2016 **Maenner MJ.** On the heterogeneity of Autism Spectrum Disorder. Tuesday Morning Seminar Discussant. CDC, Atlanta GA
- 2016 **Maenner MJ.** Characteristics of children with autism born to older versus younger parents. DBDD Research in Progress. Atlanta 2016
- 2016 **Maenner MJ.** On the changing prevalence of ASD: “diagnostic substitution”, “awareness”, or something else? American Association of Intellectual and Developmental Disabilities Annual Meeting. Atlanta GA, July 2016.
- 2016 **Maenner MJ.** Finding my research ‘frenemies’ and other textual analyses with R. CDC R User Group. Sept 2016

### Manuscript Reviewer

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*Pediatrics; Autism: The International Journal of Research and Practice; Journal of Autism and Developmental Disorders; BMC Bioinformatics; Neurosciences Journal; Social Science & Medicine; Disability and Health Journal; Birth Defects Research Part A: Clinical and Molecular Teratology; American Journal of Intellectual and Developmental Disabilities, PLoS ONE; BMC Neurology; Developmental Medicine and Child Neurology;*