

# Douglas D. Gunzler, Ph.D.

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## Personal

Born on May 31, 1976. United States Citizen.

## Education

Ph.D. Statistics, School of Medicine and Dentistry, University of Rochester, 2011.

M.A. Statistics, School of Medicine and Dentistry, University of Rochester, 2007.

M.S. Statistics, School of Arts and Sciences, Rutgers University, 2006.

B.A. English, Emory College of Arts and Sciences, Emory University, 1998.

## Professional Appointments

Senior Instructor of Medicine, School of Medicine, Case Western Reserve University, 2011-present (Primary).

Biostatistics & Evaluation Unit, Center for Health Care Research & Policy, Case Western Reserve University at MetroHealth Medical Center, 2011-present.

## Honors and Awards

Best Poster Award, Poster Session B, "Mediation Analysis of the Causal Path Between a School-based Mentoring Program and Behavior in Child Resilience," Academy Health's Annual Research Meeting (ARM), 2012.

Finalist, Best Abstract Award, Poster Session, "Urate as a Predictor of the Rate of Cognitive Decline in the DATATOP Trial", Parkinson Study Group (PSG) 25th Annual Symposium, 2011.

Travel Stipend, Poster Session, "Urate as a Predictor of the Rate of Cognitive Decline in the DATATOP Trial", Parkinson Study Group (PSG) 25th Annual Symposium, 2011.

Graduate Fellowship, Department of Biostatistics & Computational Biology, School of Medicine and Dentistry, University of Rochester, 2006-2011.

New Jersey Press Association Award, series of articles written on high school valedictorians, *North Jersey Herald & News*, 1998.

## Professional Service

### *Joint Statistical Meetings*

Chair, Measurement Bias and Error and Accuracy – Contributed Papers, Section on Health Policy Statistics, 2011.

Organizer, Patient-Reported Outcomes in Mental and Behavioral Health – Topic Contributed Papers, Social Statistics, 2012.

Organizer, Patient-Reported Outcomes in Mental and Behavioral Health – Topic Contributed Papers, Statistics in Mental Health Research, 2013.

Chair, Recent Developments for Disease Diagnosis, Risk Prediction, and Treatment Selection Using Biomarkers – Invited Papers, ENAR, 2013.

Organizer, Adherence in Clinical Research – Invited Papers, Statistics in Mental Health Research, 2015.

### *American Statistical Association*

Member, 2005-Present.

Education Co-Director in Mental Health Research Section, American Statistical Association, 2013-present.

Member of Sections in Health Policy Statistics, Mental Health Statistics, Social Statistics and Statistics in Epidemiology.

Member of Cleveland Chapter.

### *Society for Medical Decision Making*

Member, 2013-Present.

### *Eastern North American Region (ENAR) Meeting*

Chair, Longitudinal Data Analysis, Contributed Papers, ENAR, Baltimore, MD, 2014.

Chair, Dynamic Treatment Regimens, Contributed Papers, ENAR, Washington, DC, 2012.

### *International Conference on Health Policy Statistics*

Chair, Causal Analysis/Intent to Treat Analysis, Contributed Papers, Tenth ICHPS (October 2013), Chicago IL, 2013.

Chair, Longitudinal and Survival Analysis, Contributed Papers, Ninth ICHPS (October 2011), Cleveland, OH, 2011.

### *Referee / Reviewer*

Referee for *Journal of Applied Statistics*, *Journal of Geriatric Psychiatry and Neurology*, *The American Statistician*, *Quality of Life Research*, *PLOS ONE*, *Basic Research Journal of Medicine and Clinical Sciences* and *Health Services and Outcomes Research Methodology*

Reviewer of grant application for The Netherlands Organisation for Health Research and Development (ZonMw), 2015.

Reviewer of papers for Mental Health Statistics Section student paper award *Joint Statistical Meetings, 2014*

Reviewer of abstracts for *The 35th and 36th Annual North America Meetings of the Society of Medical Decision Making, 2013-2014*

## Professional Service: Case Western Reserve University & Affiliates

*NIH R01: Treatment Adherence Enhancement in Bipolar Disorder (CAE RCT) (Sajatovic, PI)*

Member of DSMB, 2013-2017.

### *Clinical Translational Science Consortium*

Member, Biostatistics, Evaluation and Research Design (BERD) Core, 2011-present.

### *MetroHealth System Clinical Research Unit*

Scientific Review Committee, 2011-present.

### *MetroHealth System*

Bioscientific Provisional Medical Staff, 2011-present.

## Teaching

### Short Courses at National / International Meetings

*Short Courses, Morning Half Day 2014, The 36th Annual Meeting of the Society for Medical Decision Making, Miami, FL*

*AM 7: Introduction to Structural Equation Modeling.* Course faculty for 3 hour introduction on Structural Equation Modeling lecturing on mediation analysis and model fit and specification. October 2014.

*Short Courses, Morning Half Day 2013, The 35th Annual Meeting of the Society for Medical Decision Making, Baltimore, MD*

*AM 13: Structural Equation Modeling for Beginners.* Course faculty for 3 hour introduction on Structural Equation Modeling lecturing on mediation analysis and model fit and specification. October 2013.

## Case Western Reserve University Clinical Research Scholars Program (CRSP)

### *CRSP 401: Introduction to Clinical Research Summer Series*

*Summer 2014.* Taught 1 hour overview lecture on Longitudinal Data Analysis. July 2014.

*Summer 2013.* Taught 1 hour overview lecture on Mediation Analysis. July 2013.

## Cleveland Chapter American Statistical Association

### *Fall Workshop 2012*

*Introduction to Structural Equation Modeling.* Taught 4 hour overview on Structural Equation Modeling presenting examples using MPlus software. October 2012.

## Courses Taught at University of Rochester

### *School of Medicine and Dentistry, Department of Biostatistics & Computational Biology*

BST 479: *Generalized Linear Models.* Required Ph.D. course. Taught 1.5 hour class on R programming for Generalized Linear Models. Teaching Assistant, 40 hours, 2010.

BST 464: *Applied Linear Regression.* Required M.S./ Ph.D. course. Teaching Assistant, 40 hours, 2007.

BST 463: *Introduction for Biostatistics.* Required School of Medicine and Dentistry course. Teaching Assistant, 40 hours, 2006.

## Service

## Judging

### *Irwin H. Lepow Student Research Day*

*Judge.* Judged 1.5 hour first session of student scientific poster presentations at Case Western Reserve University. February 2014.

*Judge.* Judged 1.5 hour first session of student scientific poster presentations at Case Western Reserve University. February 2013.

## Research Support

### *Active Projects*

**NIH NCATS 1KL2RR024990-01** (Davis, PI) [07/1/13-07/1/17]

*Case Western Reserve University/Cleveland Clinic Clinical Translational Science Award (CTSA).*

*Goals* The goal of this grant is to enable junior faculty to become independently funded investigators.

*Role* KL2 Scholar.

**RO1: Improving Outcomes for Individuals with Serious Mental Illness and Diabetes** (Sajatovic and Dawson, PI) [07/1/11 - 03/31/16]

*Targeted Training in Illness Management*

*Goals* Innovative treatment engages individuals with serious mental illness and diabetes mellitus to actively participate in illness self-management.

*Role* Quantitative Team Co-Leader.

**NIH-NICHD, RO1 HD068588-01A1** (Knutson, PI) [7/1/12-6/30/17]

*Optimizing Contralaterally Controlled FES for Acute Upper Limb Hemiplegia*

*Goals* A RCT of electrical stimulation interventions for improving hand recovery in stroke patients.

*Role* Co-investigator.

**NIH, R01 HD075542-01A1** (Chae, PI) [9/1/13-8/31/18]

*RCT of Implanted PNS for Shoulder Pain in Stroke*

*Goals* Estimate the effect size of pain reduction from Implanted IM PNS compared to short-term percutaneous IM PNS.

*Role* Co-investigator.

**NIH, T-32 NINR** (Daly, PI) [7/1/13-6/31/17]

*Symptom Management and Palliative Care Research in Adults with Advanced Disease*

*Goals* Predoctoral and postdoctoral training program describes a proposed plan for training in symptom management and palliative care research among adults with advanced disease.

*Role* Biostatistician.

### Completed Projects

**National Institute of Health** (Akkus, PI) [09/1/11 - 08/31/14]

*Crystal based Arthropathies*

*Goals* Analysis of entire data set to determine whether there are significant differences between sensitivities and specificities of polarized light microscopy and Raman analysis.

*Role* Consultant.

**Novartis** (Bermel, PI) [05/4/12 - 05/4/13]

*A Retrospective Observational Study Determining the Impact of Comorbid Depression on the Development of Physical Disability in Relapsing-Remitting Multiple Sclerosis*

*Goals* Measure the impact of comorbid depression on development of MS-related physical disability, delay to Multiple Sclerosis (MS) diagnosis, treatment utilization, and health-related quality of life in patients with MS.

*Role* Co-investigator.

**R21 DA027521** (Tang and Tu, PI) [05/01/08 - 08/14/11]

*Analysis of Count Data with Structural Zeros*

*Goals* Proposed a new class of distribution-free structural equation models for mediation analysis within a longitudinal data setting to address the missing at random assumption and non-continuous outcomes and mediators.

*Role* Biostatistician, Source for Dissertation Research.

**R01MH068423** (Wyman, PI) [09/01/05 - 06/30/11]

*Efficacy Trial of a School-Based Preventive Intervention*

*Goals* Conduct a randomized trial of a new multi-component intervention targeting young children showing emerging mental health problems; determine levels of intervention fidelity required for intervention impact, investigate mediators and moderators of intervention effects, and conduct an initial economic evaluation of program effects.

*Role* Biostatistician.

**New York State-Office of Mental Health** (Wyman, PI) [10/15/08 - 06/30/12]

*Integrated Youth Suicide Prevention Program— Phase 2*

*Goals* Disseminate an integrated youth suicide prevention program in underserved New York communities and evaluate through school-based design.

*Role* Biostatistician.

**P20MH071897** (Caine, PI) [09/29/04 - 07/31/10]

*Developing Center on Public Health and Population Interventions for the Prevention of Suicide (DC-PHPPIPS)*

*Goals* Build a multidisciplinary research enterprise that will provide an intellectual epicenter for the developing field of suicide prevention; initiate a scientifically-oriented Suicide Prevention and Public

Mental Health annual meeting; develop, implement, and assess the use of novel research designs and measures, and extend the application of new theoretical and analytic approaches to suicide prevention and intervention research.

*Role* Biostatistician.

**NIH R01 K24NS60991** (Schwarzschild, PI) 09/3/08 - 02/28/13]

*Pursuing Purine Pathways to Clinical Trials for Parkinson's Disease*

*Goals* A follow-up study to Deprenyl and Tocopherol Antioxidative Therapy of Parkinsonism randomized trial to determine whether serum urate is associated with a slower rate of cognitive loss in patients with Parkinson's Disease.

*Role* Biostatistician.

**R01 ES008442-10** Davidson, PI) [09/17/10 - 04/30/15]

*Methylmercury Effects on Adolescent Development*

*Goals* Double-blind, randomized longitudinal cohort study in the Republic of Seychelles to determine if higher Methylmercury levels pre-and post-natal exposure have a significant effect on the standardized test scores of elementary school children and behavioral problems in young adults.

*Role* Biostatistician.

## Publications

### Peer-Reviewed Articles Published or In Press

#### In Press

1. Sajatovic M **Gunzler D** Einstadter D Thomas C McCormick D Perzynski A Kanuch S Cassidy K Dawson N Clinical characteristics of individuals with serious mental illness and type 2 diabetes. *Psychiatric Services*. *Accepted for Publication*.
2. Koontz MB **Gunzler D** Huston-Presley L Catalano PM Longitudinal Changes in Infant Body Composition: Association with Childhood Obesity. *Pediatric Obesity*. *Accepted for Publication*.
3. Wilson R **Gunzler D** Bennett ME Chae J Percutaneous Peripheral Nerve Stimulation for Chronic Pain in Subacromial Impingement Syndrome: A Case Series. *Neuromodulation: Technology at the Neural Interface*. *Accepted for Publication*.
4. Sheffler LR Bailey SN **Gunzler D** Chae J Effect of BMI on Hemiparetic Gait. *PMR Journal*. *Accepted for Publication*.

#### 2014

5. **Gunzler D** Lu N Tang W Wu P Tu XM A Class of Distribution-free Models for Longitudinal Mediation Analysis. *Psychometrika*. 2014, 17(4):543-568.
6. **Gunzler D** Perzynski A Morris N Bermel R Lewis SA Miller D Disentangling Multiple Sclerosis and Depression: An Adjusted Depression Score for Patient-Centered Care. *Journal of Behavioral Medicine*. DOI: 10.1007/s10865-014-9574-5.
7. Wilson R **Gunzler D** Bennett ME Chae J Peripheral Nerve Stimulation compared to Usual Care for Pain Relief of Hemiplegic Shoulder Pain: A Randomized Controlled Trial. *American Journal of Physical Medicine and Rehabilitation*. 2014, 93: 17-28.
8. Prakash S Coffin R Schold J Lewis SA **Gunzler D** Stark S Howard M Rodgers D Einstadter D Sehgal AR Travel distance and home dialysis rates in the United States. *Peritoneal Dialysis International*. 2014, 34(1):24-32.

#### 2013

9. **Gunzler D** Chen T Wu P Zhang H An Introduction to Mediation Analysis with Structural Equation Modeling. *Shanghai Archives of Psychiatry*. 2013, 25(6): 390-394.
10. **Gunzler D** Bleyer AJ Thomas RL O'Brien A Sattar A Iyengar SK Thomas C Sedor JR Schelling JR Diabetic Nephropathy in a Sibling and Albuminuria Predict Early GFR Decline: A Prospective Cohort Study. *BMC Nephrology*. 2013, 14:124.
11. Daly BJ Douglas SL Lipson AR **Gunzler D** Clinical Trial of a Supportive Care Team for Patients with Advanced Cancer. *J Pain Symp Mgt* 2013, 46(6):775-784.
12. Lu N Han Y Chen T **Gunzler DD** Xia Y Lin JY Tu XM Power analysis for cross-sectional and longitudinal study designs. *Shanghai Archives of Psychiatry*. 2013, 25: 259-262.

13. Knutson JS Hansen K Nagy J Bailey SN **Gunzler DD** Sheffler LR Chae J Contralaterally controlled neuromuscular electrical stimulation for recovery of ankle dorsiflexion: a pilot randomized controlled trial in patients with chronic post-stroke hemiplegia. *Am J PM & R*. 2013, 92(8):656-665.
14. Sheffler LR Taylor PN **Gunzler D** Buurke JH Ijzerman MJ Chae J Randomized Controlled Trial of Surface Peroneal Nerve Stimulation for Motor Relearning in Lower Limb Hemiparesis. *Archives of PM & R* 2013, 94: 1007-1014.

## 2012

15. O'Malley NT Fleming FJ **Gunzler D** Messing S Kates SL Factors Independently Associated With Complications and Length of Stay after Hip Arthroplasty. *The Journal of Arthroplasty* 2012, 27(10):1832-1837.
16. Zhang H Yu Q Feng C **Gunzler D** Wu P Tu XM A New Look at the Difference between GEE and GLMM When Modeling Longitudinal Count Responses. *Journal of Applied Statistics* 2012, 39(9): 2067-2079.
17. Choudhary E **Gunzler D** Tu XM Bossarte R Epidemiological Characteristics of Male Sexual Assault in a Criminological Database. *Journal of Interpersonal Violence* 2012, 27:523-546.  
doi:10.1177/0886260511421674
18. Tang W Hua H **Gunzler D** Kernel Smoothing Density Estimation when Group Membership is Subject to Missing. *Journal of Statistical Planning and Inference* 2012, 142:685-694.  
doi:10.1016/j.jspi.2011.09.009
19. Lee Y Fleming FJ Debb AP **Gunzler D** Messing S Monson JRT A Laparoscopic Approach Reduces Short-term Complications and Length of Stay Following Ileocolic Resection in Crohn's Disease: An Analysis of Outcomes from the NSQIP Database. *Colorectal Disease* 2012, 14:572-577.  
doi:10.1111/j.1463-1318.2011.02756.x
20. Pisani A Schmeelk-Cone K **Gunzler D** Petrova M Goldston DB Tu XM Wyman P Associations Between Suicidal High Students' Help-Seeking and Their Attitudes and Perceptions of Social Environment. *Journal of Youth and Adolescence* 2012, 41(10):1312-1324. doi:10.1007/s10964-012-9766-7
21. He H **Gunzler D** Ma Y Xia Y Validity and Reliability of Instruments. *Modern Clinical Trial Analysis*, Tang W and Tu XM, eds., Springer Sciences, 2012. In Chapter 3, pgs 55-79.
22. Xia Y Lu N Zhang H **Gunzler D** Zubenko GS Tu XM Statistical Methods and Issues in the Study of Suicide. *Frontiers in Suicide Risk: Research, Treatment and Prevention*, Lavigne JE, ed., Nova Publishers, 2012. In Chapter 9, pgs 139-158.
23. Sheffler LR Knutson JS **Gunzler D** Chae J Relationship Between Body Mass Index and Rehabilitation Outcomes in Chronic Stroke. *Am J Phys Med Rehabil* 2012, 91(11):951-956.

## 2011

24. Conner KR **Gunzler D** Tang W Tu XM Maisto SA Test of a Clinical Model of Drinking and Suicidal Risk. *Alcoholism: Clinical and Experimental Research* 2011, 35: 60-68.  
doi:10.1111/j.1530-0277.2010.01322



25. Zhang H Xia Y Chen R **Gunzler D** Tang W Tu XM On Modeling Longitudinal Binomial Responses—Implications from Two Dueling Paradigms. *Journal of Applied Statistics* 2011, 38:2373-2390.  
doi:10.1080/02664763.2010.550038
26. Fleming FJ Francone TD Kim MJ **Gunzler D** Messing S Monson JRT A Laparoscopic Approach Does Reduce Short-Term Complications in Patients Undergoing Ileal Pouch-Anal Anastomosis. *Diseases of the Colon & Rectum* 2011, 54: 176-182.  
doi:10.1007/DCR.0b013e3181fb4232
27. Davidson PW Cory-Slechta DA Thurston SW Huang LS Shamlaye CF **Gunzler D** Watson G van Wijngaarden E Zareba G Klein JD Clarkson TW Strain JJ Myers GJ Fish Consumption and Prenatal Methylmercury Exposure: Cognitive and Behavioural Outcomes in the Main Cohort at 17 Years from the Seychelles Child Development Study. *NeuroToxicology* 2011, 32:711-717.

#### 2010

28. Fleming FJ Kim MJ Messing S **Gunzler D** Salloum R Monson JRT Balancing the Risk of Post-operative Surgical Infections: A Multivariate Analysis of Factors Associated with Laparoscopic Appendectomy from the NSQIP Database. *Annals of Surgery* 2010, 252: 895-900.  
doi:10.1097/SLA.0b013e3181f194fe
29. Davidson PW Leste A Benstrong E Burns CM Valentin J Sloane-Reeves J Huang LS Miller WA **Gunzler D** van Wijngaardern E Watson GE Zareba G Shamlaye CF Myers GJ Fish Consumption, Mercury Exposure and Their Associations with Scholastic Achievement in the Seychelles Child Development Study. *Neurotoxicology* 2010, 5: 439-447.  
doi:10.1016/j.neuro.2010.05.010

#### Prior to 2010

30. **Gunzler D** Redefining Dental Coverage. *Business and Health* 1998, 16: 56-57.

## Selected Manuscripts and Book Chapters Submitted, Under Revision or In Preparation

1. **Gunzler D** Perzynski A Sudano J An Overview of Model Specification in Structural Equation Models. *Submitted.*
2. **Gunzler D** Morris N Perzynski A Miller D Lewis SA Bermel R A Multilevel Longitudinal Mediation Model Accounting for Overlapping Symptoms of Multiple Sclerosis and Depression *Submitted.*
3. **Gunzler D** Morris N Tutorial on Structural Equation Modeling for Analysis of Overlapping Symptoms in Co-occurring Conditions. *Submitted.*
4. **Gunzler D** Implications of a Clinical Observership of Patients for a Methodologist: A Transdisciplinary Approach to Better Patient Care. *In Preparation.*
5. **Gunzler D** Lu N Tang W Tu XM A New Distribution-free Approach for Longitudinal Mediation Analysis with Count Outcomes and Mediators. *In Preparation.*

6. Wu P **Gunzler D** Lu N Chen T Wyman P Tu XM Causal inference for community-based multi-layered intervention study. *Submitted.*
7. Sajatovic M McCormick R **Gunzler D** Perzynski AT Thomas C Kanuch S Cassidy K Athey M Fuentes-Casiano E Dawson NV. Psychosocial Features of Clinically Relevant Patient Sub-groups with Serious Mental Illness and Comorbid Diabetes. *Submitted.*
8. Plow MA, Finlayson M **Gunzler D** Heinemann AW. Correlates of Community Participation in People with Multiple Sclerosis. *Submitted.*
9. Gibson K Waters T **Gunzler D** Catalano P. Factors relating to the longitudinal change in birth weight. *Submitted.*
10. Lu N **Gunzler D** Zhang H Ma Y He H Tu XM On Robust Inference for Intraclass Correlation Coefficients. *Submitted.*
11. Lu N Tang W Yu Q **Gunzler D** A Distribution-free Model for Longitudinal Count Responses with Structural Zeros. *Submitted.*
12. Das A **Gunzler D** A Comparison of Manual versus Automated Saturation of peripheral Oxygen in the Neonatal Intensive Care Unit. *Submitted.*
13. Tang W Lu N **Gunzler D** Tu XM On Double Robust Estimates for Longitudinal Count Data. *In Preparation.*
14. Tang W Lu N Chen T Wang W **Gunzler D** Han Y Tu XM On Performance of Parametric and Distribution-free Models for Zero-inflated and Over-dispersed Count Responses. *Submitted.*

## Recent Research Presentations

### *National / International Meetings*

1. **Gunzler D** Morris N Dawson N Perzynski A Dalton J McCormick D Einstadter D Thomas C Sajatovic M "Predictors of Clinical Appointment Attendance for Individuals with Serious Mental Illness and Diabetes," *The 36th Annual Meeting of the Society for Medical Decision Making*, October 2014.
2. **Gunzler D** "A Distribution-Free Approach to Longitudinal Mediation Analysis with Count Outcomes and Mediators," Topic Contributed Session, Statistics on Mental Health Research *Joint Statistical Meetings*, August 2014.
3. **Gunzler D** "Implications of a Clinical Observership of Patients for a Methodologist: a Transdisciplinary Approach," AM Roundtable Discussion, Statistics on Mental Health Research *Joint Statistical Meetings*, August 2014.
4. **Gunzler D** Morris N Perzynski A Bermel RA Lewis S Miller DM "Analysis of Overlapping Symptoms of Multiple Sclerosis and Depression," Poster Session, *Translational Science 2014 Meeting*, April 2014.
5. **Gunzler D** "Longitudinal Analyses of the Causal Path Between Multiple Sclerosis and Depression Using Structural Equation Modeling," ENAR, Causal Inference, Contributed Papers, *Eastern North American Region Meeting*, March 2014.
6. **Gunzler D** "A Latent Growth Modeling Approach to Longitudinal Mediation Analysis of the Causal Path Between Multiple Sclerosis and Depression," Contributed Session, Longitudinal Data *Tenth International Conference on Health Policy Statistics*, October 2013.

7. **Gunzler D** "Modeling the Causal Pathways Between Multiple Sclerosis and Depression," Topic Contributed Session, Statistics on Mental Health Research *Joint Statistical Meetings*, August 2013.
8. **Gunzler D** "Statistical Methods for Mediation Analysis," AM Roundtable Discussion, Health Policy Statistics Section *Joint Statistical Meetings*, August 2013.
9. **Gunzler D** Bermel RA Perzynski A Lewis S Miller DM "An Adjusted Depression Screening Scale for Multiple Sclerosis Patients," Poster Session, *Academy Health's Annual Research Meeting*, June 2013.
10. Bermel RA **Gunzler D** Lewis S Perzynski A Miller DM "A comprehensive assessment of the relationship between depression and MS-related disability in a large cross sectional clinical cohort," Poster Session, *ECTRIMS conference*, October 2012.
11. **Gunzler D** Bermel RA Perzynski A Lewis S Miller DM "Disentangling Multiple Sclerosis-Associated Fatigue and Depression: Methods to Improve Clinical Research and Care," Poster Session, *Symposium in Honor of Jack Kalbfleisch: Methodologic Advances in the Analysis of Outcomes Data*, September 2012.
12. **Gunzler D** "Disentangling Multiple Sclerosis-Associated Fatigue and Depression: Methods to Improve Clinical Research and Care," Topic Contributed Session, Social Statistics Section, Interest Group for Statistics on Mental Health Research *Joint Statistical Meetings*, August 2012.
13. **Gunzler D** "Model Comparison and Evaluation in Structural Equation Models," AM Roundtable Discussion, Health Policy Statistics Section *Joint Statistical Meetings*, August 2012.
14. **Gunzler D** Lu N Tang W Wyman P Tu XM "Mediation Analysis of the Causal Path Between a School-based Mentoring Program and Behavior in Child Resilience," Poster Session, *Academy Health's Annual Research Meeting*, June 2012.
15. Koontz M **Gunzler D** Huston-Presley L Catalano PM "Longitudinal Changes in Infant Body Composition and Childhood Obesity," Poster Session, *American Diabetes Association 72nd Scientific Sessions*, June 2012.
16. **Gunzler D** "A New Distribution-free Approach for Longitudinal Mediation Analysis with Non-continuous Outcomes and Mediators," ENAR, Causal Inference, Contributed Papers, *Eastern North American Region Meeting*, April 2012.
17. **Gunzler D** Eberly S Oakes D Ascherio A Schwarzschild MA "Urate as a Predictor of the Rate of Cognitive Decline in the DATATOP Trial," Poster Session, *Twenty Fifth Annual Symposium on Etiology, Pathogenesis, and Treatment of Parkinson's Disease and Other Movement Disorders*, May 2011.
18. **Gunzler D** "A Distribution-free Approach for Inference about Structural Equation Models," Social Statistics Section, Section on Government Statistics *Joint Statistical Meetings*, August 2010.

*Case Western Reserve University & Affiliates*

19. **Gunzler D** "Predictors of Clinical Appointment Attendance for Individuals with Serious Mental Illness and Diabetes," Center for Health Care Research & Policy Methods Seminar Series, October 2014.
20. **Gunzler D** "Structural Equation Modeling for Analysis of Overlapping Symptoms of Co-occurring Conditions," Epsi 501 Graduate Seminar, September 2014.
21. **Gunzler D** "Overview of Linear Modeling of Longitudinal Data," School of Nursing, Goldbag Research Seminars, April 2014.

22. **Gunzler D** "Disentangling Multiple Sclerosis & Depression: An Adjusted Depression Score for Patient-Centered Care," Center for Health Care Research & Policy Methods Seminar Series, June 2013.
23. **Gunzler D** "Estimating Equations Approach for Distribution-free Longitudinal Mediation Analysis," Invited Speaker, *2013 Annual Joint Symposium: Cleveland Clinic Foundation, Case Western Reserve University and Ohio State University*, April 2013.
24. **Gunzler D** Bermel RA Perzynski A Lewis S Miller DM "Disentangling Multiple Sclerosis-Associated Fatigue and Depression: Methods to Improve Clinical Research and Care," Poster Session, MetroHealth Research Day 2012, September 2012.
25. **Gunzler D** Bleyer AJ Thomas RL O'Brien A Sattar A Iyengar SK Thomas C Sedor JR Schelling JR "Albuminuria and diabetic nephropathy family history predict early glomerular filtration rate (GFR) decline and mortality," Poster Session, MetroHealth Research Day 2012, September 2012.
26. **Gunzler D** "Untangling the Overlap in Multiple Sclerosis & Depression: An Adjusted Depression Score for Patient-Centered Care," Center for Health Care Research & Policy Methods Seminar Series, September 2012.
27. **Gunzler D** Sheffler LR Chae J "New Statistical Considerations for the Footdrop Study," Physical Medicine and Rehabilitation Seminar, May 2012.
28. **Gunzler D** "A Class of Distribution-free Models for Longitudinal Mediation Analysis," Epi 501 Graduate Seminar, December 2011.
29. **Gunzler D** "Structural Equation Modeling in Clinical Research: New Methods and Applications for EHR data, Multiple Sclerosis and Depression," Center for Health Care Research & Policy Methods Seminar Series, October 2011.
30. **Gunzler D** "A New Class of Structural Equation Models for Longitudinal Mediation Analysis and a Multivariate Predictive Model for Laparoscopic vs. Open Appendectomy," Center for Health Care Research & Policy Methods Seminar Series, February 2011.

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<http://www.chrp.org/gunzler/cv-gunzler.pdf>