

BRISA N. SÁNCHEZ
Curriculum Vitae

Department of Epidemiology and Biostatistics
Dornsife School of Public Health
Drexel University

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EDUCATION

- Ph.D. Biostatistics, Harvard University, Cambridge, MA, 2006
Dissertation: Structural equation and latent variable models: fitting, diagnostics, and applications to environmental epidemiology
Advisor: Professor Louise M. Ryan
- M.Sc. Biostatistics, minor in Environmental Health, Harvard School of Public Health, Boston, MA, 2003
- M.S. Statistics, University of Texas at El Paso, El Paso, TX, 2001
- B.S. Mathematics, minor in Physics, University of Texas at El Paso, El Paso, TX, 2000

ACADEMIC APPOINTMENTS

- Dornsife Professor of Biostatistics*, Department of Epidemiology and Biostatistics
Drexel University
January 2019-
- Adjunct Professor of Biostatistics*, Department of Biostatistics
University of Michigan
January 2019-
- Professor of Biostatistics*, Department of Biostatistics
University of Michigan
September 2018-December 2018
- Associate Professor of Biostatistics*, Department of Biostatistics
University of Michigan
September 2013- August 2018
- Associate Professor (Status Only)*, Division of Biostatistics
Dalla Lana School of Public Health,
University of Toronto, 2016-
- John G. Searle Assistant Professor* (2012-2013), *Assistant Professor* (2008-2012)
Department of Biostatistics
University of Michigan
- Assistant Research Professor*, Department of Biostatistics
University of Michigan, 2006-2008

OTHER PROFESSIONAL EXPERIENCE

- Teaching Assistant*, Department of Biostatistics, Harvard School of Public Health, 2001-2006
- Teaching Assistant*, Department of Biostatistics, Kitasato University, Tokyo, Japan, Spring 2005

Summer Exchange Student, Medical Epidemiology and Biostatistics Department, Karolinska Institute, Stockholm, Sweden, 2003

Teaching Assistant, Mathematics Department, University of Texas at El Paso, 2000-2001

Undergraduate Researcher, Mathematical and Theoretical Biology Institute, Cornell University, Ithaca NY, Summer, 1999 and 2000

Undergraduate Researcher, Models Institutions for Excellence Program, University of Texas at El Paso, 2000

HONORS

Featured in American Mathematical Society & Lathisms.org Hispanic Heritage Calendar, 2016

John G. Searle Assistant Professorship, 2012-2013

Teaching Award (Probability for Biostatistics Students), Harvard School of Public Health, 2006

Margaret F. Drolette Fund for International Students, Harvard School of Public Health, 2006

Howard Hughes Medical Institute Pre-doctoral Fellowship in the Biological Sciences, 2001-2006

Model Institutions for Excellence Research Award, University of Texas at El Paso, 2000

Partnership for Excellence in Teacher Education Scholar, U of Texas at El Paso 1997-2000

Outstanding Poster Presentation Award, Joint Mathematics Meetings, 2000

College of Science Banner Bearer, University of Texas at El Paso Commencement 2000

Outstanding Poster Presentation Award, Society for the Advancement of Chicanos and Native Americans in Science National Conference, 1999

PROFESSIONAL MEMBERSHIPS

International Biometrics Society, Eastern North American Region

American Statistical Association

Society for the Advancement of Chicanos and Native Americans in Science

American Public Health Association

PUBLICATIONS

§ Indicates Biostatistics PhD student

* Indicates student or trainee with significant mentoring on data analysis

Indicates senior/corresponding author

a) Publications which have received peer review

1. **Sánchez BN**, Butdz-Jørgensen E, Ryan LM, Hu H (2005), "Structural equation models: a review with applications to environmental epidemiology", *Journal of the American Statistical Association*, 100: 1443-1455.
2. Austin SB, Melly SJ, **Sánchez BN**, Patel A, Buka S, Gortmaker SL (2005), "Clustering of fast food restaurants around schools: a novel application of spatial statistics to the study of food environments", *American Journal of Public Health*, 95: 1575-1581.
3. Weave J, **Sánchez BN**, Calafat AM, Schettler T, Hu H, Hauser R (2006), "Exposure to phthalates in neonatal intensive care unit infants", *Environmental Health Perspectives*, 114: 1424-1431.
4. Majersik JJ, Smith MA, Zahuranec DB, **Sánchez BN**, Morgenstern LB (2007), "Population-based analysis of the impact of expanding the time window for acute stroke treatment", *Stroke*, 38: 3119-3120.

5. Lisabeth LD, Smith MA, **Sánchez BN**, Brown DL (2008), “Ethnic disparities in stroke and hypertension among women: the BASIC project”, *Am Journal of Hypertension*, 21: 778-783.
6. Lisabeth LD, Escobar JD, Dvonch JT, **Sánchez BN**, Majersik JJ, Brown DL, Cox MA, Morgenstern LB (2008), “Ambient air pollution and risk of ischemic stroke and transient ischemic attack: the brain attack surveillance in Corpus Christi project (BASIC)”, *Annals of Neurology*, 64: 53-59.
7. Mukherjee B, Ahn J, Lui I, **Sánchez BN** (2008), “Fitting stratified proportional odds models by amalgamating conditional likelihoods”, *Statistics in Medicine*, 27: 4950-4971.
8. Mujahid MS, Diez Roux AV, Shen M, Gowda D, **Sánchez BN**, Jacobs D, Shea S (2008), “Relationship between neighborhood environments and obesity in the multiethnic study of atherosclerosis (MESA)”, *American Journal of Epidemiology*, 167:1349-1357.
9. Cerdá M, **Sánchez BN**, Buka SL, Tracy M, Galea S (2008), “Estimating co-occurring behavioral trajectories within a neighborhood context: a case study of multivariate transition models for clustered data”, *American Journal of Epidemiology*, 168: 1190-1203.
10. Sánchez-Vaznaugh E, Kawachi I, Subramanian SV, **Sánchez BN**, Acevedo-Garcia, D (2008), “Differential effects of birthplace and length on BMI by education, gender and race/ethnicity”, *Social Science and Medicine*, 67: 1300-1310.
11. Eden SV, Meurer WJ, **Sánchez BN**, Lisabeth LD, Smith MA, Brown DL, Morgenstern LB (2008), “Gender and ethnic differences in subarachnoid hemorrhage”, *Neurology*, 71: 731-735.
12. **Sánchez BN**, Raghunathan TE, Diez-Roux AV, Zhu YY (2008), “Combining data from two surveys to assess the effects of neighborhood characteristics on health outcomes”, *Statistics in Medicine*, 27: 5745-5763.
13. Meurer WJ, **Sánchez BN**, Smith MA, Lisabeth LD, Brown DL, Morgenstern LB (2008), “Predicting ischemic stroke subtype from presenting blood pressure”, *Journal of Internal Medicine*, 265: 388-396.
14. **Sánchez BN**, Ryan LM, Budtz-Jørgensen E (2009), “An estimating equations approach for latent exposure models with longitudinal outcomes,” *Annals of Applied Statistics*, 3: 830-856.
15. Sánchez-Vaznaugh E, Kawachi I, Subramanian SV, **Sánchez BN**, Acevedo-Garcia, D (2009), “Do Socioeconomic gradients in BMI vary by race/ethnicity, gender, and birthplace?”, *American Journal of Epidemiology*, 169: 1102-1112.
16. **Sánchez BN**, Houseman A, Ryan LM (2009), “Residual-based diagnostics for latent variable models”, *Biometrics*, 65: 104-115.
17. Nie H, **Sánchez BN**, Wilker E, Weisskopf M, Schwartz J, Sparrow D, Hu H (2009), “Bone Lead and Endogenous Exposure in an Environmentally Exposed Elderly Population: the Normative Aging Study”, *Journal of Occupational and Environmental Medicine*, 51:848-857.
18. Brown DL, Feskanich D, **Sánchez BN**, Rexrode KM, Schernhammer ES, Lisabeth LD (2009), “Rotating night shift work and the risk of ischemic stroke”, *American Journal of Epidemiology*, 169: 1370-1377.
19. *Pilsner JR, Hu H, Ettinger A, **Sánchez BN**, Wright RO, Cantonwine D, Lazarus A, Lamadrid-Figueroa H, Mercado-García A, Téllez-Rojo MM, Hernandez-Avila M (2009), “Influence of prenatal lead exposure on genomic methylation of cord blood DNA”, *Environmental Health Perspectives*, 117: 1466-1471.
20. Morgenstern LB, Escobar J, **Sánchez BN**, Hughes BA, Zuniga B, Garcia N, Lisabeth LD (2009), “Fast Food and Neighborhood Stroke Risk”, *Annals of Neurology*, 66: 165-170.
21. Ranjit N, Diez-Roux AV, **Sánchez BN**, Seeman T, Shea S, Shrager S, Watson K (2009), “Association of salivary cortisol circadian pattern with cynical hostility: Multi-Ethnic Study of Atherosclerosis”, *Psychosom Med*, 71: 748-755.

22. Sánchez-Vaznaugh E, **Sánchez BN**, Baek J, Crawford P (2010), “Competitive food and beverage policies: are they influencing childhood overweight trends?”, *Health Affairs*, 29: 436-446.
23. Lisabeth LD, **Sánchez BN**, Escobar J, Hughes R, Meurer WJ, Zuniga B, Garcia N, Morgenstern LB (2010), “The Food Environment in a Mexican American Community”, *Health Place*, 16: 598-605.
24. Hajat A, Diez Roux A, Franklin TG, Seeman T, Shrager S, Ranjit N, Castro C, Watsong K, **Sánchez BN**, Kirschbaum C (2010), “Socioeconomic and race/ethnic differences in salivary cortisol in a population-based sample: The Multi-Ethnic Study of Atherosclerosis”, *Psychoneuroendocrinology*, 35: 932-943.
25. Skolarus LE, **Sánchez BN**, Morgenstern LB, Garcia NM, Smith MA, Brown DL, Lisabeth LD (2010), “Validity of proxies and correction for proxy use when evaluating social determinants of health in stroke patients”, *Stroke*, 41: 510-515.
26. Cantu-Brito C, Majersik JJ, **Sánchez BN**, Ruano A, Quiñones G, Arzola J, Morgenstern LB (2010), “Hospitalized Stroke Surveillance in the Community of Durango, Mexico. The Brain Attack Surveillance in Durango Study”, *Stroke*, 41: 878-884.
27. *Cantonwine D, Hu H, **Sánchez BN**, Lamadrid-Figueroa H, Smith D, Ettinger AE, Mercado-García A, Hernández-Avila M, Wright RO, Téllez-Rojo MM (2010), “Critical Windows of Fetal Lead Exposure: Adverse Impacts on Length of Gestation and Risk of Premature Delivery”, *J Occupational Environmental Medicine*, 52: 1106-1111.
28. *Pilsner JR, Hu H, Wright RO, Kordas K, Ettinger AS, **Sánchez BN**, Cantonwine D, Lazarus AL, Cantoral A, Schnaas L, Téllez-Rojo MM, Hernández-Avila M (2010), “Maternal MTHFR Genotype and Haplotype Predict Infant Neurodevelopment among a Lead Exposed Birth Cohort in Mexico City”, *American Journal of Clinical Nutrition*; 92: 226-234.
29. Zahuranec DB, Morgenstern LB, **Sánchez BN**, K. Resnicow K, White DB, Hemphill, JC III (2010), “Do Not Resuscitate Orders and Predictive Models after Intracerebral Hemorrhage”, accepted, *Neurology*; 7: 626-633.
30. Simpson JR, Zahuranec DB, Lisabeth LD, **Sánchez BN**, Skolarus LE, Mendizabal JE, Smith MA, Garcia NM, Morgenstern LB (2010), “Mexican Americans with Atrial Fibrillation have More Recurrent Strokes than Non-Hispanic Whites, *Stroke*, 41: 2132-2136.
31. *Cantonwine D, Hu H, Téllez-Rojo MM, **Sánchez BN**, Lamadrid-Figueroa H, Ettinger AS, Mercado-García A, Hernández-Avila M, Wright RO (2010), “HFE Gene Variants Modify the Association between Maternal Lead Burden and Infant Birth weight: A Prospective Birth Cohort Study in Mexico City, Mexico”, *Environmental Health*; 9: 43.
32. *Cantonwine D, Meeker JD, Hu H, **Sánchez BN**, Lamadrid-Figueroa H, Mercado-García A, Fortenberry GZ, Calafat AM Téllez-Rojo MM (2010), “Bisphenol A exposure in Mexico City and risk of prematurity: a pilot nested case control study”, *Environmental Health*, 9: 62.
33. Cantu-Brito C, Majersik JJ, **Sánchez BN**, Ruano A, Becerra-Mendoza D, Wing J, Morgenstern LB (2011), “Door-to-door capture of incident and prevalent stroke cases in Durango, Mexico: the Brain Attack Surveillance in Durango Study”, *Stroke*, 42: 601-606.
34. Hsia AW, Castle A, Wing JJ, Edwards DF, Brown NC, Higgins TM, Wallace JL, Koslosky SS, Gibbons MC, **Sánchez BN**, Fokar A, Shara N, Morgenstern LB, Kidwell CS (2011), “Understanding reasons for delay in seeking acute stroke care in an underserved urban population”, *Stroke*, 42: 1697-1701.
35. Hsia AW, Edwards DF, Morgenstern LB, Wing JJ, Brown NC, Coles R, Loftin S, Wein A, Koslosky SS, Fatima S, **Sánchez BN**, Fokar A, Gibbons MC, Shara N, Jayam-Trouth A, Kidwell CS (2011) “Racial disparities in tissue plasminogen activator treatment rate for stroke: a population based study,” *Stroke*, 42 (8): 2217-21.

36. **Sánchez BN**, Hu H, Litman H, Tellez-Rojo MM (2011), “Statistical Methods to Study Timing of Vulnerability with Sparsely Sampled Data on Environmental Toxicants”, *Environmental Health Perspectives*, 119: 409-415.
37. Svatikova A, Chervin RD, Wing JJ, **Sánchez BN**, Migda EM, Brown DL (2011), “Positional Therapy in Ischemic Stroke Patients with Obstructive Sleep Apnea”, *Sleep Medicine*, 12: 262-266.
38. Lisabeth LD, Morgenstern LB, Wing JJ, **Sánchez BN**, Zahuranec DB, Skolarus LE, Burke J, Kleerekoper M, Smith MA, Brown DL (2011) “Post-stroke Fractures in a Bi-ethnic Community”, *J of Stroke and Cerebrovascular Diseases*, 21(6): 471-477.
39. Burke JF, Brown DL, Lisabeth LD, **Sánchez BN**, Morgenstern LB (2011) “Enrollment of Women and Minorities in NIHDS Trials”, *Neurology*, 76: 354-360.
40. Dromerick AW, Gibbons MC, Edwards DF, Farr D, Giannetti ML, **Sánchez BN**, Shara NM, Fokar A, Trouth A, Kidwell CS (2011), “Preventing Recurrence of Thromboembolic Events through Coordinated Treatment in the District of Columbia”, *International Journal of Stroke*, 6: 454-460.
41. *White-Newsome JL, **Sánchez BN**, Parker EA, Dvonch JT, Zhang Z, O’Neill MS (2011), “Assessing heat-adaptive behaviors among older, urban-dwelling adults”, *Maturitas*, 70: 85-91.
42. Morgenstern LB, **Sánchez BN**, Skolarus LE, Garcia N, Risser JMH, Wing JJ, Smith MA, Zahuranec DB, Lisabeth LD (2011), “Fatalism, optimism, spirituality, depressive symptoms and stroke outcome: a population-based analysis”, *Stroke*, 12: 3518-3523.
43. *Afeiche M, Peterson KE, **Sánchez BN**, Hu H, Cantonwine D, Lamadrid-Figueroa H, Mercado-García A, Ettinger AS, Wright RO, Hernández-Avila M, Téllez-Rojo M (2011), “Prenatal Lead Exposure and Weight of 0 to 5 Year-Old Children in Mexico City”, *Environmental Health Perspectives*, 119: 1426-1441.
44. Cerdá M, Tracy M, **Sánchez BN**, Galea S (2011), “Comorbidity among depression, conduct disorder, and substance use from adolescence to young adulthood: examining the role of violence exposures”, *Journal of Traumatic Stress*, 24: 651-659.
45. DeSantis AS, DiezRoux AV, Hajat A, Golden SH, Jenny NS, **Sánchez BN**, Shea S, Seeman TE (2011), “Associations of salivary cortisol levels with metabolic syndrome and its components: the Multi-Ethnic Study of Atherosclerosis”, *J Clinical Endocrinology and Metabolism*, 96(11):3483-92.
46. **Sánchez BN**, Kang S, Mukherjee B (2012), “A Latent variable approach to studies of gene-environment interactions in presence of multiple correlated exposures”, *Biometrics*, 68: 466-476.
47. Skolarus LE, Morgenstern LB, **Sánchez BN**, Garcia NM, Smith MA, Brown DL, Lisabeth LD (2012) “The Prevalence of Spirituality, Optimism, Depression and Fatalism in a Bi-ethnic Stroke Population”, *Journal of Religion and Health*, 51(4):1293-305.
48. *White-Newsome JL, **Sánchez BN**, Jolliet O, Zhang Z, Dvonch JT, O’Neill MS (2012), “Climate change and health: Indoor heat exposure in vulnerable populations”, *Environmental Research*, 112: 20-27.
49. Sanchez-Vaznaugh EV, **Sánchez BN**, Rosas LG, Baek J, Egerert S (2012), “Physical Education Policies and Children’s Fitness: Does Compliance Matter?” *American Journal of Preventive Medicine*, 42: 452-459.
50. **Sánchez BN**, Sanchez-Vaznaugh EV, Uskila A, Baek J, Zhang L (2012) “Differential associations between the food environment near schools and childhood overweight by race/ethnicity, grade and gender”, *American Journal of Epidemiology*, 175: 1284-1293.
51. *Zhang A, Hu H, **Sánchez BN**, Ettinger AS, Park SK, Cantonwine D, Schnaas L, Wright RO,

- Lamadrid-Figueroa H, Tellez-Rojo MM (2012) “Association between Prenatal Lead Exposure and Blood Pressure in Female Offspring”, *Environmental Health Perspectives*, 120: 445-450.
52. Sealy-Jefferson S, Wing JJ, **Sánchez BN**, Brown DL, Meurer WJ, Smith MA, Morgenstern LB, Lisabeth LD, “Age- and ethnic-specific sex differences in stroke risk”, *Gender Medicine*, 9:121-128.
53. *Afeiche M, Peterson KE, **Sánchez BN**, Hu H, Cantonwine D, Lamadrid-Figueroa H, Mercado-García A, Ettinger AS, Wright RO, Hernández-Avila M, Téllez-Rojo M (2012), “Windows of lead exposure sensitivity, attained height, and BMI at 48 months”, *Pediatrics*, 160(6):1044-1049.
54. **Sánchez BN**, Wu M, Raghunathan TE, Diez-Roux A (2012), “Modeling the salivary cortisol profile in population research—The Multi Ethnic Study of Atherosclerosis”, *American Journal of Epidemiology*, 176 (10): 918-928.
55. Braun JM, Hoffman E, Schwartz J, **Sánchez BN**, Tellez-Rojo MM, Schnaas L, Hernandez-Avila M, Mercado-García A, Solano-Gonzalez M, Bellinger DC, Lanphear BP, Hu H, Wright RO (2012) “Identifying the window of greatest susceptibility to lead induced cognitive deficits in Mexican children”, *Neurotoxicology*, 33 (5): 1040-1047.
56. Zahuranec DB, **Sánchez BN**, Morgenstern LB, Wing J, Brown DL, Lisabeth LD, (2012) “Computed tomography findings for intracerebral hemorrhage have little incremental impact on post-stroke mortality prediction model performance”, *Cerebrovascular Diseases*, 34(1):86-92.
57. Brown DL, Conley KM, Resnicow K, Murphy J, **Sánchez BN**, Cowdery JE, Sais E, Lisabeth LD, Skolarus LE, Zahuranec DB, Williams GC, Morgenstern LB, (2012) “Stroke Health and Risk Education (SHARE): design, methods, and theoretical basis”, *Contemporary Clinical Trials*, 33(4):721-729.
58. Fletcher JJ, Morgenstern LB, Lisabeth LD, **Sánchez BN**, Skolarus LE, Smith MA, Garcia NM, Zahuranec DB, (2012) “A Population-Based Analysis of Ethnic Differences in Admission to the Intensive Care Unit after Stroke”, *Neurocrit Care*, 17 (3): 348-353.
59. Edwards DF, Menon R, Fokar A, Gibbons MC, Wing J, **Sánchez BN**, Kidwell CS (2013), “Recruitment of Black subjects for a natural history study of intracerebral hemorrhage”, *J Health Care for Poor and Underserved*, 24(1): 27-35.
60. Hajat A, Diez-Roux AV, **Sánchez BN**, Holvoet P, Lima JA, Merkin SS, Polak J, Seeman T, Wu M, (2013) “Examining the association between salivary cortisol levels and subclinical measures of atherosclerosis: the Multi-Ethnic Study of Atherosclerosis”, *Psychoneuroendocrinology*, 38 (7): 1036-1046.
61. O'Neill MS, Osornio-Vargas A, Buxton MA, **Sánchez BN**, Rojas-Bracho L, Castillo-Castrejon M, Mordhukovich IB, Brown DG, Vadillo-Ortega F (2012) “Air pollution, inflammation and preterm birth in Mexico City: Study design and methods”, *Science of The Total Environment*, 448: 79-83.
62. Manzano-León N, Quintana R, **Sánchez BN**, Serrano J, Vega E, Vázquez-López I, Rojas-Bracho L, López-Villegas T, O'Neill MS, Vadillo-Ortega F, De Vizcaya-Ruiz D, Rosas I, Osornio-Vargasa AR, (2013) “Variation in the composition and in vitro pro-inflammatory effect of urban particulate matter from different sites”, *Journal of Biochemical and Molecular Toxicology*, 27 (1): 87-97.
63. *Anderson OS, Peterson KE, **Sánchez BN**, Zhang Z, Mancuso P, Dolinoy DC, (2013) “Perinatal Bisphenol A Exposure Promotes Hyperactivity, Lean Body Composition, and Hormonal Responses Across the Murine Life-Course”, *Journal of the Federation of American Societies for Experimental Biology*, 27 (4): 1784:1792.
64. Morgenstern LB, Smith MA, **Sánchez BN**, Brown DL, Zahuranec DB, Garcia N, Kerber KA, Skolarus LE, Meurer WJ, Burke JF, Adelman EE, Baek J, Lisabeth LD, (2013) “Persistent

- stroke disparities despite declining incidence in Mexican Americans and non Hispanic Whites”, *Annals of Neurology*, 74 (6): 778-785.
65. Lisabeth LD, **Sánchez BN**, Baek J, Smith MA, Garcia N, Skolarus LE, Brown DL, Morgenstern LB, (2014) “Neurological, Functional and Cognitive Stroke Outcomes in Mexican Americans “, *Stroke*, 45(4): 1096-1101.
 66. [§]Baek J, **Sánchez BN**, Sanchez-Vaznaugh EV, (2014) “Hierarchical multiple informant models: examining food environment contributions to the childhood obesity epidemic”, *Statistics in Medicine*, 33(4): 662-674.
 67. Skolarus L, **Sánchez BN**, Levine D, Baek J, Kerber KA, Morgenstern LB, Smith M, Lisabeth LD, (2014) “Association of Body Mass Index and Mortality after Acute Ischemic Stroke”, *Circulation: Cardiovascular Quality and Outcomes*, 7(1) 64-69.
 68. Golden SH, [#]**Sánchez BN**, Wu M, Champaneri S, Diez Roux AV, Seeman T, Wand GS, (2013) “Relationship Between the Cortisol Awakening Response and Other Features of the Diurnal Cortisol Rhythm: The Multi-Ethnic Study of Atherosclerosis”, *Psychoneuroendocrinology*, 38 (11): 2720-2728.
#corresponding author.
 69. Golden SH, **Sánchez BN**, DeSantis AS, Wu M, Castro C, Seeman TE, Tadros S, Shrager S, Diez Roux AV, (2014) “Salivary Cortisol Protocol Adherence and Reliability by Socio-Demographic features: The Multi-Ethnic Study of Atherosclerosis”, *Psychoneuroendocrinology*, 43: 30-40.
 70. Vadillo-Ortega F, Osornio-Vargas A, Buxton MA, **Sánchez BN**, Rojas-Bracho L, Viveros-Alcaraz M, Castillo-Castrejon M, Beltran-Montoya J, Brown DG, O’Neill MS, (2014) “Air Pollution, Inflammation and Preterm Birth: A potential mechanistic link”, *Medical Hypothesis*, 82(2): 219-224.
 71. *Ranchod YK, Diez-Roux AV, Evenson RK, **Sánchez BN**, Moore K, (2014) “Longitudinal associations between neighborhood recreational facilities and change in recreational physical activity in the multi-ethnic study of atherosclerosis, 2000-2007”, *American Journal of Epidemiology*, 179 (3): 335-343.
 72. *Fortenberry GZ, Meeker JD, **Sánchez BN**, Barr DB, Panuwet P, Bellinger D, Schnaas L, Solano-González M, Ettinger AS, Hernandez-Avila M, Hu H, Tellez-Rojo MM (2014) “Urinary 3,5,6-trichloro-2-pyridinol (TCPY) in pregnant women from Mexico City: distribution, temporal variability, and relationship with child attention and hyperactivity”, *Int J Hyg Environ Health*, 217 (2-3):405-12.
 73. *Fortenberry GZ, Meeker JD, **Sánchez BN**, Bellinger D, Peterson KE, Schnaas L, Solano-González M, Ettinger AS, Hernandez-Avila M, Hu H, Tellez-Rojo MM (2014) “Paraoxonase I Polymorphisms and Attention/Hyperactivity in School-age Children from Mexico City, Mexico”, *Environmental Research*, 32:342-9.
 74. Lê-Scherban F, Albrecht SS, Osypuk TL, **Sánchez BN**, Diez Roux AV, (2014) “Neighborhood ethnic composition, spatial assimilation and change in body mass index over time among Hispanic and Chinese immigrants: Multi-Ethnic Study of Atherosclerosis (MESA)”, *Am J Public Health*, 104(11):2138-46.
 75. *Faulk C, Barks A, **Sánchez BN**, Zhang Z, Anderson OS, Peterson KE, Dolinoy D, (2014) “Perinatal Lead (Pb) Exposure Results in Sex-Specific Effects on Food Intake, Fat, Weight, and Insulin Response across the Murine Life-Course”, *PLoS One*, 9(8):e104273.
 76. De Lott LB, Lisabeth LD, **Sánchez BN**, Morgenstern LB, Smith MA, Garcia NM, Chervin R, Brown DL, (2014) “Prevalence of pre-stroke sleep apnea risk and short or long sleep duration in a bi-ethnic stroke population”, *Sleep Medicine*, 15(12):1582-5.

77. [§]Tao Y, **Sánchez BN**, Mukherjee B, (2015) “Latent Variable Models for Gene-Environment Interactions in Longitudinal Studies with Multiple Correlated Exposures”, *Statistics in Medicine*, 34(7):1227-41.
78. Morgenstern LB, Zahuranec DB, **Sánchez BN**, Becker KJ, Geraghty M, et al. (2015) “Full medical support for intracerebral hemorrhage”. *Neurology*, 84(17):1739-44.
79. *Rivera-González LO, Zhang Z, **Sánchez BN**, Zhang K, Brown DG, Rojas-Bracho L, Osornio-Vargas A, Vadillo-Ortega F, O’Neill MS “An assessment of air pollution exposure metrics in Mexico City, Mexico”, *Journal of the Air & Waste Management Association*, 65(5):581–591.
80. Zahuranec DB, Lisabeth LD, **Sánchez BN**, Smith MA, Brown DL, et al. (2014) Intracerebral hemorrhage mortality is not changing despite declining incidence. *Neurology* 82(24):2180-6.
81. Morgenstern LB, Brown DL, Smith MA, **Sánchez BN**, Zahuranec DB, et al. (2014) Loss of the Mexican American survival advantage after ischemic stroke. *Stroke* 45(9):2588-91.
82. Goodrich JM[†], **Sánchez BN**^{†#}, Dolinoy DC, Zhang Z, Hernández-Ávila M, et al. (2015) Quality control and statistical modeling for environmental epigenetics: a study on in utero lead exposure and DNA methylation at birth. *Epigenetics*, 10(1):19-30.
[†]co-first author; [#]corresponding author.
83. Basu N, Tutino R, Zhang Z, Cantonwine DE, Goodrich JM, Somers EC, Rodriguez L, Schnaas L, Solano M, Mercado A, Peterson K, **Sánchez BN**, Hernández-Avila M, Hu H, Téllez-Rojo MM (2014) “Mercury levels in pregnant women, children, and seafood from Mexico City.” *Environmental Research*, 135:63-9.
84. Wang X, **Sánchez BN**, Golden SH, Shrager S, Kirschbaum C, et al. (2014) “Stability and predictors of change in salivary cortisol measures over six years: MESA”, *Psychoneuroendocrinology* 49:310-20.
85. Wing JJ, Baek J, **Sánchez BN**, Lisabeth LD, Smith MA, Morgenstern LB, Zahuranec DB (2014) “Differences in initial stroke severity between Mexican Americans and non-Hispanic whites vary by age: the Brain Attack Surveillance in Corpus Christi (BASIC) project”, *Cerebrovasc Dis.* 2014;38(5):362-9.
86. Rosas LG, Sanchez-Vaznaugh EV, **Sánchez BN** (2015). “Nativity, US Length of Residence, and BMI Among Diverse Asian American Ethnic Groups” *J Immigr Minor Health*, 17(5):1496-503.
87. *Christine, PJ, Auchincloss AH, Bertoni AG, Carnethon MR, **Sánchez BN**, Moore K, Adar S, Horwich TB, Watson, MD KE, Diez Roux AV (2015) “Longitudinal relationships between neighborhood physical and social environments and incident type 2 diabetes mellitus: the Multi-Ethnic Study of Atherosclerosis (MESA)” *JAMA Internal Medicine*, 175(8):1311-20.
88. He Z, Payne EK, Mukherjee B, Lee S, Smith JA, Ware EB, **Sánchez BN**, Seeman TE, Kardia SLR, Diez Roux AV (2015) “Association between stress response genes and features of diurnal cortisol curves in the Multi-Ethnic Study of Atherosclerosis: a new multi-phenotype approach for gene-based association tests”. *PLoS ONE*, 10(5):e0126637.
89. *Xu J, Hu H, Wright R, **Sánchez BN**, Schnaas L, Park SK, Martínez S, Hernández-Avila M, Téllez-Rojo MM, Wright RO, (2015) “Prenatal lead exposure modifies the impact of maternal self-esteem on children's inattention behavior”, *Pediatrics*, 167(2):435-41.
90. Sanchez-Vaznaugh EV, **Sánchez BN**, Crawford PB, Egerter S (2015) “Association Between Competitive Food and Beverage Policies in Elementary Schools and Childhood

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b) Books or Book Chapters

1. National Research Council (2013). Potential Health Risks to DOD Firing-Range Personnel from Recurrent Lead Exposure. National Academy Press: Washington DC.
2. Committee on National Statistics (2017). Improving Motor Carrier Safety Measurement. National Academy Press: Washington DC.

c) Letters to the Editor or Editorials

1. Ware JH, **Sánchez BN** (2005), “Bias in cross-sectional and longitudinal estimates of pulmonary function decline: a different perspective”, *COPD: Journal of Chronic Obstructive Pulmonary Disease*, 2: 393-394.
2. Morgenstern LB, **Sánchez BN** (2014), “Tissue is the issue in transient ischemic attack stroke”, *Annals of Neurology*; 75 (2): 171:172.
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4. *Rudolph KE, **Sánchez BN**, Stuart EA, Greenberg B, Fujishiro K, Wand GS, Shrager S, Seeman T, Diez Roux AV, Golden SH (2016). Response to letter regarding article, “Job strain and the cortisol diurnal cycle in the Multi Ethnic Study of Atherosclerosis: accounting for between- and within-day variability”, *Am J Epidemiology*, 183(12): 1172-1173.

d) Selected manuscripts submitted for peer review (with leading role)

§ *Biostatistics PhD student*

#corresponding author

1. §Wu M, **#Sánchez BN**, Raghunathan TE, Diez-Roux A, “Efficient Selection of Sampling Times for Salivary Cortisol Profiles--The Multi Ethnic Study of Atherosclerosis”, *in revision*.

e) Refereed abstracts presented at professional meetings (only first author are listed)

- **Sánchez BN**, Hu H, Litman H, Tellez-Rojo MM, “Statistical methods for windows of vulnerability research”, International Society of Environmental Epidemiology Meeting, 2008.
- **Sánchez BN**, Raghunathan TE, Diez-Roux AV, Zhu YY, “Combining data from two surveys

to assess the effects of neighborhood characteristics on health outcomes”, Society for Epidemiologic Research Conference, 2008.

- **Sánchez BN**, Skolarus LE, Morgenstern LB, Garcia N, Smith MA, Brown DL, Lisabeth LD “Methods to Correct for Proxy Use in Stroke Outcome Studies”, International Stroke Conference, 2010.
- **Sánchez BN**, Lisabeth L, Zahuranec D, Cox MA, Garcia N, Morgenstern LB, Long Term Stroke Outcome and Caregiving Among Mexican Americans (MA) and Non-Hispanic Whites (NHW): The Population-Based Brain Attack Surveillance in Corpus Christi (BASIC) Study, International Stroke Conference, 2014

f) Invited Talks

- *Measurement Challenges in Built Environment Health Effects*, Biostatistics Department, Johns Hopkins University, November 2019
- *Novel tests of Measurement Invariance in Factor Models with Applications to Environmental Epidemiology*, The Biometrics Society, Eastern North American Region, Atlanta, GA March 2018.
- *How do you measure that? Biostatistical applications and methods development for epidemiology and population health studies*, Drexel University, Philadelphia, PA Feb 2018.
- *Statistical Models to Assess Associations between the Built Environment and Health*, Brown University, Providence, RI 2017
- *Success in Interdisciplinary Research*, Joint Statistical Meetings 2017
- *Latent variable models in environmental health*, Universidad Autónoma de la Mixteca, Oaxaca, México (canceled, July 2017)
- *Methodological challenges in children's environmental health*, 50th anniversary of the Division of Intramural Population Health Research at the Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD), 2017
- *Statistical Models to Assess Associations between the Built Environment and Health*, University of Chicago, Chicago, IL 2017
- *Linking built environments to cardiovascular disease risk factors*, Statistics workshop on multicentre longitudinal and survival data analysis in medical research, South Africa (Dec 2017, declined)
- *The Extraordinary Power of Collaboration and Team Science*, Invited panel, Joint Statistical Meetings, Chicago, IL 2016
- *Geographic Variation in Race/Ethnic Disparities in Childhood Obesity*, Center for Social Epidemiology and Population Health, University of Michigan Ann Arbor, 2015.
- *The Role of Biostatistics in Collaborative Studies: The BASIC Project*, Neurology Department Grand Rounds, University of Michigan Ann Arbor, 2015.
- *Uncovering geographical clustering of childhood obesity and childhood obesity disparities using hierarchical spatial models*, American Public Health Association, San Francisco, CA 2012.
- *Dynamical systems models of multilevel interventions for stroke prevention in minority populations*, National Conference of the Society for the Advancement of Chicanos and Native Americans in Science, Seattle, WA, 2012.
- *Shrinkage Estimators for Latent Variable Models in the Presence of Measurement Model Misspecification*, Joint Statistical Meetings, San Diego, CA, 2012.
- *Race/ethnicity, gender and grade modify the association between the food environment near schools and overweight*, School of Social Work, University of Texas, Austin TX, 2012.

- *Differential association between the food environment near schools and overweight by race/ethnicity*, Society for the Advancement of Chicanos and Native Americans in Science National Conference, San Jose, CA, 2011.
 - *Statistical methods to characterize person-level features of the cortisol response profile in population research*, American Public Health Association Conference, 2011.
 - *Differential association between the food environment near schools and overweight by race/ethnicity*, San Francisco State University, 2011
 - *Race/ethnic inequalities in childhood obesity trends: How are 'competitive' food and beverage policies influencing them?* Washington University at St Louis, 2010
 - *Methods to characterize person-level features of the cortisol response profile in population research*, Facilitating Interdisciplinary Research Symposium: Methodological and Technological Innovation in the Behavioral and Social Sciences, National Institutes of Health Bethesda, MD, 2009
 - *Statistical methods to characterize person-level features of the cortisol response profile in population research*, Society for the Advancement of Chicanos and Native Americans in Science National Conference, Salt Lake City, UT, 2008.
 - *Residual Based Diagnostics for Structural Equation Models*. Bowling Green University, 2007.
 - *Residual Based Diagnostics for Structural Equation Models*. Arizona State University, Tempe AZ, 2007.
 - *Stroke Risk in Mexican Americans: the BASIC project*. Society for the Advancement of Chicanos and Native Americans in Science National Conference, Kansas City, MO, 2007
 - *Residual-based Diagnostics for Structural Equation Models*, The Third Erich L. Lehmann Symposium, Houston, TX, 2007
 - *Residual-based Diagnostics for Structural Equation Models*, 2006 Stat Fest, El Paso TX
 - *An Estimating Equations Approach to fit Latent Exposure Models with Longitudinal outcomes*.
 - University of Texas at El Paso, El Paso, TX, 2006.
 - Arizona State University, Tempe AZ, 2006.
 - University of Texas School of Public Health, Houston, TX, 2006.
 - University Michigan, School of Public Health, Ann Arbor, MI 2006.
 - *Applications of Structural Equation Models to Environmental Epidemiology*. International Biometrics Conference, Satellite Workshop, Sydney, Australia, 2004.
 - *Applying Missing Covariate Methods to Large-Scale Cohort Studies in Cancer Epidemiology* Karolinska Institute, Sweden, Dept. of Medical Epidemiology and Biostatistics, 2003.
- f) Other (selected) Talks
- *Uncovering geographical clustering of childhood obesity and childhood obesity disparities using hierarchical spatial models*, Robert Wood Johnson Foundation New Connections Symposium, Princeton NJ, 2013
 - *Salivary cortisol as a predictor of health outcomes*, The Biometrics Society, Eastern North American Region meeting, 2012
 - *A latent variable approach to study gene \times environment interactions in the presence of multiple correlated exposures*, The Biometrics Society, Eastern North American Region meeting, 2011
 - *Residual Based Diagnostics for Structural Equation Models*. The Biometrics Society, Eastern

- North American Region meeting, 2007.
- *Application of SEM Residual Diagnostics to Environmental Epidemiology*. Joint Statistical Meetings, 2007.
 - *An Estimating Equations Approach to fit Latent Exposure Models with Longitudinal Outcomes*. The Biometrics Society, Eastern North American Region meeting, 2006.
 - *An Application of Structural Equation Models: Fetal Lead Exposure and Neurodevelopment*. Society for Industrial and Applied Mathematics National Conference, Boston, MA, 2005.
 - *Model Misspecification and Goodness of Fit in Latent Variable and Structural Equations Models*. Joint Statistical Meetings, 2005.
 - *SEMs Applied to a Study of Lead Exposure and Neurodevelopment*, International Biometrics Conference, 2004.
 - *Are Fast Food Restaurants Clustered Around Schools in Chicago?* Harvard/Cornell Environmental Statistics Symposium, Sheffield, MA 2003.
 - *Probability of False Prostate Cancer Diagnosis*.
Society for Industrial and Applied Mathematics National Conference, 2002.
Joint Mathematics Meetings, 2000.
Society for the Advancement of Chicanos and Native Americans in Science National Conference, 1999.

TEACHING

a) Classroom Teaching (Primary instructor unless noted)

- | | |
|-------------|---|
| June 2004 | Workshop: <i>Structural Equations Models in Epidemiology</i> , Metals Epidemiology Research Group, Harvard School of Public Health |
| Summer 2007 | Biostatistics 513: <i>Applied Regression Analysis for Public Health Studies</i> , University of Michigan, On Job/On Campus Executive Masters Program |
| August 2007 | Short course: <i>Structural Equation Models with Latent Variables</i> . National Institute of Public Health of Mexico, Cuernavaca, Morelos, MX |
| Feb 2008 | “Smoothing methods” lecture in course: <i>Advanced Regression Analysis in Environmental Epidemiology</i>
(Primary instructor: Sung Park, U of M, EHS department) |
| Feb 2009 | |
| Feb 2010 | |
| Feb 2011 | |
| Feb 2012 | |
| Feb 2014 | |
| Feb 2015 | |
| Feb 2017 | |
| Feb 2018 | |
| Winter 2009 | Biostatistics 513: <i>Applied Regression Analysis for Public Health Studies</i> , |
| Winter 2010 | University of Michigan |
| Winter 2011 | |
| Winter 2012 | |
| Winter 2011 | Biostatistics 581: <i>Statistical Modeling</i> |
| Winter 2018 | University of Michigan, On Job/On Campus Executive Masters Program |
| Winter 2012 | Biostatistics 699: <i>Analysis of Biostatistical Investigations</i> |
| Winter 2018 | University of Michigan |

Fall 2012	Biostatistics 664: Latent Variable Models University of Michigan
Fall 2013	Biostatistics 650: Linear Regression
Fall 2014	University of Michigan
Fall 2016	
Fall 2014	Biostatistics 600: Introduction to Biostatistics
Fall 2015	University of Michigan
Fall 2017	
March 2017	Invited Workshop: “ <i>Exploring Nonlinear Relationships - Tips, Tricks and Techniques for Supporting Clinical and Population Thresholds</i> ” Center for Integrative Approaches to Health Disparities, UM

b) Doctoral Student Advising (Chair)

- Meihua Wu, Department of Biostatistics, September 2012
A dissertation paper won 2011 ENAR Distinguished Paper Award
Senior Biostatistician, Gilead Sciences, Inc.
- Jonggyu Baik, Department of Biostatistics, 2014
Postdoctoral fellow, Department of Epidemiology and Department of Biostatistics,
University of Michigan
- Zhenzhen Zhang, Department of Biostatistics, 2015
Postdoctoral fellow, Department of Nutrition and Department of Biostatistics,
University of Michigan
- Adam T. Peterson (co-chair: Trivellore Raghunathan), Expected 2021
Department of Biostatistics, University of Michigan
- Jung Y. Won (co-Chair with Michael Elliot), Expected 2021
Department of Biostatistics, University of Michigan

c) Doctoral Thesis Committee Member

- Linette Rodriguez, Department of Epidemiology, University of Michigan, Chair: Sioban Harlow
- Lia Smith Florey, Department of Epidemiology, University of Michigan, Chair: Mark Wilson
- Myriam Afieche, Department of Environmental Health Sciences, Chair: Howard Hu
- Ning Smith, Department of Biostatistics, Chair: Jeremy Taylor
- Bin Zhu, Department of Biostatistics, Chair: Jeremy Taylor
- Jalonne L. White-Newsome, Environmental Health Sciences Department, Chair: Marie O'Neill
- Luis Rivera-Gonzales, Department of Environmental Health Sciences, Chair: Marie O'Neill
- Gamola Fortenberry, Department of Environmental Health Sciences, Chair: John Meeker
- Siyang Huang, Department of Environmental Health Sciences, Chair: Howard Hu
- Yamini Kasavan, Department of Epidemiology, Chair: Ana Diez-Roux
- Olivia Anderson, Department of Environmental Health Sciences, Chair: Dana Dolinoy
- Tiffany Yang, Department of Environmental Health Sciences, Chair: Karen Peterson
- Melissa Smarr, Department of Environmental Health Sciences, Chair: Marie O'Neill
- Mozhgon Rajaei, Department of Env. Health Sciences, co-Chairs: Nil Basu, Tom Robbins
- Deena Thomas, Department of Env. Health Sciences, co-Chairs: Howard Hu, Karen Peterson

Paul Christine, Department of Epidemiology, co-Chairs: Ana Diez-Roux, Sarah Adar
 Ryan Malosh, Department of Epidemiology, co-Chairs: Alison Aiello, Arnold Monto
 Jeffrey Wing, Department of Epidemiology, Chairs: Lynda Lisabeth
 Nicole Kasper, Department of Environmental Health Sciences, Chair: Karen Peterson
 Miatta Buxton, Department of Epidemiology, co-Chairs: Marie O'Neill, Betsy Foxman
 Rebecca Tutino, Department of Env. Health Sciences, co-Chair: Nil Basu, Karen Peterson
 Rong Xia, Department of Biostatistics, co-Chairs: Thomas Braun, Mousumi Banarjee
 Nicole Novak, Department of Epidemiology, co-Chairs: Philippa Clark, Ana Diez-Roux
 Jamie Liu, Department of Environmental Health Sciences, Chair: Karen Peterson
 Kevin Bohlenke, Department of Environmental Health Sciences, Chair: Chuanwu Xi
 Amanda Onwuka, Dept. of Epidemiology, co-Chairs: Carlos Mendes de Leon, Ana Diez-Roux
 Sophie Yu-Pu Chen, Dept of Biostatistics, Chair: Alex Tsodikov
 Jessica Wu, Dept. of Nutritional Sciences, Chair: Karen Peterson
 Vincent Tan, Dept. of Biostatistics, Chair: Michael Elliott
 Lu Tang, Dept. of Biostatistics, Chair: Peter Song

d) Biostatistics Mentor for K23 Awards

Lesli Skolarus, MD, Neurology UM (2011-2016)

Darin Zahuarenec, MD, Neurology UM (2011-2016)

e) Academic Advisees (AA) or Graduate Student Research Assistants (GSRA)

At Drexel University

Current:

Kelsey Alexovitz (GSRA)

At University of Michigan

Current:

Adam Peterson (GSRA)

Jung Yeon Won (GSRA)

Previous:

Nuha Mahmood (RA)

David Lim (RA)

Han Fu (GSRA)

Fatema Shafi Khorasani (GSRA)

Yuqi Zhai (RA)

Andrew Whiteman (GSRA)

Maria Tomasso (GSRA)

Jonathan Skaza (GSRA)

Raymond Luu (RA)

Meihua Wu (AA, GSRA)

Shenchung Kong (GSRA)

Tahmeed Tureen (RA)

Jonggyu Baek (AA, GSRA)

Zhenzhen Zhang (AA, GSRA)

Shi Li (AA)

Teng Sun (AA)

Bao Qui Tran (AA)

Nadia Akhtar (AA)

Trevano Dean (AA)

Leah Comment (AA, GSRA)

George Harris (AA)

Evan Reynolds (AA)

Academic advisor for 52 Master's Students (cohort advisor), 2017-2018

f) Other Student Supervision

- Winter 2018- Nuha Mahmood (UM SPH undergraduate)
- Summer 2012 Sarah Abraham (UM undergraduate research assistant).
- Winter 2009 Lindy Zhang (University of Michigan's Undergraduate Research Opportunity Program. Lindy co-authored a paper with me).
- Summer 2005 Supervised a team of undergraduate students conducting research in the Summer Program in Quantitative Sciences, Harvard School of Public Health

SERVICE

a) International service

- Member, Nominations Committee for the International Biometrics Society, 2017-2019
- Member, Council of the International Biometrics Society, ENAR representative, 2017-
- Ad-hoc grant reviewer: UK, Medical Research Council, 2019
- Ad-hoc grant reviewer: Israel Science Foundation, 2017
- Ad-hoc grant reviewer: Israel Science Foundation, 2014

b) National service

- Member:* Data Monitoring and Oversight Committee (DMOC) for the SOL-Ojos Ancillary study of the Hispanic Community Health Study/Study of Latinos (HCHS/SOL), National Institutes of Health, 2019-2024
- Grant reviewer:* Special Emphasis Panel for PAR 15-346, Time-Sensitive Obesity Policy and Program Evaluation, 2017, National Institutes of Health
- Committee Member:* Committee on National Statistics of the National Academy of Sciences to *Evaluate the Safety Measurement System (SMS) of the Compliance, Safety, Accountability of the Federal Motor Carrier Safety Administration*, 2016-2017
- Grant reviewer:* Special Emphasis Panel, SBIB-PSE D (51), 2015, National Institutes of Health
- Grant reviewer:* Special Emphasis Panel, ZRG1 PSE-D (05), 2015, National Institutes of Health
- Committee Member:* National Research Council Committee on the Health Effects of Lead Exposure Among Department of Defense Personnel, 2012-2013

c) Service to the profession at large

Editorial Service

Book Reviews Editor: Biometrics, 2019-2021

Associate Editor: Statistics in Medicine, 2011-2018

Associate Editor: *Journal of the Royal Statistical Society, Series C*, 2013-2016

Journal Referee: Health and Place, Environmental and Ecological Statistics, Statistics in Medicine, Biometrics, Annals of Epidemiology, Environmental Health, Journal of Dental Research, Environmental Health Perspectives, Journal of Environmental Planning, series A, The American Statistician, American Journal of Epidemiology, Pediatrics, Neurology, Journal of Multivariate Analysis

Leadership in conference organization

Associate Program Chair, Joint Statistical Meetings 2021

Chair, Organizing committee for the 2017 Workshop for Junior Biostatisticians in Health Research, Eastern North American Region of The International Biometrics Society

Program co-Chair: 2015 Spring Meeting, Eastern North American Region of The International Biometrics Society

Organizer: Environmental Statistics Workshop, University of Michigan, 2014

Program Planner: Applied Public Health Statistics Section Program, American Public Health Association National Conference, 2012-2013

Organizer: Statistical Approaches in Children's Environmental Health and Nutrition Workshop, University of Michigan, 2012

Co-Organizer: Environmental Statistics Day symposium, University of Michigan, 2011

Leadership Roles in Professional Organizations (*=elected roles)

**Secretary*: Eastern North American Region (ENAR) of The International Biometrics Society, 2019-2020

**Secretary*: Caucus for Women in Statistics, 2020

**Regional Committee (RECOM) Member*: Eastern North American Region of The International Biometrics Society, 2016-2018

**Section Past Chair*: Applied Public Health Statistics Section, American Public Health Association, 2014-2015

Nominations Committee Chair: Applied Public Health Statistics Section, American Public Health Association, 2014-2015

Member, ENAR Nominations committee, 2013-2015

**Section Chair*: Applied Public Health Statistics Section, American Public Health Association, 2013-2014

Regional Advisory Board (RAB) Member: Eastern North American Region of The International Biometrics Society, 2011-2014

**Section Chair-elect*: Applied Public Health Statistics Section, American Public Health Association, 2012-2013

**Section Councilor*: Statistics Section, American Public Health Association, 2008-2012

Other service

Mentor: JSM Diversity Workshop and Mentoring Program, 2019

Speaker: Journey lecture "Contextual influences on life decisions...and public health", UM Big Data Summer Institute, 2017 and 2018

External Advisory Committee Member, Research for Undergraduates Summer Institute in Statistics RUSIS@OSU, 2017

Member: 2017 Spiegelman Award Committee, Applied Public Health Statistics Section, American Public Health Association

Speaker: “The role of Biostatistics in Public Health”, University of Michigan Future Public Health Leaders Program, 2017

Speaker: Journey lecture “Contextual influences on life decisions...and public health”, UM Big Data Summer Institute, 2016

Speaker: Journey lecture “Contextual influences on life decisions...and public health” in UM Big Data Summer Institute, 2015

Organizer: “New Statistical Methods in the Environmental Health Sciences” invited session, ENAR 2015

Organizer and Chair: “Mediation and Interaction: Theory, Practice and Future Directions” invited session, ENAR 2015

Chair: “Inside the Biostatistics Collaborative Process” invited session, ENAR 2014

Judge: RAB Poster Competition ENAR 2014

Mentor and Panelist: JSM Diversity Workshop and Mentoring Program, 2012

Judge: RAB Poster Competition ENAR 2012

Chair: Statistical Approaches for Studying Synergism of Genes and Environment in Epidemiologic Studies” invited session, Joint Statistical Meetings, 2009.

Speaker: “Statistical Perspectives on Health Disparities in the Hispanic Population” session, Society for the Advancement of Chicanos and Native Americans in Science National Conference, 2008; session goal was to expose undergraduate students to Biostatistics.

Chair: “Statistics Student Papers” session, American Public Health Association National Conference, 2008.

Chair: “Functional Data Analysis” session, Eastern North American Region of the International Biometrics Society Conference, 2008.

Organizer and Chair: “Success in Graduate School” session, Society for the Advancement of Chicanos and Native Americans in Science National Conference, 2006.

Panelist: “Woman to Woman in the Sciences and Engineering: Strategies for Success”, University of Michigan, 2006.

Faculty Co-Advisor: “Statistics in the Community” student organization, University of Michigan, 2008.

Panelist: 2006 StatFest, El Paso, TX

Organizer and Chair: “Quantitative Sciences in Public Health: Panel Discussion” session, Society for the Advancement of Chicanos and Native Americans in Science National Conference, 2005.

Diversity Workshop Panelist: International Biometrics Society, Eastern North American Region meeting, 2003.

d) Drexel University Service (2019-)

University

Sabbatical Leave Committee, Dornsife School of Public Health Representative, 2019-2020

Dornsife School of Public Health

Executive Committee of the Faculty (elected member), 2019-2021

Appointment, Promotion and Tenure Committee, member, 2019-2021

Department of Epidemiology and Biostatistics

Biostatistics Graduate Program Committee, 2019-

Chair, Biostatistics Qualifying Exam sub-Committee, 2020-

e) University of Michigan Service (2006-2018)

University

University of Michigan's Senate Assembly Member (elected), 2016-2018

Provost Faculty Advisory Committee Member, 2015-2017

School of Public Health

Executive Committee (elected), 2017-2019

Department of Biostatistics

Diversity Equity and Inclusion Committee, 2017-2018

Academic Advisor for 2017 Masters Cohort (52 students, with Prof. Tim Johnson)

Chair, Research Track Faculty Affairs Committee, 2016-2017

SPH 75th Anniversary Celebration Committee

Admissions Committee, Biostatistics Department, 2009-2011, 2013-2015

Search Committee, Biostatistics Department, 2008-2009, 2009-2010, 2010-2011, 2017-2018

Student recruitment representative, Graduate School Fair, Joint Mathematics Meeting, San Francisco, CA, 2010

Student Affairs Committee, Biostatistics Department, 2008-2009, 2009-2012

Search Committee, Social Epidemiology Faculty Position, 2009-2010

Computing and Web Committee, Biostatistics Department, 2007-2008

ACTIVE GRANT SUPPORT AS PI

R01 HL131610 (PI: Sánchez)	02/15/17-01/31/22
Characterizing health impacts of built environment features using complex data	
Grant's 5yr Total Cost: \$3,446,153	
R01 HL136718 (MPIs: Sanchez-Vaznaugh/ Sánchez)	03/01/18-01/31/23
Influence of school nutrition policies and food environments on childhood obesity disparities	
Total Cost of Subcontract: \$953,677	
NSF (PI: Elizabeth F.S. Roberts; co-PIs: Sánchez , Wigginton, Kerkez)	09/01/17-08/31/22
Neighborhood Environments as Socio-Techno-bio Systems: Water Quality, Public Trust,	

and Health in Mexico City
Grant's 4yr Total Cost: \$999,089

PRIOR GRANT SUPPORT WITH SPECIFIC LEADERSHIP ROLE

2P60MD002249-06 (PI: Mendes de Leon/Diez-Roux, **Role: Research Core co-Leader**)
NIH 09/01/12-08/31/17

Michigan Center for Integrative Approaches to Health Disparities (CIAHD)

Elimination health disparities will require approaches that recognize their multilevel causes. Identifying these causes requires interdisciplinary approaches that integrate social and biological factors and that bridge across research, training, and community engagement. Through its activities CIAHD will enhance our understanding of cardiovascular health disparities and our ability to intervene to eliminate them.

P20 ES018171 (PI: Peterson; **Role: Biostatistics Core Leader**) 7/01/10-6/30/13

Perinatal Exposures, Epigenetics, Child Obesity and Sexual Maturation

The major goal of this NIEHS/EPA Formative Children's Environmental Health and Disease Prevention Center is to study the complex interactions among perinatal environmental exposures, epigenetic regulation, childhood growth and the development of obesity and the tempo of sexual maturation. Role: Biostatistics Core Leader

1-P30-ES-017885-01-A1 (Loch-Carusio; **Role: Core Co-Leader**) 4/15/11 to 3/31/15
NIH

Lifestage Exposures and Adult Disease

To promote translational research using novel multi-disciplinary approaches to understand the impact of environmental exposures on adult chronic disease through mechanisms involving epigenetic modifications during vulnerable stages of life.