

Travis Michael Loux

On the web: [SLU faculty site](#) | [Personal site](#)

RESEARCH INTERESTS

Causal Inference and observational studies; missing data; statistics education.

ACADEMIC POSITIONS

- 2018-present: Associate Professor, Department of Epidemiology and Biostatistics, Saint Louis University
- 2017-2018: Assistant Professor, Department of Epidemiology and Biostatistics, Saint Louis University
- 2013-2017: Assistant Professor, Department of Biostatistics, Saint Louis University
- 2011-2013: Visiting Assistant Professor, Department of Applied Probability and Statistics, University of California, Santa Barbara.
- 2010-2011: Adjunct Faculty, Department of Mathematics and Statistics, Sacramento City College.
- 2008-2011: Associate Instructor, Department of Statistics, University of California, Davis.

EDUCATION

- **Doctor of Philosophy, Statistics**, University of California, Davis. December 2011.
Dissertation: Causal Inference and Estimation of the Odds Ratio. Advisor: Dr. Christiana Drake.
- **Master of Science, Statistics**, University of California, Davis. June 2008.
- **Bachelor of Science, Mathematics**, University of Washington. June 2006.
Minors in statistics and law, societies, and justice.

PUBLICATIONS

Student co-authors indicated by *

- **Loux, T.**, Davy, O.*. “Adjusting Published Estimates for Exploratory Biases Using the Truncated Normal Distribution.” *The American Statistician*. doi: 10.1080/00031305.2020.1775700
- Chiu, Y., Neel, A., **Loux, T.** “Acoustic characteristics in relation to intelligibility reduction in noise for speakers with Parkinson’s disease.” *Clinical Linguistics & Phonetics*. doi: 10.1080/02699206.2020.1777585
- Turner, J.A.*, Rebmann, T., **Loux, T.M.**, Tao, D., Garza, A. “First Responders’ and Librarians’ Intention to Use Web-Based Resources for Response Information During Biological, Chemical, and Radiological Terrorism Events.” *Journal of Homeland Security and Emergency Management*. doi: 10.1515/jhsem-2019-0030
- Rebmann, T., Charney, R.L., **Loux, T.M.**, Turner, J.A.*, Abbyad, Y. S., and Silvestros, M.* (2020) “Emergency Medical Services Personnel’s Pandemic Influenza Training Received and Willingness to Work during a Future Pandemic.” *Prehospital Emergency Care*. 24(5), 601-609. doi: 10.1080/10903127.2019.1701158

- Turner, J.A.*, Rebmann, T., **Loux, T.M.**, Charney, R.L. (2020) “Willingness to respond to radiological disasters among first responders in St. Louis, MO.” *Health Security*. 18(4), 318-328. doi: 10.1089/hs.2019.0160
- Peters Bergquist, E.*, Trolard, A., Sebert Kuhlmann, A., **Loux, T.**, Liang, S.Y., Stoner, B.P., Reno, H. (2020) “Undertreatment of Chlamydia and Gonorrhea among Pregnant Women in the Emergency Department.” *International Journal of STD & AIDS*. 31(2), 166-173. doi: 10.1177/0956462419880379
- Lew, D.*, Xian, H., **Loux, T.**, Qian, Z., Vaughn, M. (2020) “Short Sleep Duration and Latent Classes of Risk Profiles Among Adolescents” *Health Behavior & Policy Review*. 7(1), 27-37. doi: 10.14485/HBPR.7.1.4
- Peters Bergquist, E.*, Trolard, A., Sebert Kuhlmann, A., **Loux, T.**, Liang, S.Y., Stoner, B.P., Reno, H. (2020) “Single and Repeated Use of the Emergency Department for Chlamydia and Gonorrhea Care.” Submitted to *Sexually Transmitted Diseases*. 47(1), 14-18. doi: 10.1097/OLQ.0000000000001087
- McClure, S., **Loux, T.**, Shacham, E., Gillespie, E.*, Hooks-Anderson, D. (2019) “Context matters: Construct framing in measures of physical activity engagement among African American women.” *Journal of Health Disparities Research and Practice*. 12(3), 21-34. url: <https://digitalscholarship.unlv.edu/jhdrp/vol12/iss3/2>
- Rebmann, T., Tao, D., Turner, J.A.*, **Loux, T.M.**, Srinivasan, S., and Garza, A. (2019) “Implementation and evaluation of the Value of Improved and Sustained Information Access By Library Expertise (VISIBLE) Program.” *Disaster Medicine and Public Health Preparedness*. 13(5-6), 982-988. doi: 10.1017/dmp.2019.33
- **Loux, T.**, Nelson, E., Arnold, L.D., Shacham, E., Schootman, M. (2019) “Using multilevel regression with poststratification to obtain regional health estimates from a Facebook-recruited sample.” *Annals of Epidemiology*. 39, 15-20. doi: 10.1016/j.annepidem.2019.09.005
- Dirks-Linhorst, A., Linhorst, D., **Loux, T.** (2019) “Criminal Court-Ordered Psychiatric Evaluations: Does Gender Play a Role?” *Women & Criminal Justice*. 29(6), 303-322. doi: 10.1080/08974454.2018.1520673
- Rebmann, T., Charney, R.L., **Loux, T.M.**, Turner, J.A.*, and Nguyen, D.* (2019) “Firefighters’ and emergency medical services personnel’s knowledge and training on occupational radiation exposures and safety: Results from a survey conducted in a Midwestern metropolitan area.” *Health Security*, 17(5), 393-402. doi: 10.1089/hs.2019.0086
- Weaver, N., Weaver, T., **Loux, T.**, Jupka, K., Lew, D.*, Sallee, H. (2019) “The impact of RISE Up in promoting positive parenting and safety behaviors of parents with young children.” *Children and Youth Services Review*, 105, 104422. doi: 10.1016/j.childyouth.2019.104422
- Schootman, M., Ratnapradipa, K., **Loux, T.**, McVay, A., Su, L.J., Nelson, E., Kadlubar, S. (2019) “Individual- and county-level determinants of high breast cancer incidence rates.” *Translational Cancer Research*, 8(4). doi: 10.21037/tcr.2019.06.08
- Chiu, Y., Forrest, K., **Loux, T.** (2019) “Relationship between F2 slope and intelligibility in Parkinson’s Disease: Lexical effects and listening environment.” *American Journal of Speech-Language Pathology*, 28(2S), 887-894. doi: 10.1044/2018_AJSLP-MS18-18-0098
- **Loux, T.**, Gibson, A.K.* (2019) “Using Flint, MI, Lead Data in Introductory Statistics.” *Teaching Statistics*, 41(3), 85-88. doi: 10.1111/test.12187
- Peters Bergquist, E.*, Trolard, A., Fox, B., Sebert Kuhlmann, A., **Loux, T.**, Liang, S.Y., Stoner, B.P., Reno, H. (2019) “Presenting to the Emergency Department versus Clinic-Based STD Care Locations for Testing for Chlamydia and Gonorrhea; A Spatial Exploration.” *Sexually Transmitted Diseases*, 46(7), 474-479. doi: 10.1097/OLQ.0000000000001007

- Nelson, E, **Loux, T.**, Siddiqui, S.*, Arnold, L., Schootman, M. (2019) “Obtaining contextually relevant geographic data using Facebook recruitment in public health studies.” *Health and Place*, 55, 37-42. doi: 10.1016/j.healthplace.2018.11.002
- Dirks-Linhorst, A., Linhorst, D., **Loux, T.** (2018) “The Role of Race in Court-Ordered Pre-trial Psychiatric Evaluations.” *Journal of Ethnicity in Criminal Justice*, 16(3), 225-248. doi: 10.1080/15377938.2018.1517070
- McClure, S.M., **Loux, T.M.** (2018) “Variability in weight concern and physical activity engagement among African American adolescent girls.” *Journal of Racial and Ethnic Health Disparities*, 5(6), 1365-1372. doi: 10.1007/s40615-018-0486-x
- Osazuwa-Peters, N.*, Simpson, M.*, Zhao, L.*, Adjei Boakye, E.*, Olomukoro, S.*, Vavares, M.A., **Loux, T.M.**, Schootman, M. (2018) “Suicide risks among cancer survivors in the United States.” *Cancer*, 124(20), 4072-4079. doi: 10.1002/cncr.31675
- Shacham, E., **Loux, T.**, Barnidge, E.K., Lew, D.*, Pappaterra, L.* (2018) “Determinants of Organ Donation Registration in Missouri.” *American Journal of Transplantation*, 18(11), 2798-2803. doi: 10.1111/ajt.15025
- Kremer, K.*, Vaughn, M., **Loux, T.M.** (2018) “Parent and Peer Social Norms and Youth’s Post-Secondary Attitudes: A Latent Class Analysis.” *Journal of Adolescence*, 93, 411-417. doi: 10.1016/j.chilyouth.2018.08.026
- Linhorst, D., **Loux, T.M.**, Riley, S.E.*, Dirks-Linhorst, P.A. (2018) “Characteristics and Outcomes of People with Intellectual and Developmental Disabilities Participating in a Mental Health Court.” *American Journal on Intellectual and Developmental Disabilities*, 123(4), 359-370. doi: 10.1352/1944-7558-123.4.359
- Chibnall, J.T., **Loux, T.**, Schechtman, K.B., Yuping, W. (2018) “Maximizing Exploratory Predictive Models.” *Journal of Cardiac Failure*, 24(3), 135-136. doi: 10.1016/j.cardfail.2018.02.010
- Osazuwa-Peters, N.*, Arnold, L.D., **Loux, T.M.**, Vavares, M.A., Schootman, M. (2018) “Factors associated with increased risk of suicide among survivors of head and neck cancer: a population-based analysis.” *Oral Oncology*, 81, 29-34. doi: 10.1016/j.oraloncology.2018.03.017
- Rebmann, T., **Loux, T.M.**, Lew, D.*, and Wakefield, M. (2017) “Pertussis vaccination among childcare center staff, administrators, and parents: Uptake, policies, and beliefs.” *Maternal & Child Health Journal*, 22(2), 166-174. doi: 10.1007/s10995-017-2388-7
- Rebmann, T., Anthony, J., **Loux, T.M.**, Mulroy, J., Sitzes, R. (2017) “Assessment of closed point of dispensing (POD) preparedness in St. Louis County, Missouri: 2012 - 2016.” *Health Security*, 15(5), 539-547. doi: 10.1089/hs.2016.0125
- Howard, S., Zhang, Z., Buchanan, P., Armbrrecht, E., Williams, C., Wilson, G., Hutchinson, J., Pearson, L., Ellsworth, S., Byler, C., **Loux, T.**, Wang, J., Bernell, S., Holekamp, N. (2017) “The Effect of a Comprehensive Care Transition Model on Cost and Utilization for Medically Complex Children With Cerebral Palsy.” *Journal of Pediatric Health Care*. doi: 10.1016/j.pedhc.2017.04.017
- Schootman, M., Hendren, S., **Loux, T.**, Ratnapradipa, K.*, Eberth, J., Davidson, N. (2017) “Differences in effectiveness and use of robotic surgery in patients undergoing minimally invasive colectomy.” *Journal of Gastrointestinal Surgery*. doi: 10.1007/s11605-017-3460-8
- Mohammed, K.A., Murray, E., **Loux, T.M.**, Arnold, L.D. (2017) “Factors associated with parental intent to vaccinate adolescents for HPV: Findings from the National Immunization Survey-Teen, 2014.” *Preventing Chronic Disease*, 14:160314. doi: 10.5888/pcd14.160314
- Howard, S., Scharff, D., **Loux, T.** (2017) “Flipping Classrooms in a School of Public Health.” *Frontiers in Public Health*, 5, Art.73. doi: 10.3389/fpubh.2017.00073

- Rebmann, T., **Loux, T.M.**, Daly, B. (2017) “Uptake and attitudes regarding seasonal influenza vaccination among childcare center staff, administrators, and parents.” *Infection Control and Hospital Epidemiology*, 38(3), 367-370. doi: 10.1017/ice.2016.263
- Nelson, E., Maynard, B., **Loux, T.M.**, Arnold, L.D., Fatla, J., Gordon, R. (2017) “The Acceptability of Self-Sampled Screening for HPV DNA: A Systematic Review with Meta-Analysis.” *Sexually Transmitted Infections*, 93(1), 56-61. doi: 10.1136/sextrans-2016-052609
- **Loux, T.M.**, Drake, C., Smith-Gagen, J. (2017) “A comparison of marginal odds ratio estimators.” *Statistical Methods in Medical Research*, 26(1), 155-175. doi: 10.1177/0962280214541995
- Rebmann, T., Baskin, C.R., **Loux, T.M.**, Wakefield, M. (2017). “Uptake and attitudes regarding Hepatitis A vaccine among childcare center staff, administrators, and parents.” *Public Health*, 142, 152-158. doi: 10.1016/j.puhe.2016.07.012
- Steigerwald, D.*, Nolan, C., **Loux, T.**, Baskin, C.R., Scharff, D.P. (2016) “Improving Public Health Competencies through Required Practice Experience.” *Public Health*, 140, 265-267. doi: 10.1016/j.puhe.2016.07.001
- Osazuwa-Peters, N., Adjei Boakye, E., **Loux, T.**, Varvares, M.A., Schootman, M. (2016) “Insufficient evidence to support or refute the association between head and neck cancer and marijuana use.” *Journal of Evidence-Based Dental Practice*, 16(2), 127-129. doi: 10.1016/j.jebdp.2016.06.004
- Smith-Gagen, J., **Loux, T.M.**, Drake, C., Perez-Stable, E. (2016) “How Does Managed Care Improve the Quality of Breast Cancer Care Among Medicare-Insured Minority Women?” *Journal of Racial and Ethnic Health Disparities*, 3(3), 496-507. doi: 10.1007/s40615-015-0167-y
- **Loux, T.M.**, Varner, S.E.*, VanNatta, M.* (2016) “Flipping an introductory biostatistics course: A case study of student attitudes and confidence.” *Journal of Statistics Education*, 24(1), 1-7. doi: 10.1080/10691898.2016.1158017
- Rebmann, T., Wilson, K.D., **Loux, T.**, Iqbal, A.Z., Peters, E.B., Peavler, O.* (2016) “Outcomes, approaches, and challenges to developing and passing a countywide mandatory vaccination policy: St. Louis County’s experience with hepatitis A vaccine for food service personnel.” *AIMS Public Health*, 3(1), 116-130. doi: 10.3934/publichealth.2016.1.116
- Rebmann, T., **Loux, T.M.**, Zink, T.K., Swick, Z.*, Wakefield, M.* (2015). “Infection prevention and mass vaccination training for U.S. point of dispensing (POD) staff and volunteers: A national study.” *American Journal of Infection Control*, 43(3), 222-227. doi: 10.1016/j.ajic.2014.11.012
- Rebmann, T., **Loux, T.M.**, Swick, Z.*, Dolgin, H., Reddick, D., Wakefield, M.* (2015) “Are US Jurisdictions Prepared to dispense medical countermeasures through Open Points of Dispensing? Findings from a national study.” *Health Security*, 13(2): 96-105. doi: 10.1089/hs.2014.0080
- Rebmann, T., **Loux, T.M.**, Zink, T.K., Swick, Z.*, Wakefield, M.* (2015) “U.S. disaster planners’ attitudes regarding pre-event vaccine for first responders and point of dispensing (POD) workers.” *Health Security*. 13(1), 29-36. doi: 10.1089/hs.2014.0066
- **Loux, T.M.** (2015) “Randomization, matching, and propensity scores in the design and analysis of experimental studies with known covariates.” *Statistics in Medicine*. 34(4), 558-570. doi: 10.1002/sim.6361 [R Package]
- Rebmann, T., **Loux, T.M.**, Swick, Z.*, Reddick, D., Dolgin, H., Anthony, J., Prasad, R. (2014) “A national study examining Closed Points of Dispensing (POD): Existence, preparedness, exercise participation, and training provided.” *Biosecurity and Bioterrorism: Strategy, Practice, and Science*, 12(4), 208-216. doi: 10.1089/bsp.2014.0014
- **Loux, T.M.** (2013) “A simple, flexible, and effective covariate-adaptive treatment allocation procedure.” *Statistics in Medicine*, 32(22), 3775-3787. doi: 10.1002/sim.5837 [R Package]

- Drake, C. and **Loux, T.** (2011) “The Propensity Score and Its Role in Causal Inference.” In Jiang, J., Roussas, G.G., Samaniego, F.J. (Eds.) Nonparametric Statistical Methods and Related Topics: A Festschrift in Honor of Professor P.K. Bhattacharya on the Occasion of this 80th Birthday. World Scientific Books. doi: 10.1142/9789814366571_0002

SOFTWARE

Student co-authors indicated by *

- **Loux, T.**, Wiskow, C.* paramhetero: Numeric and Visual Comparisons of Heterogeneity in Parametric Models. Current version 0.2.0. Available from <https://CRAN.R-project.org/package=paramhetero>.
- **Loux, T.** tldr: Functions to Simplify Data Analysis and Reporting. Current version 0.1.6. Available from <https://github.com/tloux/tldr>.
- **Loux, T.M.** PropScrRand: Propensity score methods for assigning treatment in randomized trials. Current version 1.1. Available from <https://CRAN.R-project.org/package=PropScrRand>.

RESEARCH GRANTS & OTHER FUNDING

Current

- 1R21AG065526-01A1: The Effect of Patient Dementia on Outpatient Clinicians’ Performance on Cost Outcomes Under Medicare Value-Based Payment
9/15/2020 - 5/31/2022
Role: Co-Investigator (PI: Dr. Kenton Johnston)
Funding: National Institutes of Health
The goals of this project are to: (1) validate the adequacy of claims-based measures of dementia; (2) evaluate the performance of a claims-based costs of care model that includes dementia by adding it to the standard CMSHCC risk model; and (3) demonstrate the effects of our new model versus the standard CMS-HCC model on clinicians’ relative performance on cost measures in MIPS and the program more broadly.

Completed

- Exercise: Addressing Stress in Relapse Prevention for Substance Use Disorders
9/19/2016 - 3/31/2019
Role: Co-Investigator (PIs: Dr. Jeremiah Weinstock and Dr. Patrick Lustman)
Funding: National Institutes of Health
The purpose of this study is to implement a randomized clinical trial examining exercise as a relapse prevention strategy for substance use disorders.
Approx amount: \$1,200,000
- Exposure and Preparedness for Natural and Man-Made Radiological Events
3/1/2018 - 2/28/2019
Role: Co-Investigator (PI: Dr. Terri Rebmann)
Funding: Institute of Clinical and Translational Sciences at Washington University
The primary purpose of the proposed study is to determine baseline radiation exposure levels for first responders in the St. Louis region both inside and outside of the St Louis West Lake Landfill geographical area and compare firefighters’ exposure rates to those of emergency medical services (EMS) personnel.
Approx amount requested: \$50,000

- St. Louis MetroMarket: Evaluating a Social Entrepreneurship Model to Increase Access to Healthy Food Options in St. Louis Food Deserts
7/1/2016 - 5/31/2017
Role: Co-Investigator (PI: Dr. Enbal Shacham)
Funding: Saint Louis University College for Public Health and Social Justice (internal)
The purpose of this study is to monitor fruit and vegetable intake from MetroMarket customers at baseline and 3 and 6 months after MetroMarket begins its service.
Approx amount: \$9,700
- Parental Perspectives and Involvement During Behavioral Intervention Planning: Is Parental Involvement Necessary to Enhance Treatment Adherence?
7/1/2016 - 5/31/2017
Role: Co-Investigator (PI: Dr. Alyssa Wilson)
Funding: Saint Louis University College for Public Health and Social Justice (internal)
This project will investigate the effect of parental involvement in behavioral intervention planning for children with autism.
Approx amount: \$10,000
- Measuring sleep and body temperature among adults with Multiple Sclerosis
6/1/2016 - 5/31/2017
Role: Co-Investigator (PI: Dr. Rebecca Lorenz)
Funding: Saint Louis University Health Sciences Research Grant (internal)
The purpose of this project is to measure ambient room and body temperature of Multiple Sclerosis patients while they are sleeping in order to assess the association between ambient room temperature, true body temperature, perceived body temperature, and reported difficulty sleeping.
Approx amount: \$3,500
- The Value of Improved and Sustained Information access By Library Expertise (VISIBLE) in Missouri
9/30/2015 - 9/29/2016
Role: Co-Investigator (PI: Dr. Terri Rebmann)
Funding: National Library of Medicine
The purposes of the VISIBLE project are to increase awareness and knowledge of NLM resources among emergency responders and reference librarians through a train-the-trainer format, and evaluate the impact of this education on individual competence.
Approx amount: \$19,500
- Assessment of Electronic Patient Care Software Usability
7/1/2015 - 9/15/2015
Role: Co-Investigator (PI: Dr. Alex Garza)
Funding: National Association of Emergency Medical Technicians
The purpose of this project is to compare the usability of the most common electronic patient care software among EMTs.
Approx amount: \$8,900
- Post-Doctoral Career Development Award
1/1/2014 - 12/31/2014
Role: Principal Investigator
American Statistical Association Biometrics Section
Funding to attend Johns Hopkins School of Public Health Summer Institute in Mental Health Research
Approx amount: \$3,000

Pending

- Treatment Effect Analysis of Variance (TEANOVA): Omnibus Assessment of Treatment Effect and Heterogeneity

8/1/2021 - 7/31/2023

Role: Principal Investigator

Funding: National Science Foundation

The goal of this project is to develop a general statistical approach for investigating heterogeneous treatment effects (HTEs) on a sample-wide scale using the potential outcomes framework relying on an ANOVA-style sums of squares decomposition and develop an open source package for the R statistical environment incorporating this technique.

Approx amount: \$80,000

- Can the Medicare Quality Payment Program Incentivize Evidence-Based Treatment of Depression and Anxiety Disorders by Primary Care Providers?

4/1/2021 - 3/31/2025

Role: Co-Investigator (PI: Dr. Kenton Johnston)

Funding: National Institutes of Health

The goals of this project are to evaluate the impact of Medicare payment program on patient access to evidence-based treatment for depression and anxiety disorders in the primary care setting and to assess quality of care for Medicare beneficiaries with these conditions.

- Design against dropout: developing evidence-based guidelines to limit attrition in obesity prevention studies

4/1/2021 - 3/31/2023

Role: Co-Principal Investigator (Co-PI: Dr. Brandy Maynard)

Funding: National Institutes of Health

The goals of this project are to determine study design characteristics associated with decreased rates of dropout in longitudinal studies of obesity prevention and treatment.

PRESENTATIONS

Invited Presentations

- Estimating Local Health Outcomes from Internet Non-Probability Samples. Southern Illinois University - Edwardsville, Edwardsville, IL, December 6, 2019.
- Fool's Gold: Impediments to Causal Inference in Randomized Trials. VA St. Louis Health Care System, St. Louis MO, May 14, 2019.
- Fool's Gold: Impediments to Causal Inference in Randomized Trials. Indiana University School of Public Health at Bloomington, Bloomington, IN, April 1, 2019.
- Causal Inference in Health Inequity Research: Defining the Question and Role of Covariates. American College of Epidemiology 2018 Annual Meeting Minority Affairs Committee Workshop: The Role of Equity in Shaping Precision Public Health, Cincinnati, OH, September 22, 2018.
- More than Average: Measuring Heterogeneous Treatment Effects. Saint Louis University College for Public Health and Social Justice Advanced and Innovative Methods Speaker Series, St. Louis, MO, March 24, 2016.
- Propensity-Biased Treatment Allocation in Trials with Staggered Entry. VA St. Louis Health Care System, St. Louis MO, November 12, 2013.
- Propensity-Biased Treatment Allocation in Trials with Staggered Entry. Washington University of St. Louis, St. Louis MO, October 22, 2013.
- Causal Inference, Propensity Scores, and Odds Ratios. UC Santa Barbara, Santa Barbara CA, April 11, 2012.

Contributed Presentations

- Multilevel Regression with Poststratification for Local Estimation: An Example and Lessons Learned. Conference on Statistical Practice, Sacramento, CA, February 21, 2020.
- Data Ethics for Health Sciences (Roundtable speaker). Joint Statistical Meetings, Denver, CO, July 31, 2019.
- Statistically valid exploratory analysis of treatment effect heterogeneity (Poster). ICTS Advancing Precision Medicine through Translational Genomics Symposium, St. Louis, MO, January 16, 2018.
- Adjusting Published Estimates for Exploratory Biases using the Truncated Normal Distribution. Joint Statistical Meetings, Chicago, IL, August 2, 2016.
- Propensity Scores in the Design and Analysis of Randomized Experiments (Poster). Atlantic Causal Inference Conference, Philadelphia, PA, May 20, 2015.
- Propensity-Biased Treatment Allocation in Trials with Staggered Entry. IMS 14th Meeting of New Researchers in Statistics and Probability, UC San Diego, San Diego CA, July 26, 2012.
- Estimation of the Marginal Odds Ratio in Observational Studies. WNAR/ IMS Annual Meeting, San Luis Obispo CA, June 20, 2011.
- Marginal, Crude and Conditional Odds Ratios: Definitions and Estimation. Sacramento Statistical Association Institute on Research and Statistics, Sacramento, CA, April 1, 2010.

TEACHING EXPERIENCE

Saint Louis University (2013 - present)

- BST 3100: Applied Biostatistics I
- BST 4100/5020: Theory of Biostatistics I
- BST 5000: Principles of Biostatistics
- BST 5100: Introduction to General Linear Modeling
- BST 6100: Introduction to Causal Inference
- PUBH 5040: Generating Evidence from Public Health Data

UC Santa Barbara (2011 - 2013)

- PSTAT 5E: Statistics With Economics and Business Applications
- PSTAT 120A: Probability and Statistics
- PSTAT 123: Sampling Techniques

Sacramento City College (2010 - 2011)

- MATH 170: Intermediate Algebra Review
- STAT 300: Introductory Statistics

UC Davis (2008 - 2011)

- STA 10: Statistical Thinking
- STA 13: Elementary Statistics
- STA 32: Basic Statistical Analysis through Computers
- STA 103: Applied Statistics for Business and Economics
- STA 120: Probability and Random Variables for Engineers

WORKSHOPS AND GUEST LECTURES

- Presentation: “Imputing and analyzing missing data with mice.” St. Louis R Users Group, St. Louis, MO, February 8, 2018.
- Guest lecture: “Analysis of Experimental Studies.” M88-588: Epidemiology for Clinical Research, Applied Health Behavior Research Program, School of Medicine, Washington University in St. Louis, St. Louis, MO, April 6, 2016.
- Workshop: An Introduction to Causal Inference. SLU School of Social Work Doctoral Student Association, St. Louis, MO. December 9, 2015.

STUDENT MENTORING

Master’s Students

- Cara Wiskow, GRA mentor (Biostatistics, 2018-2020)
- Orlando Davy, GRA mentor (Biostatistics, 2015-2017)
- Daphne Lew, GRA mentor (Biostatistics, 2014-2016)

Doctoral Students

- Noor Al-Hammadi, doctoral committee **co-chair** (Health Outcomes, current)
- Dajun Tian, doctoral committee **chair** (Biostatistics, current)
- Orlando Davy, doctoral committee **chair** (Biostatistics, current)
- Saad Siddiqui, doctoral committee **co-chair** (Epidemiology, current)
- Tyler Glassford, doctoral committee member (Social Work, 2020)
- Meera Muthukrishnan, doctoral committee member (Epidemiology, 2020)
- Daphne Lew, doctoral committee member (Biostatistics, 2020)
- Katie Holzer, doctoral committee member (Social Work, 2020)
- Eleanor Peters Bergquist, doctoral committee member (Behavioral Science and Health Education, 2019)
- Austin Turner, doctoral committee member (Biosecurity and Disaster Preparedness, 2019)
- Jason Carbone, doctoral committee member (Social Work, 2019)

- Sarah Underwood, doctoral committee member (Social Work, 2018)
- Nosayaba Osazuwa-Peters, doctoral committee member (Epidemiology, 2018)
- Kristen Kremer, doctoral committee member (Social Work, 2018)
- Shahida Rice, doctoral committee member (Health Management and Policy - Policy Track, 2015)

DEPARTMENTAL & UNIVERSITY SERVICE

- Director, Public Health Studies Doctoral Program. 2020 - present.
- EPI/BST Department Adivsing Committee. 2020 - present.
- SLU Institutional Review Board. 2019 - present.
- SLU IT Advisory Board. 2018 - present.
- CPHSJ Doctoral Steering Committee. 2018 - 2020.
- EPI/BST Department Admissions Committee. 2017 - 2020.
- CPHSJ MPH Steering Committee. 2017 - 2019.
- CPHSJ Research Advisory Council. 2017 - 2019.
- CPHSJ MPH Curriculum Reinvention Task Force. 2017 - 2018.
- CPHSJ Faculty Council Secretary, 2016 - 2017.
- Biostatistics Department MPH Admissions Coordinator. 2015 - 2017.
- CPHSJ Pedagogy Committee. 2014 - 2016.
- Organizer, Doctoral R Programming Seminar. 2014 - 2016.
- CPHSJ Committe on Faculty Workload Policy. 2014 - 2016.

PROFESSIONAL SERVICE

- Vice President, St. Louis Chapter of the American Statistical Association, 2020.
- Resource Review Editor, American Statistical Association Section for Teaching Statistics in the Health Sciences, 2020.
- Consulting statistical editor, *Journal of Cardiac Failure* (>200 manuscripts).
- Reviewer: *Statistical Methods in Medical Research* (7); *Journal of Statistics Education* (3); *American Journal of Public Health* (1); *BMJ Open* (1); *Trials* (1); *Journal of Nonparametric Statistics* (1); *Studies in Higher Education* (1); *AIMS Public Health* (1); *Teaching Statistics* (1).
- Reviewer: Medical Research Council Skills Development Fellowships (2016).
- Reviewer: SLU President's Research Fund (Fall 2015, Fall 2016).

CONSULTING EXPERIENCE

- Mid-American Transplant. General statistical consulting. 2017
- Regional Justice Information Service (REJIS) Commission of St Louis, MO. Grant application preparation and data analysis. Multiple projects, 2015-2016.
- Sierra Research Laboratories of Modesto, CA. Designing experiments and analyzing data to determine efficacy of insect repellants. Multiple projects, 2012 - 2016.

PROFESSIONAL DEVELOPMENT

- Introduction to Online Teaching Seminar. Reinert Center for Transformative Teaching and Learning. Saint Louis University, April 20 - May 15, 2020.
- “Mentoring for Mission in Teaching.” Saint Louis University, January 2019 - November 2019.
- “Writing/Designing Winning NIH Proposals.” Grant Training Center. Washington University of St. Louis, June 13, 2017.
- “TIER Faculty Development Workshop.” Project TIER. Haverford College, November 18-19, 2016.
- “Evaluation of Mental Health Service Systems.” Presenter: Christine Walrath. Johns Hopkins School of Public Health Summer Institute in Mental Health Research, June 13, 2014.
- Online Teaching and Learning Institute. Reinert Center for Transformative Teaching and Learning. Saint Louis University, June 2-5, 2014.
- IMS 14th Meeting of New Researchers in Statistics and Probability. UC San Diego, July 26-28, 2012.
- “Student Engagement: Mission Possible.” Center for Excellence in Teaching and Learning TA Consultant Workshop Series. UC Davis, Winter 2011.
- “Become a Catalyst for Change in Statistics Education.” Presenters: Bob delMas, Joan Garfield, John Holcomb, Andy Zieffler. Preceding JMM 2010 in San Francisco CA.

PROFESSIONAL AFFILIATIONS

- American Statistical Association
 - Chapters: St. Louis
 - Sections: Biometrics, Health Policy Statistics, Statistics and Data Science Education, Statistics in Epidemiology, Teaching Statistics in the Health Sciences

AWARDS AND HONORS

- Dr. Terry Leet Teaching Award. Saint Louis University College for Public Health and Social Justice. 2018-2019 academic year.
- Runner-Up, Student Paper Competition Best Oral Presentation. WNAR/ IMS Annual Meeting, San Luis Obispo CA, June 19-22, 2011. Cash award.
- TA Appreciation Award, 2011. Presented by the UC Davis Statistics Club.