

Alexander M. Kaizer

Contact Information

Department of Biostatistics and Informatics
Colorado School of Public Health
University of Colorado
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Aurora, CO 80045
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Education

Ph.D. Biostatistics, 2017
Minor in Population Geography
University of Minnesota, Minneapolis, MN
Dissertation Title: “Bayesian Hierarchical Modeling based on Multi-Source Exchangeability”
Advisor: Joseph Koopmeiners
Committee: Brad Carlin, Haitao Chu, Julia Drew

B.S. Demographic Analysis, *Summa Cum Laude*, 2012
Minors in Actuarial Science, Geography, Mathematics, Statistics, and Statistical Methods
Truman State University, Kirksville, MO

Employment

Assistant Professor (tenure-track), 2017-present
Department of Biostatistics and Informatics, Colorado School of Public Health, University of Colorado, Aurora, CO

Planning Analyst Intern, 2016-2017
Integrated Planning and Analysis Division of Human Services and Public Health Department of Hennepin County, Minneapolis, MN

Survival Analysis Tutor, 2015-2016
Division of Health Policy and Management, School of Public Health, University of Minnesota, Minneapolis, MN

Research Assistant, 2015 - 2017
Biostatistical Design and Analysis Center, University of Minnesota, Minneapolis, MN

Data Analysis Intern, 2013-2014
City of Minneapolis IT Department, Minneapolis, MN

Research Assistant, 2012 - 2015
Division of Biostatistics, University of Minnesota, Minneapolis, MN

Quality Engineering Intern, 2012
Hollister Incorporated, Kirksville, MO

Senior Student Consultant and Webmaster, 2011 - 2012
Center for Applied Statistics and Evaluation at Truman State University, Kirksville, MO

Research Assistant, 2011 - 2012
MathBio NSF REU, Truman State University, Kirksville, MO

SMACS (Science, Math and Computer Science) Tutor, 2010 - 2012
Truman State University, Kirksville, MO

Level I Tutor, 2010 - 2015
tutor.com, New York, NY

Honors and Awards

Coca-Cola Scholar, 2008

Dean's List, Truman State University, 2008 - 2012

General John J. Pershing Scholarship, Truman State University, 2008 - 2012

Kappa Mu Epsilon National Mathematics Honor Society, 2010

Outstanding Biostatistics Teaching Assistant, 2015

Outstanding Student Seminar Presenter, 2016

Outstanding Paper Competition Recipient for the Medical Devices and Diagnostics Section of the American Statistical Association, 2016

Outstanding Paper Competition Recipient for the Health Policy Section of the American Statistical Association, 2017

Refereed Publications

—— = advised by Dr. Kaizer

1. Powell, S., **Kaizer, A.**, Koopmeiners, J.S., Iwamoto, C., Klein, M. "High Expression of Class III tubulin in Small Cell Lung Carcinoma." *Oncology Letters*, **7**, 405-410, 2014.
2. **Kaizer, A.**, Fore, S., Kim, H-J., York, E. "Modeling the Biotic and Abiotic Factors that Describe the Number of Active Off-Host *Amblyomma americanum* Larvae." *Journal of Vector Ecology*, **40**, 1-10, 2015.
3. **Kaizer, A.**, Koopmeiners, J.S. "Identifying Optimal Approaches to Early Termination in Two-Stage Biomarker Validation Studies." *Journal of the Royal Statistical Society: Series C*, **66**, 187-199, 2016.
4. Ryder, J., **Kaizer, A.**, Rudser, K., Daniels, S., Kelly, A. "Utility of BMI in Determining Excess Adiposity in Youth across the Obesity Spectrum." *Journal of Pediatrics*, **177**, 255-261, 2016.
5. Fox, C., **Kaizer, A.**, Rudser, K., Nathan, B., Gross, A., Sunni, M., Abuzzahab, M.J., Schwartz, B., Kumar, S., Petryk, A., Billington, C., Ryder, J., Kelly, A. "Meal-Replacements followed by Topiramate for BMI Reduction in Adolescents with Obesity: A Pilot Randomized Controlled Trial." *Obesity*, **24**, 2553-2461, 2016.
6. Ryder, J., **Kaizer, A.**, Rudser, K., Gross, A., Kelly, A., Fox, C. "Effect of Phentermine on Weight Reduction in a Pediatric Weight Management Clinic." *International Journal of Obesity*, **41**, 90-93, 2017.
7. Iroh Tam, P-Y., Thielen, B., Obaro, S.K., Brearley, A., **Kaizer, A.**, Chu, H., Janoff, E.N. "Childhood Pneumococcal Disease in Africa: A Systematic Review and Meta-Analysis of Incidence, Serotype Distribution, and Antimicrobial Susceptibility." *Vaccine*, **35**, 1817-1827, 2017.
8. Rodgers, N.J., **Kaizer, A.**, Miller, W., Rudser, K., Orchard, P., Braunlin, E. "Mortality After Hematopoietic Stem Cell Transplantation for Severe Mucopolysaccharidosis Type I: The 30-Year University of Minnesota Experience." *Journal of Inherited Metabolic Disease*, **40**, 271-280, 2017.
9. Ryder, J., Gross, A., Fox, C., **Kaizer, A.**, Rudser, K., Jenkins, T., Ratcliff, M., Kelly, A., Kirk, S., Siegel, R., Inge, T. "Factors Associated with Long-term Weight Loss Maintenance Following Bariatric Surgery in Adolescents with Severe Obesity." *International Journal of Obesity*, **42**, 102-107, 2018.
10. **Kaizer, A.**, Koopmeiners, J.S., Hobbs, B.P. "Bayesian Hierarchical Modeling based on Multi-Source Exchangeability." *Biostatistics*, **19**, 169-184, 2018.

11. **Kaizer, A.**, Hobbs, B.P., Koopmeiners, J.S. "A Multi-source Adaptive Platform Design for Testing Sequential Combinatorial Therapeutic Strategies." *Biometrics*, **74**, 1082-1094, 2018.
12. Andrade, R., Diaz-Gutierrez, I., Hutchins, J., **Kaizer, A.**, Small, J., Rao, M. "Laparoscopic Trans-diaphragmatic Chest Surgery: Early Experience." *The Journal of Thoracic and Cardiovascular Surgery*, **155**, 1294-1299, 2018.
13. Fox, C., **Kaizer, A.**, Rudser, K., Ryder, J., Kelly, A., Kumar, S., Gross, A. "Cardiometabolic Profiles of Community versus Treatment-Seeking Youth with Obesity." *Obesity Science and Practice*, **4**, 207-215, 2018.
14. Gross, A., **Kaizer, A.**, Ryder, J., Fox, C., Rudser, K., Dengel, D., Kelly, A. "Relationships of Anxiety and Depression with Cardiovascular Health in Youth with and without Obesity." *Journal of Pediatrics*, **199**, 85-91, 2018.
15. Hutchins, J., Grandelis, A., **Kaizer, A.**, Jensen, E. "Thoracic Paravertebral Block Versus Thoracic Epidural Analgesia for Post-Operative Pain Control in Open Pancreatic Surgery: A Randomized Controlled Trial." *Journal of Clinical Anesthesia*, **48**, 41-45, 2018.
16. Kline, S., Neaton, J., Lynfield, R., Ferrieri, P., Kulasingam, S., Dittes, K., Glennen, A., Jawahir, S., **Kaizer, A.**, Menk, J., Johnson, J. "Randomized Controlled Trial of a Self-Administered Five-Day Antiseptic Bundle versus Usual Disinfectant Soap Showers for Pre-Operative Eradication of *Staphylococcus aureus* Colonization." *Infection Control & Hospital Epidemiology*, **39**, 1049-1057, 2018.
17. Kirsch, J., Duran, A., **Kaizer, A.**, Thompson-Buum, H., Robiner W., Weber-Main, A.M. "Career-Focused Mentoring for Early-Career Clinician Educators in Academic General Internal Medicine." *The American Journal of Medicine*, **131**, 1387-1394, 2018.
18. Cuneo, B., Sonnesson, S.-E., Levasseur, S., Moon-Grady, A., Krishnan, A., Donofrio, M., Raboisson, M.-J., Hornberger, L., van Eerden, P., Sinkovskaya, E., Abuhamad, A., Arya, B., Szwast, A., Gardiner, H., Jacobs, K., Freire, G., Howley, L., Lam, A., **Kaizer, A.**, Benson, W., Jaeggi, E. "Home Monitoring for Fetal Heart Rhythm During Anti-Ro Pregnancies." *Journal of the American College of Cardiology*, **72**, 1940-1951, 2018.
19. Gross, A., **Kaizer, A.**, Kelly, A., Rudser, K., Ryder, J., Borzutzky, C., Santos, M., Tucker, J., Yee, J., Fox, C., on behalf of POWER. "The Long and Short of It: Early Response Predicts Longer-term Outcomes." *Obesity*, **27**, 272-279, 2019.
20. Ryder, J., **Kaizer, A.**, Jenkins, T., Kelly, A., Shaibi, G., Inge, T. "Heterogeneity in Response to Treatment of Adolescents with Severe Obesity: The Need for Precision Obesity Medicine." *Obesity*, **27**, 288-294, 2019.
21. Cuneo, B., **Kaizer, A.**, Strasburger, J., Bitant, S., and Wakai, R. "Assessment of Atrioventricular Conduction by Echocardiography and Magnetocardiography in Normal and AntiRo/SSA Antibody Positive Pregnancies." *Ultrasound in Obstetrics and Gynecology*, **54**, 625-633, 2019.
22. Ream, K., Sandhu, A., Valle, J., Weber, R., **Kaizer, A.**, Wiktor, D., Borne, R., Tumolo, A., Marzec, L., Zipse, M., Schuller, J., Tompkins, C., Rosenberg, M., Nguyen, D., Carrol, J., Messenger, J., Sauer, W., Aleong, R., Tzou, W. "Delayed High-Grade Atrioventricular Block Following Transcatheter Aortic Valve Replacement: Utility of Ambulatory Monitoring." *Journal of the American College of Cardiology*, **73**, 2538-2547, 2019.
23. Price, P., **Kaizer, A.**, Daniels, S., Jenkins, T., Inge, T., Eckel, R. "Physical Activity Improves Lipid and Weight Loss Outcomes Post-Metabolic Bariatric Surgery in Adolescents with Severe Obesity." *Obesity*, **27**, 989-996, 2019.
24. Weber-Main, A., Shanedling, J., **Kaizer, A.**, Connett, J., Lamere, M., El-Fakahany, E. "A Randomized Controlled Pilot Study of the University of Minnesota Mentoring Excellence Training Academy: A Hybrid Learning Approach to Research Mentor Training." *Journal of Clinical and Translational Science*, **3**, 152-164, 2019.

25. Eisengart, J., Pierpont, E., **Kaizer, A.**, Rudser, K., King, K., Pasquali, M., Polgreen, L., Dickson, P., Le, S., Miller, W., Tolar, J., Orchard, P., Lund, T. "Intrathecal Enzyme Replacement for Hurler Syndrome: Biomarker Association With Neurocognitive Outcomes." *Genetics in Medicine*, **29**, 2552-2560, 2019.
26. Gross, A., **Kaizer, A.**, Vock, D., Siddiqui, S., Fox, C. "Cognitive, Emotional, and Behavioral Contributors to Early Childhood Weight Status." *Journal of Child Health Care*, **23**, 382-391, 2019.
27. Hutchins, J., Argenta, P., Berg, A., Habeck, J., **Kaizer, A.**, Geller, M. "Ultrasound-Guided Subcostal Transversus Abdominis Plane Block With Liposomal Bupivacaine Compared to Bupivacaine Infiltration for Patients Undergoing Robotic-Assisted and Laparoscopic Hysterectomy: A Prospective Randomized Study." *Journal of Pain Research*, **12**, 2087-2094, 2019.
28. Cuneo, B., Olson, C., Haxel, C., Howley, L., Gagnon, A., Benson D.W., **Kaizer, A.**, Thomas, J.F. "Risk Stratification of Fetal Cardiac Anomalies in an Underserved Population Using Telecardiology." *Obstetrics & Gynecology*, **134**, 1096-1103, 2019.
29. Cuneo, B., **Kaizer, A.**, Clur, S., Swan, H., Herberg, U., Winbo, A., Rydberg, A., Haugaa, K., Etheridge, S., Ackerman, M., Dagradi, F., Killen, S., Wacker-Gussmann, A., Benson, D.W., Wilde, A., Pan, Z., Lam, A., Spazzolini, C., Horigome, H., Schwartz, P. "Mothers with Long QT Syndrome Are at Increased Risk for Fetal Death: Findings from a Multicenter International Study." *American Journal of Obstetrics and Gynecology*, **222**, 263.e1-263.e11, 2019.
30. **Kaizer, A.**, Koopmeiners, J.S., Kane, M.J., Roychoudhury, S., Hong, D.S., Hobbs, B.P. "Basket Designs: Statistical Considerations for Oncology Trials." *JCO Precision Oncology*, **3**, 1-9, 2019.
31. Bartels, K., **Kaizer, A.**, Jameson, L., Bullard, K., Dingman, C., Fernandez-Bustamante, A. "Hypoxemia Within the First 3 Postoperative Days Is Associated With Increased 1-Year Postoperative Mortality After Adjusting for Perioperative Opioids and Other Confounders." *Anesthesia & Analgesia*, **131**, 555-563, 2019.
32. Derderian S.C., Patten, L., **Kaizer, A.**, Inge, T., Jenkins, T., Michalsky, M., Changchun, X., Dewberry, L., Sitzman, T. "Body Contouring in Adolescents After Bariatric Surgery." *Surgery for Obesity and Related Diseases*, **16**, 137-142, 2020.
33. Kelly, A., **Kaizer, A.**, Bosch, T., Rudser, K., Ryder, J., Gross, A., Chow, L., Fox, C., Dengel, D. "Reaching the Tipping Point: Identification of Thresholds at which Visceral Adipose Tissue Steeply Increases in Youth." *Obesity*, **28**, 139-145, 2020.
34. Northrop, E., Milbauer, L., Rudser, K., Fox, C., Solovey, A., **Kaizer, A.**, Hebbel, R., Kelly, A., Ryder, J. "Reproducibility of Endothelial Microparticles in Children and Adolescents." *Biomarkers In Medicine*, **14**, 43-51, 2020.
35. Chen, A., Harmatz, P., Nestrail, I., Eisengart, J., King, K., Rudser, K., **Kaizer, A.**, Svatkova, A., Wakumoto, A., Le, S., Madden, J., Young, S., Zhang, H., Polgreen, L., Dickson, P. "Intrathecal Enzyme Replacement for Cognitive Decline in Mucopolysaccharidosis Type I, a Randomized, Open-Label, Controlled Pilot Study." *Molecular Genetics and Metabolism*, **129**, 80-90, 2020.
36. **Kaizer, A.**, Koopmeiners, J.S. "A Fully Bayesian Mixture Model Approach for Identifying Non-Compliance in a Regulatory Tobacco Clinical Trial." *Statistics in Medicine*, **39**, 1328-1342, 2020.
37. Yadlapati, R., Triggs, J., Quader, F., Eluri, S., Bhatia, S., **Kaizer, A.**, Van De Voorde, Z., Pandolfino, J., Komanduri, S., Gyawali, P., Shaheen, N., Menard-Katcher, P., Wani S. "Reduced Esophageal Contractility Is Associated with Dysplasia Progression in Barretts Esophagus: A Multicenter Cohort Study." *Digestive Diseases and Sciences*, **65**, 3631-3638, 2020.
38. Gawron, A., Bell, R., Abu Dayyeh, B., Buckley, T., Chang, K., Dunst, C., Edmundowicz, S., Jobe, B., Lipham, J., Lister, D., Canto M.I., Smith, M., Starnoli, A., Triadafilopoulos, G., Watson, T., Wilson, E., Pandolfino, J., **Kaizer, A.**, Van de Voorde, Z., Yadlapati, R. "Surgical and Endoscopic Management Options for Patients with GERD Based on Proton Pump Inhibitor Symptom Response: Recommendations from an Expert U.S. Panel." *Gastrointestinal Endoscopy*, **92**, 78-87, 2020.

39. Hutchins, J., Habeck, J., Novaczyk, Z., Campbell, R., Creedon, C., Spartz, E., Richter, M., Wolter, J., Suryawanshi, G., **Kaizer, A.**, Berg, A. "Patient Complications After Interscalene Block: A Retrospective Comparison of Liposomal Bupivacaine to Nonliposomal Bupivacaine." *Anesthesiology Research and Practice*, **2020**, 1-7, 2020.
40. Zabor, E., **Kaizer, A.**, Hobbs, B. "Randomized Controlled Trials." *CHEST*, **158**, 79-87, 2020.
41. DeLay, K., Pandolfino, J., Gyawali, P., Frye, J., **Kaizer, A.**, Menard-Katcher, P., Sloan, J., Gawron, A., Peterson, K., Carlson, D., Khan, A., Keswani, R., Yadlapati, R. "Esophageal Manometry Competency Program Improves Gastroenterology Fellow Performance in Motility Interpretation." *The American Journal of Gastroenterology*, **115**, 1453-1459, 2020.
42. Price, P., **Kaizer, A.**, Inge, T., Eckel, R. "Physical Activity Impacts Insulin Sensitivity Post-Metabolic Bariatric Surgery in Adolescents with Severe Obesity." *International Journal of Obesity*, **44**, 1479-1486, 2020.
43. Derderian, S.C., Dewberry L., Patten, L., Sitzman, T., **Kaizer, A.**, Jenkins, T., Michalsky, M., Changchun, X., Mitchell, J., Inge, T. "Excess Skin Problems Among Adolescents Following Bariatric Surgery." *Surgery for Obesity and Related Diseases*, **16**, 993-998, 2020.
44. Lundberg, E., Strong, D., Anderson, M., **Kaizer A.**, Gubbels, S. "Do Patients Benefit from a Cochlear Implant When They Qualify Only in the Presence of Background Noise?" *Otology & Neurotology*, **42**, 251-259, 2020.
45. Derderian, S.C., Patten, L., **Kaizer, A.**, Moore, J., Ogle, S., Jenkins, T., Michalsky, M., Mitchell, J., Bjornstad, P., Dixon, J., Inge, T. "Influence of Weight Loss on Obesity-Associated Complications After Metabolic and Bariatric Surgery in Adolescents." *Obesity*, **28**, 2397-2404, 2020.
46. Kane, M., Chen, N., **Kaizer, A.**, Jiang, X., Xia, H.A., Hobbs, B. "Analyzing Basket Trials under Multisource Exchangeability Assumptions." *R Journal*, **12**, 359-371, 2020.
47. Shahi, N., Skillman, H., Phillips, R., Cooper, E., Shirek, G., Goldsmith, A., Meier, M., **Kaizer, A.**, Recicar, J., Banks, A., Moulton, S. "Why Delay? Early Enteral Nutrition in Pediatric Burn Patients Improves Outcomes." *Journal of Burn Care & Research*, **42**, 171-176, 2021.
48. Yadlapati, R., Masihi, M., Carlson, D., Gyawali, C.P., Kahrilas, P., Darren, B., Kia, L., **Kaizer, A.**, Pandolfino, J. "Ambulatory Reflux Monitoring Guides Proton Pump Inhibitor Discontinuation in Patients With Gastroesophageal Reflux Symptoms: A Clinical Trial." *Gastroenterology*, **1**, 174-182, 2021.
49. Clavijo, C., Oliva, A., Dingmann, C., **Kaizer, A.**, Christians, U., Burger, E., Patel, V., Kleck, C., Vogel, S., Scott, B., Janik, D., Jameson, L., Ginde, A. "Toxicology Screening Testing in Spine Surgical Patients: A Prospective Observational Pilot Study." *Therapeutic Drug Monitoring*, **43**, 136-138, 2021.
50. Ghadersohi, S., Haville, S., Hedman, M., Adkisson, K., Cooper, E., **Kaizer, A.**, Gitomer, S., Kelley, P. "Socioeconomic and Clinical Factors Influencing Treatment Selection in Microtia and Aural Atresia." *International Journal of Pediatric Otorhinolaryngology*, **141**, 110551, 2021.
51. **Kaizer, A.**, Koopmeiners, J., Chen, N., Hobbs, B. "Statistical Design Considerations for Trials That Study Multiple Indications." To appear in *Statistical Methods in Medical Research*.
52. Goel, V., Moran, B., **Kaizer, A.**, Sivanesan, E., Patwardhan, A., Ibrahim, M., DeWeerth, J., Shannon, C., Shankar, H. "Opioid Prescriptions by Pain Medicine Physicians in the Medicare Part D Program: A Cross Sectional Study." To appear in *Anesthesia & Analgesia*.
53. DeLay, K., Pandolfino, J., Roman, S., Gyawali, C.P., Savarino, E., **Kaizer, A.**, Yadlapati, R. "Diagnostic Yield and Reliability of Post-Prandial High-Resolution Manometry and Impedance-pH for Detecting Rumination and Supragastric Belching in PPI Non-Responders." To appear in *Neurogastroenterology and Motility*.

54. Hanna, P., Regmi, S., Kalapara, A., Mulpuri, K., Zabel, J., Albersheim, J., Wahr, J., Randle, D., **Kaizer, A.**, Patten, L., Konety, B., Weight, C. "Alvimopan as a Part of the Enhanced Recovery After Surgery Protocol Following Radical Cystectomy Is Associated With a Decreased Hospital Stay." To appear in *International Journal of Urology*.
55. Beswick, D., Hwang, P., Adappa, N., Le, C., Humphreys, I., Getz, A., Suh, J., Aasen, D., Abuzeid, W., Change, E., **Kaizer, A.**, Kingdom, T., Kohanski, M., Nabavizadeh, S., Nayak, J., Palmer, J., Patel, Z., Ramakrishnan, V., Snyderman, C., St. John, M., Wild, J., Wang, E. "Surgical Approach is Associated with Complication Rate in Sinonasal Malignancy: A Multi-Center Study." To appear in *International Forum of Allergy & Rhinology*.
56. Yadlapati, R., **Kaizer, A.**, Sikavi, D., Greytak, M., Cai, J., Carroll, T., Gupta, S., Wani, S., Menard-Katcher, P., Weissbrod, P., Vahabzadeh-Hagh, A., Pandolfino, J., Chan, W. "Distinct Clinical Physiologic Phenotypes of Patients with Laryngeal Symptoms Referred for Reflux Evaluation." To appear in *Clinical Gastroenterology and Hepatology*.
57. Scott, A., Kanaster, K., **Kaizer, A.**, Young, C., Pantcheva, M., Ertel, M., Kahook, M., Seibold, L. "The Utility of iCare HOME Tonometry for Detection of Therapy-Related Intraocular Pressure Changes in Glaucoma and Ocular Hypertension." To appear in *Ophthalmology Glaucoma*.
58. Cass, N., Hebbe, A., Meier, M., **Kaizer, A.**, Stevens, C., Tholen, K., Haville, S., Handley, E., Francom, C., Herrmann, B. "Pediatric Primary Tympanoplasty Outcomes with Autologous and Non-Autologous Grafts." To appear in *Otology & Neurotology*.
59. Yadlapati, R., Pandolfino, J., Greytak, M., Cahoon, J., Clarke, M., Clary, M., Fink, D., Menard-Katcher, P., Vahabzadeh-Hagh, A., Weissbrod, P., Gupta, S., **Kaizer, A.**, Wani, S. "Upper Esophageal Sphincter Compression Device as an Adjunct to Proton Pump Inhibition for Laryngopharyngeal Reflux." To appear in *Digestive Diseases and Sciences*.

Other Publications

1. **Kaizer, A.**, Kittelson, J. Discussion on "Predictively consistent prior effective sample sizes," by Beat Neuenschwander, Sebastian Weber, Heinz Schmidli, and Anthony O'Hagan. *Biometrics*, **76**, 588-590, 2020.
2. Banik, R., Karuppiyah, S., **Kaizer, A.** "Statistical Significance Versus Clinical Relevance. Response to 'Comparison of Incidence of Anaphylaxis Between Sugammadex and Neostigmine: A Retrospective Multicentre Observational Study.'" *British Journal of Anaesthesia*, **124**, 227-228, 2020.
3. Anderson, M., Rallapalli, V., Walker, K., **Kaizer, A.**, Uhler, K. "Do Infants with Hearing Loss Listen Like Little Adults?" *Canadian Audiologist*, **7**, 2020.
4. Holmen, I., Beach, J., **Kaizer, A.**, Gumidyal, R. "The Association Between Preoperative Cannabis Use and Intraoperative Inhaled Anesthetic Consumption: A Retrospective Study." *Journal of Clinical Anesthesia*, **67**, 109980, 2020.

Presentations

Invited Conference Presentations

1. "A Multi-Source Adaptive Platform Design for Emerging Infectious Diseases." ENAR Spring Meetings, Atlanta, GA, March 2018.
2. "Innovative Statistical Approaches Toward Phase I/II Trial Designs." NRG Oncology Semiannual Meeting, Phoenix, AZ, February 2019.
3. "A Multi-source Adaptive Platform Design for Testing Sequential Combinatorial Therapeutic Strategies." Midwest Biopharmaceutical Statistics Workshop, Indianapolis, IN, May 2019.
4. "Adaptive Trial Designs: From Basics to Bayesian." ACCORDS Emerging Research Designs Conference, Aurora, CO, June 2019.
5. "Novel Trial Designs: Interactive Session." Association of Clinical and Translational Statisticians, Denver, CO, July 2019.

6. “Adaptive Randomization: How, When, and Why.” Adaptive Designs Workshop at Colorado State University, Fort Collins, CO, November 2019.
7. “A Sequential Basket Trial Design Based on Multi-Source Exchangeability with Predictive Probability Monitoring.” International Indian Statistical Association 2021 Conference, Virtual, May 2021.

Contributed Conference Presentations

1. “Technical Needs Assessment for Truman State University’s ITS.” Student Research Conference, Kirksville, MO, April 2010.
2. “Count Regression Modeling of *Amblyomma americanum* Larva.” Student Research Conference, Kirksville, MO, April 2012.
3. “Exploring the Cross-Validation Estimate of the ROC Curve for a Combination of Biomarkers.” University of Minnesota School of Public Health Student Research Day, Minneapolis, MN, April 2013.
4. “Identifying Optimal Approaches to Early Termination in Two-Stage Biomarker Validation Studies.” Joint Statistical Meetings (JSM) 2016, Chicago, IL, August 2016.
5. “Dynamic Multi-Resolution Smoothing Using Multi-Source Exchangeability Models.” Joint Statistical Meetings (JSM) 2017, Baltimore, MD, July 2017.
6. “A Fully Bayesian Mixture Model Approach for Identifying Non-Compliance in a Regulatory Tobacco Clinical Trial.” Translational Science, Washington, DC, March 2019.
7. “Statistical Considerations for Trials that Study Subpopulation Heterogeneity.” ENAR Spring Meetings, Philadelphia, PA, March 2019.
8. “Statistical Considerations for Trials that Study Subpopulation Heterogeneity.” Joint Statistical Meetings (JSM), Denver, CO, July 2019.
9. “Basket Trial Design: Challenges and Potential Solutions.” Virtual Joint Statistical Meetings (JSM), Philadelphia, PA, August 2020.
10. “Sequential Basket Trial Design Based on Multi-Source Exchangeability With Predictive Probability Monitoring.” Virtual International Biometric Conference (IBC) 2020, Seoul, South Korea, August 2020.

Departmental and Society Seminars

1. “Exploring Urban Size Theory Through an Empirical Lens.” University of Minnesota Biostatistics Student Seminar Series, Minneapolis, Minnesota, October 2015.
2. “Using the National Health and Nutrition Examination Survey to Explore Celiac Disease and Gluten-Free Diet Prevalence in the United States.” University of Minnesota Biostatistics Student Seminar Series, Minneapolis, Minnesota, December 2016.
3. “A Multi-Source Adaptive Platform Design for Emerging Infectious Diseases.” Department of Biostatistics and Informatics, Colorado School of Public Health, University of Colorado, September 2017.
4. “Opinionated Analysis Development.” Department of Biostatistics and Informatics, Colorado School of Public Health, University of Colorado, March 2018.
5. “Predatory Journal Awareness.” Department of Biostatistics and Informatics, Colorado School of Public Health, University of Colorado, October 2018.
6. “Frequentist versus Bayesian Approaches to Statistics: A Debate.” Department of Biostatistics and Informatics, Colorado School of Public Health, University of Colorado, November 2018.
7. “Statistical Considerations and Challenges for Trials That Study Multiple Indications.” Department of Statistics, Colorado State University, September 2019.

8. “Predictive Modeling: From Simple to Complex and Transparent to Opaque, A Debate of Two Extremes.” Department of Biostatistics and Informatics, Colorado School of Public Health, University of Colorado, November 2019.
9. “A Multi-Source Adaptive Platform Design for Testing Sequential Combinatorial Therapeutic Strategies.” Strategies to Innovate Emergency Care Clinical Trials Network (SIREN) Neurological Emergencies Treatment Trials (NETT) Network, Online Webinar, April, 2020.
10. “COVID-19: Master Protocols and Challenge Trials.” Department of Biostatistics and Informatics, Colorado School of Public Health, University of Colorado, April 2020.
11. “Statistical Considerations for Trials That Study Multiple Indications.” Bayesian Scientific Working Group Lecture Series, December 2020.
12. “A Sequential Basket Trial Design Based on Multi-Source Exchangeability With Predictive Probability Monitoring.” Department of Biostatistics, Vanderbilt University, February 2021.
13. “A Sequential Basket Trial Design Based on Multi-Source Exchangeability With Predictive Probability Monitoring.” Department of Biostatistics and Informatics, Colorado School of Public Health, University of Colorado, February 2021.

Grant Support

Currently Funded Grants

1. **Title:** Statistical Methods and Adaptive Trial Designs for Cardiovascular Outcomes with Information Sharing
Source: NIH K01-HL151754
Role: Principal Investigator, 75% salary support.
Purpose: To develop statistical methods to facilitate information sharing and accompanying trial designs with application and training in cardiovascular outcomes.
Period: 4/1/2021 - 3/31/2026
2. **Title:** Colorado Clinical and Translational Sciences Institute
Source: NIH UL1-TR002535
Role: Co-Investigator, 10% salary support. (PI: Ronald Sokol, MD)
Purpose: To develop education programming and provide grant writing support in the Biostatistics, Epidemiology, and Research Design core and serve as the local biostatistician for the Trial Innovation Network.
Period: 5/1/2018 - 4/30/2023
3. **Title:** The Contributions of Age Related Changes in the Sound Localization Pathway to Central Hearing Loss
Source: NIH R01-DC017924-01A1
Role: Co-Investigator, 10% salary support. (Multi-PI: Daniel Tollin, PhD, Achim Klug, PhD, Melinda Anderson, PhD)
Purpose: The goal of this project is to examine age-related hearing loss in both humans and animal models to identify the role of the sound localization pathway, better diagnose central hearing loss, and suggest mechanisms for the development of future medical interventions.
Period: 7/1/2019 - 6/30/2024

Completed Grants

1. **Title:** Statistical Methods for Cancer Biomarkers
Source: NIH R01-CA129102
Role: Co-Investigator, 10% salary support. (Multi-PI: Debashis Ghosh, PhD and Jeremy Taylor, PhD)
Purpose: The goal of this project is to explore statistical methods for incorporating new biomarkers

to existing risk prediction models in the context of head and neck cancer and prostate cancer.
Period: 9/1/2017 - 6/30/2019

Teaching

Course Instruction

at Truman State University

Teaching Assistant, Linear Regression/Time Series, Fall 2011

Teaching Assistant, Junior Interdisciplinary Seminar Course “Why You’re Wrong”, Fall 2011

Teaching Assistant, ANOVA and Experimental Design, Spring 2012

at University of Minnesota

Teaching Assistant, Fundamentals of Biostatistical Inference, Fall 2014

Teaching Assistant, Biostatistics Modeling and Methods, Spring 2015

at University of Colorado

Instructor, Biostatistical Methods I, Fall 2018-Fall 2020

Instructor, Advanced Methods in the Design of Clinical Trials, Spring 2020

Guest Lectures

Bayesian Methods, Division of Biostatistics and Informatics, University of Colorado, Spring 2018

Anesthesia Biostatistics Workshop, Department of Anesthesiology, University of Minnesota, Spring 2020

Short Course Instruction

at University of Colorado

Instructor and Creator, Fundamentals of Study Design, Spring 2019-Fall 2020

Advising

PhD Advising

at the University of Colorado

Wenru Zhou, current.

PhD Committees in non-Chair Role

at the University of Colorado

Junxiao Hu, Biostatistics, PhD, 2019.

Ilana Trumble, Biostatistics, PhD, expected 2021.

Laura Campos, Clinical Science, PhD, expected 2022.

Master’s Advising

at the University of Colorado

Arianna Roberts, MPH, 2017-18.

Piper Williams, MS, 2019.

Luke Patten, MS, 2019.

Annika Hebbe, MS, 2020.

Master’s Committees in non-Chair Role

at the University of Colorado

Samantha Bothwell, MS, 2021.

Professional Activities

Professional Memberships

American Statistical Association, 2013 - present

International Biometrics Society - Eastern North American Region (ENAR), 2014 - present

Society for Clinical Trials, 2017 - present

Colorado Clinical and Translational Sciences Institute, 2017 - present

Association for Clinical and Translational Science, 2019 - present

Association of Clinical and Translational Statisticians (ACTStat), 2019 - present

International Biometrics Society - Western North American Region (WNAR), 2019 - present

Service to Professional Societies

Steering Committee Co-Chair, ENAR Council for Emerging and New Statisticians, 2018 - 2021

Member, ACTStat Annual Meeting Planning Committee, 2018 - present

Member, Committee on Communications for the International Biometrics Society, 2020 - present

Member, Social Media and Educational Marketing Taskforce for the Association for Clinical and Translational Science (ACTS), 2020 - present

Referee for:

Biometrical Journal

Biometrics

Biostatistics

Clinical Trials

Journal of Cardiac Failure

Pharmaceutical Statistics

Seminars in Cardiothoracic and Vascular Anesthesia

Statistics in Biopharmaceutical Research

Statistics in Medicine

Surgery for Obesity and Related Diseases

Trials

Grant Reviewer:

Indiana CTSI, Design and Biostatistics Program Pilot Grant, May 2018

Member, NIH NIGMS special emphasis panel (R34), November 2018

Member, Cystic Fibrosis Foundation Clinical Research Committee, April 2019 - present

Member, Cystic Fibrosis Foundation Infectious Disease Research Committee, October 2019 - present

Data Safety and Monitoring Board Service:

Chair, William Cornwell K-Award Research Studies

Member, DSMB for Cystic Fibrosis Foundation trials

Member, Rachel Graham Lucas-Thompson K01 Research Studies

Service

for the Department of Biostatistics and Informatics, University of Colorado

Admissions Committee, 2017 - present

Junior Faculty Mentoring Committee, 2017 - 2019

Social Activities Committee, 2020 - present

for the Center for Innovative Design and Analysis, University of Colorado

Research Tools Committee, 2018 - present

Social Activities Committee, 2018 - present

for the Biostatistics, Epidemiology, & Research Design (BERD) Core of the Colorado Clinical and Translational Sciences Institute, University of Colorado

Education Committee, 2018 - present

for the Colorado Clinical and Translational Sciences Institute, University of Colorado

K-to-R Mock Study Section, 2020

Translational Methods Pilot Grant Study Section, 2020 - present