

Daniel Almirall

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University of Michigan
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Ann Arbor, MI 48104-2321

Education

- 2002 - 2007 University of Michigan & Institute for Social Research, Ann Arbor
PhD, Statistics
Primary Advisor: Susan A. Murphy
Co-Advisors: Thomas R. Ten Have, Stephen Raudenbush, & Yu Xie
- 2000 - 2002 University of Michigan, Ann Arbor
MA, Statistics
- 1996 - 2000 University of Florida, Gainesville
BS, Mathematics
BA, Statistics
Minor Concentrations: Education and Business

Positions Held

- 2013 - present Survey Research Center, Institute for Social Research, University of Michigan, Ann Arbor
Assistant Professor (Tenure Track)
- 2016 - present Population Studies Center, Institute for Social Research, University of Michigan, Ann Arbor
Faculty Associate
- 2010 - 2012 Institute for Social Research, Survey Research Center, University of Michigan, Ann Arbor
Faculty Research Fellowship
- 2007 - 2009 Department of Biostatistics, Duke University Medical Center, Durham, North Carolina
Assistant Professor
- 2007 - 2009 HSR&D, VA Medical Center, Durham, North Carolina
Biostatistician
- 2002 - 2007 Institute for Social Research, University of Michigan, Ann Arbor
Graduate Student Research Assistant
- 2004 RAND Corporation, Pittsburgh, Pennsylvania
Summer Associate
- 2001 Department of Epidemiology, University of Miami, Florida
Summer Research Intern
- 2000 Department of Biostatistics, Harvard School of Public Health, Boston, Massachusetts
Summer Research Intern
Advisors: Louise Ryan & David Wypij

Publications

Peer-Reviewed Articles (Methodological Work)

Setodji C.M., McCaffrey D.F., Burgette L.F., **Almirall D.**, Griffin B.A. (accepted 2017, to appear). The right tool for the job: choosing between covariate balancing and generalized boosted model propensity scores. *Epidemiology*.

Griffin B.A., McCaffrey, D.F., **Almirall, D.**, Burgette, L., Setodji C.M. (accepted 2017, to appear). “Chasing balance versus model fit when estimating propensity scores.” *Journal of Causal Inference*. DOI: <https://doi.org/10.1515/jci-2015-0026>

Nahum-Shani, I., Ertefaie, A., Lu, Xi (Lucy), Lynch, K., McKay, J., Oslin, D., **Almirall, D. (senior author)** (accepted 2016, to appear). A SMART Data Analysis Method for Constructing Adaptive Treatment Strategies in Substance Use Disorders. *Addiction*. DOI: 10.1111/add.13743

Wodtke, G.T., **Almirall, D. (senior author)** (accepted 2016, to appear). Analyzing causal effect heterogeneity with time-varying treatments and time-varying effect moderators: Structural nested mean models and regression-with-residuals estimation. *Sociological Methodology*.

Almirall D., Chronis-Tuscano, A. (2016). “Adaptive interventions in Child and Adolescent Mental Health.” *Journal of Clinical Child and Adolescent Psychology*, 45(4):383-395.

Almirall D., DiStefano, C., Chang, Y., Shire, S., Lu, X., Nahum-Shani, I., Kasari, C. (2016). Adaptive interventions and longitudinal outcomes in minimally verbal children with ASD: Role of speech-generating devices. *Journal of Clinical Child and Adolescent Psychology*, 45(4):443-456.

Kim, H., Ionides, E., **Almirall, D. (senior author)** (2016). “A sample size calculator for SMART pilot studies.” *SIAM Undergraduate Research Online*, Volume 9. DOI: <http://dx.doi.org/10.1137/15S014058>

Sherwood, N.E., Butryn, M.L., Forman, E. M., **Almirall D.**, Seburg, E.M., Crain, L.A., Kunin-Batson, A.S., Hayes, M.G., Levy, R.L., Jeffery, R.W. (2016). The BestFIT trial: A SMART approach to developing individualized weight loss treatments. *Contemporary Clinical Trials*, March, 47:209-216.

Lu, X., Nahum-Shani, I., Kasari, C., Lynch, K.G., Oslin, D.W., Pelham, W.E., Fabiano, G., **Almirall D. (senior author)** (2016). Repeated measures analysis of sequential, multiple assignment, randomized trials: Modeling considerations. *Statistics in Medicine*, 35:1595-1615.

Klasjna, P., Hekler, E., Shiffman, S., Boruvka, A., **Almirall, D.**, Tewari, A., Murphy, S.A. (2015). Micro-randomized trials: An experimental design for developing just-in-time adaptive interventions. *Health Psychology*, December, 34:1220-1228.

Kilbourne, A.M., **Almirall, D.**, Eisenberg, D., Waxmonsky, J., Goodrich, D.E., Fortney, J.C., Kirchner, J.E., Solberg, L.I., Main, D., Bauer, M.S., Kyle, J., Murphy, S.A., Nord, K.M., Thomas, M.R. (2014). “Protocol: Adaptive Implementation of Effective Programs Trial (ADEPT): cluster randomized SMART trial comparing a standard versus enhanced implementation strategy to improve outcomes of a mood disorders program.” *Implementation Science*, 9,132. DOI: 10.1186/s13012-014-0132-x.

Collins L.M., Nahum-Shani I., **Almirall D.** (2014). “Optimization of Behavioral Dynamic Treatment Regimens Based on the Sequential Multiple Assignment Randomized Trial (SMART).” *Clinical Trials*, 11:426-434.

Almirall D., Nahum-Shani I., Sherwood N.E., Murphy S.A. (2014). “Introduction to SMART Designs for the Development of Adaptive Interventions: With Application to Weight Loss Research” *Translational Behavioral Medicine*, 4(3):260-274.

Publications (continued)

Almirall D., McCaffrey D.F., Griffin, B.A., Ramchand R., Murphy S.A. (2013). “Time-varying Effect Moderation using the structural nested mean model: Estimation Using Inverse-Weighted Regression-with-Residuals” *Statistics in Medicine*, 33(20):3466-3487.

McCaffrey D.F., Griffin B.A., **Almirall D.**, Slaughter M.E., Ramchand R., Burgette L. (2013). “A Tutorial on Propensity Score Estimation for Multiple Treatments Using Generalized Boosted Models.” *Statistics in Medicine*, 32(19):3388-3414. DOI:10.1002/sim.5753

Almirall D., Compton S.N., Rynn M.A., Walkup J.T., Murphy S.A. (2012). “SMARTer Discontinuation Trials: With Application to the Treatment of Anxious Youth.” *Journal of Child and Adolescent Psychopharmacology*, 22(5):364-74.

Nahum-Shani I., Qian M., **Almirall D.**, Pelham W.E., Gnagy B., Fabiano G., Waxmonsky J., Yu J., Murphy S.A. (2012). “Experimental Design and Primary Data Analysis Methods for Comparing Adaptive Interventions.” *Psychological Methods*, 17(4):457-477.

Nahum-Shani I., Qian M., **Almirall D.**, Pelham W.E., Gnagy B., Fabiano G., Waxmonsky J., Yu J., Murphy S.A. (2012). “Q-Learning: A Data Analysis Method for Constructing Adaptive Interventions.” *Psychological Methods*, 17(4):478-494.

Almirall D., Lizotte, D., Murphy S.A. (2012). “SMART Design Issues and the Consideration of Opposing Outcomes,” a Discussion of “Evaluation of Viable Dynamic Treatment Regimes in a Sequentially Randomized Trial of Advanced Prostate Cancer” by Wang, Rotnitzky, Lin, Millikan, and Thall. *Journal of the American Statistical Association, Case Studies and Applications*, 107(498):509-12.

Almirall D., Compton S.N., Gunlicks-Stoessel M., Duan N., Murphy S.A. (accepted 2011; in press). “Designing a Pilot Sequential Multiple Assignment Randomized Trial for Developing an Adaptive Treatment Strategy.” *Statistics in Medicine*, 31(17):1887-902.

Almirall D., McCaffrey D.F., Ramchand R., Murphy S.A.. (2013). “Subgroups Analysis when Treatment and Moderators are Time-varying.” *Prevention Science*, 14(2):169-78. DOI: 10.1007/s11121-011-0208-7.

Almirall D., Ten Have T.R., Murphy S.A. (2010; March). “Structural Nested Mean Models for Assessing Time-Varying Causal Effect Moderation.” *Biometrics*, 66(1):131-139.

Bray B.C., **Almirall D.**, Zimmerman R.S., Lynam D., Murphy S.A. (2006). “Assessing the Total Effect of Time-Varying Predictors in Prevention Research.” *Prevention Science* 7(1): 1-17.

Peer-Reviewed Articles (Collaborative Work)

Smith, S.N., Lai, Z., **Almirall D.**, Goodrich, D. E., Abraham, K.M., Nord, K.M., Kilbourne, A.M. (2015). Implementing Effective Policy in a National Mental Health Re-engagement Program for Veterans. *Journal of Nervous and Mental Disease*, 205(2):161-170.

Kilbourne, A.M., Barbaresso, M., Lai, Z., Nord, K., Bramlet, M., Goodrich, D.E., Post, E., **Almirall D.**, Bauer, M. (2017). Improving Physical Health in Patients with Chronic Mental Disorders: 12-Month Results from a Randomized Controlled Collaborative Care Trial. *Journal of Clinical Psychiatry*, January, 78(1):129-137.

Chronis-Tuscano, A., Wang, C.H., Strickland, J., **Almirall D.**, Stein, M.A. (2016). Moving Toward Personalized Treatment of Mothers with ADHD and Their At-Risk Children: A SMART Pilot. *Journal of Clinical Child and Adolescent Psychology*, 45(4):510-521.

Publications (continued)

- Kilbourne, A.M., **Almirall, D.**, Goodrich, D. E., Lai, Z., Abraham, K. M., Nord, K. M., and Bowersox, N. W. (2014). "Enhancing outreach for persons with serious mental illness: 12-month results from a cluster randomized trial of an adaptive implementation strategy." *Implementation Science*, 9(1), 163. DOI: 10.1186/s13012-014-0163-3.
- Gunlicks-Stoessel, M., Mufson, L., Westervelt, A., Murphy S.A., **Almirall D.** (2016). "A Pilot SMART for Developing an Adaptive Treatment Strategy for Adolescent Depression". *Journal of Clinical Child and Adolescent Psychology*, 45(4):480-494.
- Ramchand R., Griffin B.A., McCaffrey D.F., **Almirall D.**, and Morral A. (2014). "Do Improvements in Substance Use and Mental Health Symptoms During Treatment Translate to Long-Term Outcomes In The Opposite Domain?" *Journal of Substance Abuse Treatment*, 47(5):339-346.
- Peris T.S., Compton S.N., **Almirall D.**, Kendall P.C., Albano A.M., Walkup J.T., March J.S., Birmaher B., Ginsburg G.S., Sherrill J., Rynn M.A., McCracken J.T., Keeton C.P., Sakolsk D., Iyengar S., Piacentini J.C. (2015). "Trajectories of Change in Youth Anxiety During Cognitive Behavior Therapy." *Journal of Consulting and Clinical Psychology*, 83(2):239-252.
- Kilbourne, A.M., Abraham, K.M., Goodrich, D.E., Bowersox, N.W., **Almirall D.**, Lai, Z., Nord, K.M. (2015). "Re-Engaging Veterans with Serious Mental Illness into Care: Preliminary Results (6 Month Outcomes) from a National Randomized Trial of an Enhanced versus Standard Implementation Strategy." *Psychiatric Services*, January, 66(1):90-93.
- Kilbourne, A.M., Bramlett, M., Barbaresso, M.M., Nord, K.M., Goodrich, D.E., Zongshan, L., Post, E.P., **Almirall D.**, Verchinina, L., Duffy, S.A., Bauer, M.S. (2014). "SMI Life Goals: Description of a Randomized Trial of a Collaborative Care Model to Improve Outcomes for Persons with Serious Mental Illness". *Contemporary Clinical Trials*, 39(1):74-85.
- Kasari C., Kaiser A., Goods K., Nietfeld J., Mathy P., Landa R., Murphy S.A., **Almirall, D. (senior author)** (2014). "Communication Interventions for Minimally Verbal Children with Autism: Sequential Multiple Assignment Randomized Trial" *Journal of the American Academy of Child and Adolescent Psychiatry*, June, 53(6):635-646.
- Compton S.N., Peris T.S., **Almirall D.**, Birmaher B., Sherill J., Kendall P.C., March J.S., Gosch E.A., Ginsburg G.S., Rynn M.A., Piacentini J.C., McCracken J.T., Keeton C.P., Suvey C., Aschenbrand S.G., Sakolsky D., Iyengar S., Walkup J.T., Albano A.M (2014). "Predictors and Moderators of Treatment Response in Childhood Anxiety Disorders: Results from the CAMS Trial." *Journal of Consulting and Clinical Psychology*, 82(2):212-224, DOI:10.1037/a003548.
- Schuler M., Griffin B.A., Ramchand R., **Almirall D.**, McCaffrey D. (2014) "Effectiveness of adolescent substance abuse treatments: is biological drug testing sufficient?" *Journal of Studies on Alcohol and Drugs*, 75:358-370.
- Griffin B.A., Ramchand R., **Almirall D.**, Slaughter, M., Burgette, L., McCaffrey D.F. (2013). "Estimating the Causal Effects of Cumulative Treatment Episodes for Adolescents using Marginal Structural Models and Inverse Probability of Treatment Weighting." *Journal of Substance Abuse Treatment*, March, 136:69-78.
- Kilbourne A.M., Abraham K.M., Goodrich D.E., Bowersox N.W., **Almirall D.**, Zongshan L., Nord K. (2013). "Cluster randomized adaptive implementation trial comparing a standard versus enhanced implementation intervention to improve uptake of an effective re-engagement program for patients with serious mental illness" *Implementation Science*, 8(136). DOI: 10.1186/1748-5908-8-136.

Publications (continued)

- Yancy, W.S., Coffman, C.J., Geiselman, P.J., Kolotkin, R.L., **Almirall D.**, Oddone, E.Z., Mayer, S.B., Gaillard, L.A., Turner, M., Smith, V.A., Voils, C.I. (2013). "Considering Patient Diet Preference to Optimize Weight Loss: Design Considerations of a Randomized Trial Investigating the Impact of Choice." *Contemporary Clinical Trials*, 35(1):106-116
- Franklin M.E., Freeman J., Sapyta J., Moore P., Compton S.N., **Almirall D.**, March J. (2011). "Cognitive-Behavior Therapy Augmentation of Pharmacotherapy in Pediatric Obsessive Compulsive Disorder: The Pediatric OCD Treatment Study II (POTS II) Randomized, Controlled Trial." *Journal of American Medical Association*, 306(11):1224-1232.
- Lin P.H., Wang Y., Grambow S.C., Goggins, W., **Almirall D.** (2012). "Dietary Saturated Fat Intake Is Negatively Associated With Weight Maintenance Among the PREMIER Participants." *Obesity*, 20(3):571-575. DOI: 10.1038/oby.2011.17.
- Bosworth H.B., **Almirall D.**, Weiner B.J., Maciejewski M., Kaufman M.A., Powers B.J., Oddone E.Z., Shouu-Yih D.L., Damush T., Newell M, Smith V., Anderson D., Roumie C., and Jackson G.L. for HTN-IMPROVE Investigators (2010). "The Implementation of a Translational Study Involving a Primary Care Based Behavioral Program to Improve Blood Pressure Control: The HTN-IMPROVE Study Protocol." *Implementation Science*, 5(1).
- Sánchez-Ortuño M.M., Edinger J.D., **Almirall D.**, Means M.K. (2010). "Home Is Where Sleep Is: An Ecological Approach to Test the Validity of Actigraphy for the Assessment of Insomnia." *Journal of Clinical Sleep Medicine*, 6(1):21-29.
- Gellad Z.F., **Almirall D.**, Provenzale D., Fisher D.A. (2009). "Time from Positive Screening Fecal Occult Blood Test to Colonoscopy and Risk of Neoplasia." *Digestive Disease Sciences*, 54(11):2497-2502.
- Yancy W.S., **Almirall D.**, Maciejewski M.L., Kolotkin R.L., McDuffie J.R., Westman E.C. (2009). "Effects of Two Weight Loss Diets on Health-related Quality of Life." *Quality of Life Research* 18(3):281-89.
- Mithas S., **Almirall D.**, Krishnan M.S. (2006). "Using Propensity Scores for Causal Inference: Do CRM Systems Cause One-to-one Marketing Effectiveness?" *Statistical Science* 21(2):223-33.
- Newburger J.W., Wypij D., Bellinger D.C., du Plessis A.J., Kuban K.C., Rappaport L.A., **Almirall D.**, Wessel D.L., Jonas R.A., Wernovsky G. (2003). "Length of Stay After Infant Heart Surgery is Associated with Long-Term Cognitive Outcome." *Journal of Pediatrics* July, 143:67-73.

Book Chapters & Other

- Almirall, D.**, Shih, W. (accepted 2016, in press). "SMART Research Design." *The SAGE Encyclopedia of Abnormal and Clinical Psychology*.
- Almirall D.**, Blalock J. (2013). "Summary of the Society for Research on Nicotine and Tobacco (SRNT) Treatment Network Webinar: Getting SMART About Developing Individualized Sequences of Health Interventions." *Nicotine and Tobacco Research (Society News)*, 16(2):252.
- Almirall D.**, Coffman C.J., Yancy W.S., Murphy S.A. (2010). "Maximum Likelihood Estimation of the Structural Nested Mean Model Using SAS PROC NLP." *Analysis of Observational Health-Care Data Using SAS*. D. Faries, A. Leon, J.M. Haro, B. Obenchain (Editors).
- Almirall D.**, Murphy S.A. (2009). "Dynamic Treatment Regimens." *Encyclopedia of Medical Decision Making*. M.W. Kattan (Editor). Thousand Oaks, CA: Sage Publications.

Publications (continued)

Mithas S., **Almirall D.**, Krishnan M.S. (2009). “A Potential Outcomes Approach to Assess Causality in Information Systems Research.” In R.J. Kauffman and P.P. Tallon (Eds.) *Economics, Information Systems, and Electronic Commerce Research II: Advanced Empirical Methodologies*. Armonk, NY: M.E. Sharpe.

Work Submitted for Publication

Boruvka, A., **Almirall D.**, Murphy, S.A. (under revision). “Assessing Time-Varying Causal Effect Moderation in Mobile Health” *Journal of the American Statistical Association*

NeCamp, T., Kilbourne, A., **Almirall D. (senior author)** (under revision). “Comparing Cluster-level dynamic treatment regimens using sequential, multiple assignment randomized trials: Regression estimation and sample size considerations” *Statistical Methods in Medical Research Journal*

Hall, K., Nahum-Shani, I. August G., Patrick, M., Murphy, S.A., **Almirall D. (senior author)** (submitted). “Adaptive Intervention Designs in Substance Use Prevention.” *Advances in Prevention Science*. Z. Sloboda, H. Petras, L. Robertson, R. Hingson (Editors).

Almirall D., Nahum-Shani I., Wang, L., Kasari C. (submitted). “Experimental Designs for Research on Adaptive Interventions: Singly- and Sequentially-Randomized Trials”

Kidwell, K., Seewald, N., **Almirall, D. (senior author)** (submitted). “Design and Analysis Considerations for Comparing Dynamic Treatment Regimens with Binary Outcomes from SMART Studies.”

Tao, Y., Wang, L. **Almirall D.** (submitted). Tree-based Reinforcement Learning for Estimating Optimal Dynamic Treatment Regimens.

Work in Progress

Seewald, N.J., Nahum-Shani I., **Almirall D. (senior author)** (in progress). “Sample Size Considerations for the Analysis of Continuous Repeated-Measures Outcomes in Sequential Multiple-Assignment Randomized Trials.”

Almirall D., Lu X., Kasari C., Nahum-Shani I., (in progress). “Small sample considerations in the comparison of dynamic treatment regimens using SMART data: With application in autism research.”

Almirall D., Lu X., Griffin, B.A., McCaffrey D.F. (in progress). “Accounting for within-person residual correlation in IPTW estimation of the repeated measures marginal structural model: Practice and pitfalls”

Almirall D., Lu, X., Kasari, C., Nahum-Shani, I. (in progress). Variance reduction in the comparison of dynamic treatment regimens using SMART data: With applications to ADHD.

Almirall, D., Nahum-Shani, I. Murphy, S.A. (book project). “Getting SMART about Adaptive Interventions: Case Studies in the Behavioral, Biobehavioral and Educational Sciences”

Grant Funding

Principal Investigator Role

2015 - 2020 NIDA/NIH, R01-DA039901 (Co-PI, with Nahum-Shani) *Novel Longitudinal Methods for SMART Studies of Drug Abuse and HIV*. (\$338,525 per year)

2012 - 2015 NIMH/NIH, R03-MH097954. *Discovering Tailoring Variables in Childhood Mental Health Treatment Research*.

Grant Funding (continued)

2010 - 2011 United States Department of Agriculture, Cooperative Agreement 58-4000-0-0026. *Dynamic Participation in the Supplemental Nutrition Assistance Program and Its Impact on Child Overweight.* (\$25,000)

Co-Investigator Role

2016 - 2020 NICHD/NIH, P01-HD087155. *Transition to Adulthood within its Life Course & Intergenerational Family Context.* (Principal Investigator: Narayan Sastry, Ph.D., Institute for Social Research, University of Michigan)

2015 - 2019 NIDA/NIH, P50-DA039838. *Innovative Methods for Constructing Just-In-Time Adaptive Interventions.* (Principal Investigator: Susan A. Murphy, Ph.D., Department of Statistics & Institute for Social Research, University of Michigan)

2014 - 2019 NCA/NIH, R01-CA188892. *Evaluating Options for Non-Responders: A SMART Approach to Enhancing Weight Loss* (Principal Investigator: Nancy Sherwood, Ph.D., HealthPartners Institute for Education and Research)

2014 - 2018 NIMH/NIH, R01-MH099898. *Improving Mental Health Outcomes: Building an Adaptive Implementation Strategy* (Principal Investigator: Amy Kilbourne, Ph.D., University of Michigan)

2012 - 2017 NICHD/NIH, R01-HD73975. *Adaptive Interventions for Minimally Verbal Children with ASD in the Community* (Principal Investigator: Connie Kasari, Ph.D., University of California, Los Angeles)

2012 - 2017 Veterans Affairs, IPA Sub-contract. *Life Goals Collaborative Care to Improve Health Outcomes in Mental Disorders* (Principal Investigator: Amy Kilbourne, Ph.D., University of Michigan)

2012 - 2015 NIDA/NIH, R01-DA034065. *Causal Effects of Community-based Treatments for Youth.* (Principal Investigator: Beth Ann Griffin & Daniel F. McCaffrey, Ph.D., RAND Corporation)

2010 - 2015 NIDA/NIH, P50-DA10075. *SMART Methodology for Constructing Adaptive Treatments.* (Principal Investigator: Susan A. Murphy, Ph.D., Department of Statistics & Institute for Social Research, University of Michigan) (\$336,271)

2013 - 2015 NICHD/NIH, R01-HD074603. *Heterogeneous Treatment Effects in Demographic Research* (Principal Investigator: Yu Xie, Ph.D., Survey Research Center & Institute for Social Research, University of Michigan)

2007 - 2010 Department of Veterans Affairs, VHA, IIR-05-213-1. *Sleep Specialty Consultation: Improving Management of Sleep Disorders.* (Principal Investigator: Jack Edinger, Ph.D., Durham VA & Duke University Medical Center, Psychiatry) (\$769,000)

2007 - 2010 Department of Veterans Affairs, VHA. *HTN Implementation Project.* (Principal Investigator: Hayden Bosworth, Ph.D., Durham VA & Duke University Medical Center, General Medicine) (\$900,000)

2007 - 2012 Department of Veterans Affairs, VHA, IIR-05-202-2. *Family Supported Smoking Cessation for Chronically Ill Veterans.* (Principal Investigator: Lori Bastian, Ph.D., Durham VA & Duke University Medical Center, General Internal Medicine) (\$900,000)

2006 - 2007 Samueli Institute & Department of Defense, IEA-0000040. *Effects of Guided Imagery for Military Sexual Trauma on PTSD Symptoms, Neurosteroids, and Brain Function.* (Principal Investigator: Jennifer Strauss, Ph.D., Durham VA & Duke University Medical Center, Psychiatry) (\$175,000)

Grant Funding (continued)

2007 - 2012 National Institute of Mental Health, R01-MH079154. *Family Based Treatment of Early Childhood OCD*. (Principal Investigator: John March, Ph.D., Duke University Medical Center, Psychiatry) (\$170,000)

Presentations

Sequential Multiple Assignment Randomized Trials for Building (Cluster-level) Adaptive Interventions
February 2017, Institute for Policy Research, Northwestern University, Evanston, IL (Invited)

Assessing Time-varying Causal Effect Moderation in Mobile Health
January 2017, Department of Public Health Sciences, University of Chicago, IL (Invited)
January 2017, Center for Causal Inference, RAND Corporation, Washington, DC (Invited)
December 2016, Department of Biostatistics, Johns Hopkins University, Baltimore, MD (Invited)
November 2016, Department of Biostatistics, University of Washington, Seattle, WA (Invited)
August 2016, Joint Statistical Meetings, Chicago, IL

Adaptive Interventions: What are they? Why do we need them? How can we study them?
December 2016, Inst. for Transl. Research in Children's Mental Health, Univ of Minnesota (Invited)

Sequential Multiple Assignment Randomized Trials for Building Adaptive Interventions in Education
December 2016, Institute for Education Sciences PI Meeting, Washington DC (Invited)
December 2015, Institute for Education Sciences PI Meeting, Washington DC (Invited)

Adaptive Interventions in Autism: What are they? Why do we need them? How can we study them?
June 2016, NIH Autism Centers of Excellence, Principal Investigator Meeting, Washington DC

A Look Under the Hood of SMART Designs for Developing Adaptive Interventions.
April 2016, Center for Drug Use and HIV Research (CDUHR), NYU, New York, NY (Invited)

Assessing Proximal and Lagged Moderated Effects in Mobile Health.
April 2016, Department of Biostatistics, University of Pennsylvania, PA (Invited)

Getting SMART About Developing Individualized Sequences of Oral Health Interventions
March 2016, American Association for Dental Research Methods Group, Los Angeles, CA (Keynote)

Adaptive Interventions and SMARTs in Autism.
January 2016, Department of Psychology, University of Michigan, Ann Arbor, MI

Adaptive Interventions and SMART Designs in Mental Health Services Research
September 2015, Ctr for Mental Health Policy & Services, Univ Pennsylvania, Phil., PA (Invited)

On the Comparison of Adaptive Interventions Using Repeated Measures Data from a SMART: Applications in Child and Adolescent Mental Health
May 2015, Quantitative Methods for Social & Behavioral Sciences, University of Chicago, IL (Invited)

Adaptive Interventions and SMART Methods: Applications in Child and Adolescent Mental Health.
April 2015, Preventive Medicine Grand Rounds, Rush University, Chicago, IL (Invited)

Getting SMART about Innovative Designs for Studying Effectiveness: The Case of Adaptive Implementation Interventions and Connections to HIV Research
February 2015, Conference on Retroviruses & Opportunistic Infections, Seattle, WA (Invited)

Presentations (continued)

Improving Mental Health Outcomes: Building an Adaptive Implementation Strategy Using a Cluster Randomized SMART

December 2014, Conf. on Science of Dissemination & Implementation, Washington, DC (Invited)

Adaptive Interventions and SMART Designs in Autism

October 2014, Vanderbilt University, Nashville, TN (Invited)

Comparing Adaptive Interventions Using Data Arising from a SMART: With Application to Autism

March 2014, Department of Biostatistics, Columbia University, New York, NY (Invited)

Introduction to a SMART Way to Construct Adaptive Interventions

November 2013, Methods in Prevention Program Packages Meeting (MP3), Washington, DC (Invited)

September 2013, Optimizing Behavioral Interventions in HIV Research, Washington, DC (Invited)

Getting SMART About Developing Individualized Sequences of Health Interventions

September 2013, U.S. Census Bureau, Washington, DC (Invited)

Examining moderated effects of additional adolescent substance use treatment: Structural nested mean model estimation using inverse-weighted regression-with-residuals.

February 2013, Dept. of Epidemiology & Biostatistics, Univ of Maryland, Baltimore, MD (Invited)

September 2012, Department of Statistics, George Mason University (Invited)

July 2012, Institute of Mathematical Statistics, Asia Pacific Rim Meeting, Tsukuba, Japan (Invited)

March 2012, RAND Corporation, Pittsburgh, PA (Invited)

December 2011, Department of Biostatistics, University of Michigan, Ann Arbor, MI

October 2011, International Conference on Health Policy Statistics, Cleveland, OH (Invited)

Getting SMART about Developing Individualized Sequences of Health Interventions.

November 2012, Innovative Methods Program for Advancing Clinical Trials, Raleigh, NC (Invited)

Piloting and Sizing Sequential Multiple Assignment Randomized Trials in Dynamic Treatment Regime Development

October 2012, Advances in Interdisciplinary Statistics and Combinatorics, UNC, Greensboro, NC

Variable Selection for Individualized Treatment Decision-Making.

July 2012, Joint Statistical Meetings, San Diego, California

An Adaptive Intervention for Reducing College Student Alcohol-Related Consequences: A SMART Pilot Study Proposal

March 2012, Center for the Study of Health & Risk Behaviors, Univ. of Washington, Seattle (Invited)

Developing Adaptive Health Interventions: Getting SMART

March 2012, AIMS Center, Univ. of Washington, Seattle (Invited)

Experimental Designs for Developing Adaptive Treatment Strategies

October 2011, Annual Meeting of the Obesity Society, Orlando, FL (Invited)

June 2011, Childhood Obesity Prevention and Treatment Research Program (Invited)

April 2011, Annual Meeting of the Society of Behavioral Medicine, Washington, DC

Time-varying Causal Effect Moderation in the Presence of Time-varying Confounding using Structural Nested Mean Models.

August 2010, Joint Statistical Meetings, Vancouver, Canada

Experimental Designs for Developing Adaptive Treatment Strategies: With Application to Bipolar Disorder

June 2010, International College of Neuro-psychopharmacology, Hong Kong, China (Invited)

Presentations (continued)

Participation in the Supplemental Nutrition Assistance Program and its Impact on Child BMI
June 2010, PSID Early Results Workshop, Institute for Social Research, Ann Arbor, MI

Subgroups Analysis when Treatment and Moderators are Time-Varying.
March 2010, Methodology Center, Pennsylvania State University, State College (Invited)

Causal Effect Moderation (Modification) When Treatment or Exposure is Time-Varying: When to use the MSM versus the SNMM.
September 2009, Federal Interagency Subgroups Analysis Meeting, Bethesda, MD. (Invited)

Structural Nested Mean Models for Assessing Time-varying Effect Moderation
January 2010, Prevention Science and Methodology Group, University of South Florida. (Invited)
September 2009, Causal Inference Working Group, University of North Carolina, Chapel Hill (Invited)
May 2009, Atlantic Coast Causal Modeling Conference, Philadelphia, Pennsylvania (Invited)
September 2007, Department of Statistics, North Carolina State University, Raleigh, NC (Invited)
July 2007, Joint Statistical Meetings, Salt Lake City, UT
March 2007, Michigan Student Symposium for Interdisciplinary Statistical Sciences, Ann Arbor, MI
August 2006, Joint Statistical Meetings, Seattle, WA
May 2006, Durham VA Medical Center, HSR&D, Durham, NC
March 2006, ENAR Biometrics Conference, Tampa, FL [Distinguished Student Paper Award]
November 2005, Grad Seminar, Department of Statistics, University of Michigan, Ann Arbor, MI

Structural Nested Mean Models for Assessing Time-varying Effect Moderation: A Maximum Likelihood Implementation
August 2009, Joint Statistical Meetings, Washington, DC.

Experimental Designs for Developing Adaptive Treatment Strategies: With Application to the Management of Child Anxiety
September 2009, Durham VA Medical Center, HSR&Development, Durham VA Medical Center
May 2008, NIMH-NCDEU Conference, Phoenix, AZ (Invited)
August 2009, Institute of Psychiatry, University of Sao Paulo, Brazil (Invited)

Assessing the Effects of Time-Varying Predictors and Treatments: Conceptual Issues
September 2007, Durham VA Medical Center, HSR&Development, Durham VA Medical Center

Causal Effect Moderation with Application to Level of Care Matching for Adolescent Substance Abuse
November 2006, Grad Seminar, Department of Statistics, University of Michigan, Ann Arbor, MI.

Why Study Time-varying Effect Moderation?
October 2005, Quantitative Methodology Program, Institute for Social Research, Ann Arbor, MI

Teaching

Workshops

Building Just-in-time Adaptive Interventions in Mobile Health: The Role of Micro-Randomized Trials.
May 2016, Association for Psychological Science, Annual Convention, Chicago, IL (1/2-day workshop)

Getting SMART about Adaptive Interventions.
May 2016, Training on Optimization of Behavioral Interventions, Washington, DC (1-day workshop)

Just-in-time Adaptive Interventions in Mobile Health.
March 2016, Society for Behavioral Medicine, Washington, DC (1/2-day workshop)

Teaching (continued)

Getting SMART about Adaptive Implementation Interventions

September 2015, Implementation Research Collab., Univ of Washington, Seattle (1-day workshop)

Getting SMART about Adaptive Interventions: From Clinical to Implementation Science.

June 2015, AcademyHealth, Washington, DC (1/2-day workshop)

Getting SMART: Experimental Design Methods for Developing Adaptive Interventions

May 2015, Society for Prevention Research, Washington, DC (1/2-day workshop)

Getting SMART about Adaptive Interventions in Education: A Conceptual Introduction

December 2014, Institute of Education Sciences, Washington, DC (1-day workshop)

Getting SMART about Adaptive Interventions: A Workshop

December 2014, Taste of Methodology, Penn State University, PA (1-day workshop)

Experimental Design and Analysis Methods for Developing Adaptive Interventions: Getting SMART

June 2014, University of Michigan, Ann Arbor, MI (2-day workshop)

Clinical Trials for Adaptive Intervention Designs: Workshop on the Design and Conduct of Sequential Multiple Assignment Randomized Trials

May 2014, Annual Meeting of the Society for Clinical Trials, Philadelphia, PA (1-day workshop)

Combating Autism with Adaptive Interventions: Novel Treatment and Research Methods for Individualizing Treatment

May 2014, International Meeting for Autism Research, Atlanta, GA (2-hr workshop)

Getting SMART about Developing Adaptive Interventions: Individualizing Sequences of Treatment

April 2014, Annual Meeting of the Society for Behavioral Medicine, Philadelphia, PA (1-day workshop)

Getting SMART About Developing Adaptive Interventions

March 2014, Society for Research on Educational Effectiveness, Washington, DC (2-day workshop)

Getting SMART about Developing Individualized, Adaptive Health Interventions: An Introduction to a Novel Experimental Study Design

February 2013, VA Medical Center, Baltimore, MD (8-hr workshop)

Getting SMART about Developing Individualized, Adaptive Health Interventions: An Introduction to a Novel Experimental Study Design

June 2012, Health Behavior Training Inst., Univ of Wisconsin, Madison, WI (2.5-hr workshop)

Getting SMART About Developing Individualized Sequences of Health Interventions

June 2012, Methods Work, Chicago, IL (2-day workshop)

November 2011, Association of Behavioral & Cognitive Therapies, Toronto, Canada (8-hr workshop)

October 2011, Addiction Health Services Research Conference, Fairfax, VA (4-hr workshop)

June 2011, College on Problems of Drug Dependence, Hollywood, FL (2-hr workshop)

June 2011, University of Minnesota NIMH Prevention Center, Twin Cities, MN (8-hr workshop)

April 2011, Society of Behavioral Medicine, Washington, DC (3-hr workshop)

Developing Dynamic, Sequential Treatments that Optimize Mental Health Outcomes: Experiences with a Novel Clinical Trial Design

June 2011, New Clinical Drug Evaluation Unit (NCDEU), Boca Raton, FL (4-hr workshop)

Teaching (continued)

Graduate/Professional Courses

How to Design and Draw Inferences in Experimental and Quasi-Experimental Studies (Lecturer): Summer Institute in Survey Research Techniques, University of Michigan: Summer 2015

Topics in Clinical Research (Ad-hoc Lecturer): Clinical Research Training Program, Duke University Medical Center: Winter 2008

Undergraduate Courses

Introduction to Statistics (Discussion Leader): University of Michigan: Fall 2006, Winter 2007

Introduction to Probability (Substitute): University of Michigan: Fall 2013, Winter 2006, 2011

Pre-calculus Algebra: University of Florida: Fall 1998, Spring 1999

Pre-Calculus, Survey of Calculus, and Calculus I (Discussion Leader): University of Florida: Spring 1997 - Spring 2000

High School Courses

SAT/ACT Exam Preparation Courses: Santa Fe Community College: Fall 1999, Spring 2000

Students

* Grant-funded.

PhD Level

Nick Seewald* Summer 2016–present; Department of Statistics, University of Michigan
Analysis of Longitudinal Outcomes in a SMART, and Sample Size Calculation

Tim Necamp* Fall 2015–present; Department of Statistics, University of Michigan
Regression Estimation and Sample Size Calculation for Cluster Randomized SMARTs

Xi Lu* Summer 2013–Summer 2015; Department of Statistics, University of Michigan
Repeated Measures Analysis of Data Arising from a SMART
Notables: (1) This work became part of Dr. Lu's PhD Thesis; (2) Dr. Lu is lead author on a manuscript arising from this work (published in *Statistics in Medicine*).

Robert Yuen* Fall 2011–Fall 2012; Department of Statistics, University of Michigan
Inference for an IPTW Estimator of the Structural Nested Mean Model
Notables: Dr. Yuen is a co-author on a manuscript arising from this work (published in *Statistics in Medicine*).

Masters Level

Yeonil Kim Winter 2014–Summer 2014; Department of Statistics, University of Michigan
Guided readings and practicum on multiple imputation with the PSID

Undergraduates

Kelly Hall Fall 2015–present; Department of Statistics, University of Michigan
Adaptive Interventions in Substance Use Prevention

Students (continued)

Notables: Ms. Hall is lead author on a book chapter arising from this work.

- Hwanwoo “Josh” Kim* Summer 2014–current; Department of Statistics, University of Michigan
A Sample Size Calculator for SMART Pilot Studies
Notables: (1) Mr. Kim is lead author on a manuscript arising from this work (submitted to the SIAM Undergraduate Research Journal); (2) Won 2nd Prize in the 2015 USPROC Competition; (3) Developed a web applet to implement method
- Raghav Haran Winter 2013; Department of Statistics, University of Michigan
Guided readings on adaptive interventions, SMARTs and SMART pilot studies

Professional Service

- Summer 2016 Member: Planning Committee, NIH Autism Centers of Excellence Principal Investigator Meeting, Washington, DC
- 2015 - present Member: Diversity Committee, Survey Research Center, Institute for Social Research, University of Michigan, Ann Arbor, MI
- July 2015 Member: Institute of Education Sciences Technical Working Group on “Adaptive Interventions and SMARTs in Education Research”, Washington, DC
- Summer/Fall 2015 Member: Dean/Director’s Search Committee, Institute for Social Research, University of Michigan, Ann Arbor, MI
- Spring 2014 Co-Leader (joint with Megan Patrick): Review of the Experiences of Junior Faculty, Survey Research Center, Institute for Social Research, University of Michigan, Ann Arbor, MI
- 2010 - 2013 Host/Moderator: Quantitative Methodology Program Seminar Series, Institute for Social Research, University of Michigan, Ann Arbor, MI
- 2008 - 2009 Member: Internal Grant Review Committee, Health Services Research Department, Durham VA Medical Center
- 2008 - 2009 Member: PhD and Masters Curriculum Committee, Biostatistics & Bioinformatics Department, Duke University Medical Center
- Grant Reviews June 2015: Member, National Institute of Mental Health Special Emphasis Panel (ZMH1)
- Special Issue 2012-2015: Co-Editor (with Professor Andrea Chronis-Tuscano) of a Special Issue on “Science of Adaptive Treatment Strategies in Child and Adolescent Mental Health” for the *Journal of Clinical Child and Adolescent Psychology*.
- K-Awardees Meredith Gunlicks-Stoessel, University of Minnesota, Adolescent Depression
Dikla Eckshtain, Harvard University, Child Depression
Molly Adrian, University of Washington, Adolescent Suicide
- Data Safety CAMS/DBT Suicide Prevention (PI: Pistorello, University of Nevada-Reno)
- Monitoring Boards Sequenced Therapies for Comorbid and Primary Insomnias (Co-PI: Edinger/Morin, University of Montreal)
Preventing Addiction Related Suicide (PI: Comtois, University of Washington)

Professional Service (continued)

Attention Control Training for Infants at Risk for ADHD (PI: Johnson, Birkbeck, University of London)

Journal Referee

Journal of the American Statistical Association
Biometrics
Statistics in Medicine
Annals of Applied Statistics
BMC Medical Research Methodology
Journal of the American Academy of Child and Adolescent Psychiatry
Journal of Clinical Child and Adolescent Psychology
Journal of Consulting and Clinical Psychology
Journal of Research on Educational Effectiveness
Prevention Science
American Journal of Evaluation
Sociological Methodology

Professional Affiliations

2016 - present Member: National Hispanic Science Network (of the National Institute on Drug Abuse)

2008 - present Member: Society for Clinical Trials

2003 - present Member: International Biometric Society's Eastern North American Region subdivision

2002 - present Member: Institute of Mathematical Statistics, and American Statistical Association

Other Skills

Programming

Statistical R, SAS

Other Fortran, HTML, L^AT_EX

Languages

Fluent Spanish, English

References are available upon request.