

Benjamin ACKERMAN

PERSONAL DATA

ADDRESS: 615 N. Wolfe St, E3031, Baltimore, Maryland 21205
PHONE: 310-963-0578
EMAIL: backer10@jhu.edu
WEB: www.benjaminackerman.com

EDUCATION

- 2015 - PRESENT **PhD Candidate, Biostatistics**
Johns Hopkins Bloomberg School of Public Health, Baltimore, MD
Advisor: Dr. Elizabeth STUART
Thesis Title: *“Statistical Methods for Transportability: Addressing External Validity and Measurement Error Concerns in Randomized Trials”*
- 2011 - 2015 **Bachelor of Arts, Public Health Studies**
Johns Hopkins University, Baltimore, MD
Minor: Applied Mathematics and Statistics
Honors Thesis: *“The Association Between Genetic Variants and IQ among Individuals with Autism Spectrum Disorders”* | Advisor: Dr. Yin YAO

PROFESSIONAL EXPERIENCE

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| <i>Current</i>
MARCH 2016 | Statistician/Programmer
<i>SAJE Consulting</i> , Baltimore, MD
Conducted data analysis and produced publication-ready graphics for various research studies conducted by pharmaceutical and biotechnology companies. Contributed to analyses for reports to the following regulatory agencies: FDA, EMA and NOMA. |
| SUMMER 2018 | Fellow, Data Science for Social Good
<i>Center for Data Science & Public Policy, University of Chicago</i> , Chicago, IL
Partnered with AllianceChicago to build a predictive model to identify patients at risk of developing Type 2 Diabetes using de-identified electronic health records (EHR) data. |

RESEARCH EXPERIENCE

Graduate Research Assistant, Johns Hopkins Bloomberg School of Public Health

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| <i>Current</i>
JUNE 2016 | Department of Biostatistics
Worked with thesis advisor Dr. Elizabeth Stuart to evaluate statistical methods for assessing and improving upon the generalizability of randomized controlled trials. Also developed methods to improve upon the transportability of measurement error correction from external validation samples to lifestyle intervention trials. |
| SEPT 2016 -
AUG 2017 | Department of Mental Health
Collaborated with Dr. Heather Volk to examine the relationship between prenatal air pollution exposure and risk of Autism Spectrum Disorders, using data from the Boston Birth Cohort. |
| OCT 2015 -
OCT 2017 | Center for Public Health and Human Rights
Worked with Dr. Tonia Poteat to estimate HIV risk among MSM, transgender and gender variant populations in Africa. Merged survey data across eight different countries, and explored issues regarding survey methodology and gathering data on sexual orientation and gender identity. |

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Undergraduate Research Assistant

SUMMER 2014	Unit on Statistical Genomics, <i>National Institute of Mental Health</i> Evaluated the association between genetic variants and IQ among individuals with Autism Spectrum Disorders using statistical analysis software PLINK and FBAT.
SEPT-DEC 2013	Department of Infectious Diseases, <i>Assaf Harofeh Medical Center</i> Assessed the epidemiology of carbapenem-resistant enterobacter species in patients at Assaf Harofeh Medical Center in Israel and Detroit Medical Center.
SUMMER 2013	Summer Institute Training in Biostatistics (SIBS), <i>Columbia University Mailman School of Public Health</i> 8-week program supported by the National Heart Lung and Blood Institute. Conducted research in Center for Behavioral Cardiovascular Health with Dr. Keith Diaz.

PUBLICATIONS

Published / In Press:

1. Ackerman, B., Schmid, I., Rudolph, K. E., Seamans, M. J., Susukida, R., Mojtabai, R., Stuart, E. A. (2019). "Implementing statistical methods for generalizing randomized trial findings to a target population." *Addictive Behaviors*, 94, 124-132. <https://doi.org/10.1016/j.addbeh.2018.10.033>
2. Nguyen, T. Q., Ackerman, B., Schmid, I., Cole, S., Stuart, E.A. (2018). "Sensitivity analyses for effect modifiers not observed in the target population when generalizing treatment effects from a randomized controlled trial: Assumptions, models, effect scales, data scenarios, and implementation details." *PLoS One*, <https://doi.org/10.1371/journal.pone.0208795>
3. Lenis, D., Ackerman, B., Stuart, E.A. (2018). "Measuring model misspecification: Application to propensity score methods on complex survey data." *Computational Statistics & Data Analysis*, 128, 48-57. <https://doi.org/10.1016/j.csda.2018.05.003>
4. Poteat, T., Ackerman, B., Diouf, D., Ceesay, N., Mothopeng, T., Odette, K-Z, et al. (2017) "HIV prevalence and behavioral and psychosocial factors among transgender women and cisgender men who have sex with men in 8 African countries: A cross-sectional analysis." *PLoS Med*, 14(11): e1002422. <https://doi.org/10.1371/journal.pmed.1002422>
5. Stuart, E. A., Ackerman, B., Westreich, D. (2017). "Generalizability of randomized trial results to target populations: Design and analysis possibilities." *Research on Social Work Practice*, 28(5), 532-537.
6. Tao, Y., Gao, H., Ackerman, B., Guo, W., Saffen, D., Shugart, Y. Y. (2016). "Evidence for contribution of common genetic variants within chromosome 8p21.2-8p21.1 to restricted and repetitive behaviors in autism spectrum disorders." *BMC Genomics*, 17(1), 163.
7. Lazarovitch, T., Amity, K., Coyle, J. R., Ackerman, B., Tal-Jasper, R., Ofer-Friedman, H., et al. (2015). "The complex epidemiology of carbapenem-resistant enterobacter infections: A multicenter descriptive analysis." *Infection Control and Hospital Epidemiology*, 36(11), 1283-1291.

Preprints/Under Review:

8. Ackerman, B., Siddique, J., Stuart, E.A. (2019) "Transportability of outcome measurement error correction: from validation studies to intervention trials." <https://arxiv.org/abs/1907.10722>

HONORS AND AWARDS

- 2019 Special Award for Outstanding Student Service, Johns Hopkins Biostatistics
- 2019 JSM Best Student Paper Award, ASA Biopharmaceutical Section - 3rd Place
- 2019 JHU 3 Minute Thesis (3MT) Competition - 3rd Place + Alumni Choice Winner
- 2017 JHSPH Delta Omega Poster Competition - 2nd Place (Applied Research)

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2015 Best Senior Thesis in Public Health, Johns Hopkins University

2011-2015 Dean's List, Johns Hopkins University

COMPUTING PROJECTS AND RESOURCES

- 2018 **generalize** (R Package)
Software for implementing statistical methods to assess and improve upon generalizability of RCTs to well-defined target population
<https://benjamin-ackerman.github.io/generalize>
- 2017 **How will the House Tax Bill Impact Graduate Students?** (R Shiny App)
Web app to calculate estimated 2018 federal income tax under proposed H.R. 1 tax bill
<https://benjaminackerman.shinyapps.io/GOPtax2017/>
Featured in Science Magazine (see section on Tuition Waivers)

PROFESSIONAL ACTIVITIES

- Outreach** “This is Public Health” Ambassador for the Association of Schools & Programs of Public Health (ASPPH)
- Reviewer** *Biometrics, PLOS ONE, Pharmaceutical Statistics, The Journal of Experimental Education, Sexuality Research and Social Policy*
- Member** American Statistical Association (ASA)
Eastern North America Region of the International Biometrics Society (ENAR)
Society for Research on Educational Effectiveness (SREE)

ACADEMIC SERVICE

- Co-President, JHSPH Mental Health Grad Network
- Tea Time Organizer, Department of Biostatistics, JHSPH
- 2018-2019 PhD Representative to the Faculty Meetings, Department of Biostatistics, JHSPH

TALKS AND PRESENTATIONS

Invited Talks

- 2019 **Sensitivity Analysis for Unobserved Effect Modification when Generalizing Findings from Randomized Trials to Target Populations**
FCSM/WSS Workshop on Sensitivity Analysis with Integrated Data, Washington, DC.
- Using Statistics and Data Science for Public Health and Social Good**
Department of Global and Community Health, George Mason University, Fairfax, VA.
Invited talk for National Public Health Week 2019

Conference Talks and Posters

- 2019 **Calibrating Validation Samples when Correcting for Measurement Error in Intervention Study Outcomes**
- *Joint Statistical Meetings (JSM)*, Denver, CO, Topics Contributed Talk.
- *ENAR Spring Meeting*, Philadelphia, PA, Contributed Talk.

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generalize: Statistical Software for Implementing Methods to Generalize Randomized Trial Findings to a Well-Defined Target Population

- *Society for Research on Educational Effectiveness (SREE) Spring 2019 Conference*, Washington, DC, Poster.

- *Institute of Education Sciences (IES) Annual PI Meeting*, Washington, DC, Poster.

2018 **Supporting Proactive Diabetes Screenings to Improve Health Outcomes**

Data Science for Social Good Data Fest, Chicago, IL, Speed Talk and Poster.

Sensitivity Analysis for an Unobserved Moderator in Trial-to-Target-Population Generalization of Treatment Effects

Society for Research on Educational Effectiveness (SREE) Spring 2018 Conference, Washington, DC, Contributed Talk.

Estimating Population Effects: Case Study of Generalizing Results of a Methamphetamine Dependence Trial

International Conference on Health Policy Statistics (ICHPS), Charleston, SC, Contributed Talk.

2017 **Characterizing the Burden of HIV and Specific Vulnerabilities among Transgender Women compared to Men who have Sex with Men across Eight Sub-Saharan African Countries**

- *Joint Statistical Meetings (JSM)*, Baltimore, MD, Topics Contributed Talk.

- *Johns Hopkins LGBT Research Day*, Baltimore, MD, Talk.

2016 **Sensitivity Analysis for an Unobserved Moderator in RCT-to-Target-Population Generalization of Treatment Effects**

Joint Statistical Meetings (JSM), Chicago, IL, SPEED Talk and Poster.

2015 **Genetic Variants and IQ Among Individuals with Autism Spectrum Disorder**

- *6th Annual Undergraduate Conference in Public Health*, Baltimore, MD, Talk and Poster.

- *National Institutes of Health Summer Research Program Poster Day (2014)*, Bethesda, MD, Poster.

TEACHING EXPERIENCE

2018 **Advanced Data Science I (Guest Lecturer), JHSPH (25 graduate students)**

Professors: Dr. Stephanie Hicks, Dr. Roger Peng

Designed and led a 50-minute tutorial on creating R packages, Shiny apps and GitHub pages

Teaching Assistant

2016- **Public Health Biostatistics, JHU (225 undergraduate students)**

2019 Professors: Dr. Margaret Taub, Dr. Leah Jager

Section Instructor. Reviewed introductory statistical concepts and R programming skills.

2018- **Causal Inference in Medicine and Public Health I, JHSPH (60 graduate students)**

2019 Professor: Dr. Elizabeth Stuart

TA. Held weekly office hours to review causal inference topics for both experimental and non-experimental studies, gave lecture on generalizability of randomized controlled trials.

2017- **Statistical Methods in Public Health III, JHSPH (500 MPH students)**

2018 Professors: Dr. Marie Diener-West, Dr. Leah Jager, Dr. Jim Tonascia

TA. Held weekly office hours for to review regression topics, provided assistance with STATA programming.

2013- **Public Health Biostatistics, JHU (200 undergraduate students)**

2014 Professors: Dr. Scott Zeger, Dr. Margaret Taub, Dr. Leah Jager

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Learning Den Tutor and Guest Lecturer. Held biweekly small group review sessions.

COMPUTING SKILLS

Languages	Proficient: R, Python, SQL Intermediate: SAS, SPSS, Stata
Markup	\LaTeX , knitr, markdown, Sweave
Other	Git, Microsoft Word, Excel, PowerPoint, Google Documents