

Eric J. Daza, DrPH, MPS

Healthcare Data Scientist + Causal Inference Biostatistician + Personalized Digital Health Methodologist

CONTACT INFORMATION	P.O. Box 613 Palo Alto, CA 94301 USA (510)552-4151 ericjdaza@gmail.com	ericjdaza.com statsof1.org linkedin.com/in/ericjdaza medium.com/@ericjdaza.19407 orcid.org/0000-0002-8376-1600
EDUCATION	Dr.P.H. (Biostatistics) , The University of North Carolina at Chapel Hill. 2007–2015. <i>Dissertation:</i> Longitudinal Regression Conditioning on Continuation <i>Committee:</i> Michael G. Hudgens (Advisor), Amy H. Herring (Co-advisor), Linda S. Adair, Stephen R. Cole, John S. Preisser, Jr. M.P.S. (Applied Statistics) , Cornell University. 2001–2002. B.A. (Neurobio. & Behavior, Cog. Studies) , Cornell University. 1996–2000.	
HIGHLIGHTED PAPERS AND POSTS	<ul style="list-style-type: none">• How A ‘Secret Asian Man’ Embraced Anti-Racism. <i>LAist</i>, 25 Sep 2020.• Significant? You Really Mean Detectable (Two common wrong phrases about statistical significance). <i>Towards Data Science</i>, 29 Aug 2020.• Confusing P-values with Clinical Impact: The Significance Fallacy (Significance does not imply importance — but you need it to judge quality). <i>Towards Data Science</i>, 1 May 2020.• Your Coronavirus Telemedicine Health App Might Be Overrated (Causal inference tutorial in R using synthetic data: Part 2). <i>Towards Data Science</i>, 21 Apr 2020.• Coronavirus, Telemedicine, and Race: Simulated Real-World Evidence (Causal inference tutorial in R using synthetic data: Part 1). <i>Towards Data Science</i>, 15 Apr 2020.• The Overlooked Data Scientists in the Fight against Coronavirus: Biostatisticians. <i>Towards Data Science</i>, 5 Apr 2020.• Effects of Sleep Deprivation on Blood Glucose, Food Cravings, and Affect in a Non-Diabetic: An N-of-1 Randomized Pilot Study. <i>Healthcare</i>, Jan 2020.• Person as population: A longitudinal view of single-subject causal inference for analyzing self-tracked health data. <i>arXiv preprint arXiv:1901.03423</i>, Jan 2019. (in preparation)• Causal analysis of self-tracked time series data using a counterfactual framework for n-of-1 trials. <i>Methods of Information in Medicine</i>, Feb 2018.	
HONORS, AWARDS, GRANTS	Insight Health Data Science Fellows Program. 4 Jun–20 Jul 2018. (declined offer) Young Investigator Award. 2018 Sage Assembly: Algorithms and the Role of the Individual. 19–21 Apr 2018. Pilot Project Award. Improving personalized medicine through n-of-1 causal inference and predictive modeling (N1CPM). Stanford Center for Clinical and Translational Research and Education (Spectrum) Pilot Grant for Population Health Sciences. 1 May 2017–30 Apr 2018. \$26,000. (Principal Investigator)	
ACADEMIC APPOINTMENTS	Stanford Prevention Research Center (SPRC) , Stanford University, Stanford, CA. <i>Postdoctoral Research Fellow.</i> Oct 2015 – Sep 2018. (Mentor: Michael Baiocchi, PhD.) <i>Study Biostatistician.</i> Jul 2016 – Sep 2018. (PI: Judith Prochaska, PhD.) Trained in data-analytic and machine-learning methods, and methodological research in causal inference. Collaborated within academic and non-academic projects by providing statistical consultation and programming solutions. Carolina Population Center (CPC) , UNC Chapel Hill, Chapel Hill, NC. <i>Graduate Research Assistant / Data Programmer & Biostatistician.</i> May 2010 – Sep 2015. Per-	

formed data management and cleaning, and statistical programming in Stata and SAS. Assisted faculty, post-doc, graduate, and undergraduate researchers with statistical concepts, methods, and software implementation.

Survey Research Unit (SRU), UNC Chapel Hill, Chapel Hill, NC. *Research Assistant*. Jun 2009 – Jun 2010. (Advisor: William Kalsbeek, PhD) Collaborated with SRU Director and researchers in applying survey sampling methods for Add Health and the NC Department of Transportation. Provided statistical programming support in SAS and SUDAAN.

Rho, Inc., Chapel Hill, NC. *Graduate Research Assistant*. Sep 2007 – Jul 2009. Drafted table, listing, and graph (TLG) specifications, and produced TLGs. Prepared statistical reports. Conducted analyses. Validated dataset structures, analyses, TLGs, and reports. Maintained analysis and validation documentation.

Johnson School of Management, Cornell University, Ithaca, NY. *Research Assistant*. Jul 2001 – May 2002. (Advisor: David F. Sally, PhD)

Department of Neurobiology and Behavior, Cornell University, Ithaca, NY. *Research Assistant*. Jan 1999, May 2002. (Advisor: H. Kern Reeve, PhD)

INDUSTRY
EXPERIENCE

Evidation Health. San Francisco, CA. *Lead Biostatistician (Digital Health Outcomes)*. Jun 2020 – present.

Clarify Health. San Francisco, CA. *Senior Statistician (Data Science)*. Oct 2018 – Mar 2020. Led causal inference (potential outcomes, directed acyclic graphs) to model CMS metrics/outcomes using healthcare claims (e.g., Medicare, case-mix) joined with socio-behavioral determinants of health commercial data (e.g., LexisNexis, LiveRamp); e.g., machine learning prediction (e.g., regularized GLM, random forests) for admission/readmission risk, total cost of care, hospital length-of-stay. Performed life sciences real-world evidence cost analytics: wrote statistical analysis plan, conducted multiple imputation. Assessed data quality (missingness, measurement error, selection bias). Taught/applied statistical methods (e.g., survey sampling, standardization, imputation). Worked in R, SQL, and Spark (Sparklyr, PySpark); RStudio, DBeaver, and AWS (Athena, EMR, S3, EC2). PM: Confluence, Jira, scrum master.

Statistical Consultation. Clarify Health, Evidation Health. May 2018 – Sep 2018.

Supergen, Inc., Dublin, CA. *SAS Programmer / Biostatistician*. Sep 2002 – Aug 2007. Supported Phase II and III oncology clinical trials. Conducted analyses and enforced GCP standards using SAS. Managed clinical data, created/reviewed TLGs and SOPs. Stayed abreast of FDA guidelines and CDISC.

PAPERS
PUBLISHED OR
ACCEPTED

14. EE Weinlander, **EJ Daza**, M Winget. Impact of Mind–Body Medicine Professional Skills Training on Healthcare Professional Burnout. *Global Advances in Health and Medicine*, Feb 2020. (“Daza” misspelled “Gaza” in publication; contact Sage Publishing or Dr. Weinlander to verify)
13. JJ Prochaska, MH Watts, L Zellers, D Huang, **EJ Daza**, J Rigdon, MJ Peters, L Henriksen. Inequity in California’s Smokefree Workplace Laws: A Legal Epidemiologic Analysis of Loophole Closures. *American Journal of Preventive Medicine*, Jan 2020.
12. **EJ Daza**, K Wac, M Oppezzo. Effects of Sleep Deprivation on Blood Glucose, Food Cravings, and Affect in a Non-Diabetic: An N-of-1 Randomized Pilot Study. *Healthcare*, Jan 2020.

11. **EJ Daza**. Person as population: A longitudinal view of single-subject causal inference for analyzing self-tracked health data. *arXiv preprint arXiv:1901.03423*, Jan 2019. (in preparation)
10. **EJ Daza**. Causal analysis of self-tracked time series data using a counterfactual framework for n-of-1 trials. *Methods of Information in Medicine*, Feb 2018.
9. ML Nguyen, J Hu, K Hastings, **E Daza**, M Cullen, L Orloff, L Palaniappan. Thyroid cancer mortality is higher in Filipinos in the United States: An analysis using National Mortality Records from 2003 through 2012. *Cancer*, Sep 2017.
8. **EJ Daza**, MG Hudgens, AH Herring. Estimating inverse-probability weights for longitudinal data with dropout or truncation: The xtrccipw command. *The Stata Journal*, Jul 2017.
7. AP Keil, **EJ Daza**, SM Engel, JP Buckley, JK Edwards. A Bayesian approach to the g-formula. *Statistical Methods in Medical Research*, Jan 2017.
6. CG Brown-Johnson, A Burbank, **EJ Daza**, A Wassmann, A Chieng, GW Rutledge, JJ Prochaska. Online patient-provider e-cigarette consultations: Perceptions of safety and harm. *American Journal of Preventive Medicine*, Dec 2016.
5. JJ Prochaska, AK Michalek, C Brown-Johnson, **EJ Daza**, M Baiocchi, N Anzai, A Rogers, M Grigg, A Chieng. Likelihood of unemployed smokers vs nonsmokers attaining reemployment in a one-year observational study. *JAMA Intern Med.*, May 2016.
4. VL Flax, LS Adair, LH Allen, S Shahab-Ferdows, D Hampel, CS Chasela, G Tegha, **EJ Daza**, A Corbett, NL Davis, D Kamwendo, AP Kourtis, CM van der Horst, DJ Jamieson, ME Bentley for the Breastfeeding, Antiretrovirals, and Nutrition (BAN) Study Team. Plasma micronutrient concentrations are altered by antiretroviral therapy and lipid-based nutrient supplements in lactating HIV infected Malawian women. *The Journal of Nutrition*, Jun 2015.
3. VL Flax, M Negerie, AU Ibrahim, S Leatherman, **EJ Daza**, ME Bentley. Integrating group counseling, cell phone messaging, and participant-generated songs and dramas into a microcredit program increases Nigerian women's adherence to international breastfeeding recommendations. *The Journal of Nutrition*, May 2014.
2. VL Flax, ME Bentley, GF Combs, CS Chasela, D Kayira, G Tegha, D Kamwendo, **EJ Daza**, A Fokar, AP Kourtis, DJ Jamieson, CM van der Horst, LS Adair. Plasma and breast-milk selenium in HIV-infected Malawian mothers are positively associated with infant selenium status but are not associated with maternal supplementation: results of the Breastfeeding, Antiretrovirals, and Nutrition study. *The American Journal of Clinical Nutrition*, Apr 2014.
1. EM Widen, ME Bentley, D Kayira, CS Chasela, **EJ Daza**, ZK Kacheche, G Tegha, DJ Jamieson, AP Kourtis, CM van der Horst, LH Allen, S Shahab-Ferdows, LS Adair for the BAN Study Team. Changes in soluble transferrin receptor and hemoglobin concentrations in Malawian mothers are associated with those values in their exclusively breastfed, HIV-exposed infants. *The Journal of Nutrition*, Mar 2014.

PAPERS UNDER
REVIEW OR IN
PREPARATION

1. **EJ Daza**. Person as population: A longitudinal view of single-subject causal inference for analyzing self-tracked health data. (in preparation)

OTHER
PUBLICATIONS
AND POSTS

12. How A ‘Secret Asian Man’ Embraced Anti-Racism. *LAist*, 25 Sep 2020.
11. Significant? You Really Mean Detectable (Two common wrong phrases about statistical significance). *Towards Data Science*, 29 Aug 2020.
10. From Filipino White Supremacy to Black Lives Matter (My Filipino American journey as a privileged Brown Asian immigrant). *Full-Stack Biostats*, 23 June 2020.
9. Confusing P-values with Clinical Impact: The Significance Fallacy (Significance does not imply importance — but you need it to judge quality). *Towards Data Science*, 1 May 2020.
8. Your Coronavirus Telemedicine Health App Might Be Overrated (Causal inference tutorial in R using synthetic data: Part 2). *Towards Data Science*, 21 Apr 2020.
7. Coronavirus, Telemedicine, and Race: Simulated Real-World Evidence (Causal inference tutorial in R using synthetic data: Part 1). *Towards Data Science*, 15 Apr 2020.
6. The Overlooked Data Scientists in the Fight against Coronavirus: Biostatisticians. *Towards Data Science*, 5 Apr 2020.
5. J Sills, L Winslow, ST May, IC McKay, T McCallum, **EJ Daza**, EM Guthman, D Gutierrez, E Adkins, SM Homer-Drummond. Letters: Outside the Tower: March for Science: Share your sign. *Science*, 14 Apr 2017.
4. J Sills, J Paik, M Warrington, **EJ Daza**, Z Wang, RE Keith, JA Speetjens, DA Pederson, M Scult, H Vazquez-Rivera, D Fanslow, N Medvedev, JD Hoyle, N Idrisi, IC McKay, M Dutta, S Srivastava, T McCallum, OM Staveley-O’Carroll, V Miron, KL Murray, C Leifer, N Ritter, L Winslow, SM Homer-Drummond, B Zeller-Plumhoff, KC Chan, A Ramanathan, AF Pincus, SJ Halmhofer, H Pollard. Letters: NextGen voices: Advocacy in brief. *Science*, 7 Apr 2017.
3. E Jordan-Bell, L Adair, V Flax, C Chasela, D Kayira, **E Daza**, M Tembo, P Chitsulo, D Jamieson, C van der Horst, M Bentley. Weight status in HIV-positive women after termination of a drug and lipid-based nutrient supplement intervention is predicted by food availability and health. *The Journal of the Federation of American Societies for Experimental Biology*, Apr 2012.
2. **EJ Daza**, WD Kalsbeek. Evaluation of the Random Vehicle Survey in the Annual Inspection and Maintenance Audit of Automobiles by the NC Department of Environment and Natural Resources Division of Air Quality (NCDENR DAQ). *NCDENR DAQ internal report document*, Jun 2010.
1. N Brownstein, W Kalsbeek, J Tabor, P Entzel, **E Daza**. Non-response in Wave IV of the the National Longitudinal Study of Adolescent Health (Add Health Study). *Add Health Study*, 2010.

PRESENTATIONS,
POSTERS

14. (presentation, poster) **EJ Daza**. Person as population: A longitudinal view of single-subject causal inference for analyzing self-tracked health data. *Joint Statistical Meetings, Colorado Convention Center, Denver, CO*, Jul 2019.
13. (poster) **EJ Daza**. Use Your Own Self-Trackd Data to Design Personalized Experiments. *Sage Assembly 2018, Seattle, WA*, Apr 2018.
12. (poster) **EJ Daza**. Use Your Own Self-Trackd Data to Design Personalized Experiments. *Spectrum Innovation Research Symposium, Stanford, CA*, Apr 2018.

11. (poster) **EJ Daza**. Use Your Own Self-Trackd Data to Design Personalized Experiments. *Stanford Prevention Research Center Research Symposium, Stanford, CA*, Apr 2018.
10. (presentation) **EJ Daza**. Causal Analysis of Self-tracked Time Series Data using a Counterfactual Framework for N-of-1 Trials. *Eastern North American Region (ENAR) International Biometric Society 2018 Spring Meeting, Atlanta, GA*, Mar 2018.
9. (presentation, poster) **EJ Daza**. Use Your Own Self-Trackd Data to Design Personalized Experiments. *Stanford Wearable Electronics Initiative (eWEAR) Annual Affiliate Member Meeting, Stanford, CA*, Feb 2018.
8. (presentation) **EJ Daza**. It's About Time: Using Self-Trackd Health Data to Design Personalized, Single-Subject Randomized Trials. *Stanford Prevention Research Center / Primary Care and Population Health Weekly Seminar, Stanford, CA*, Jan 2018.
7. (presentation) **EJ Daza**. Design Trumps Analysis: (Very Carefully) Drawing Causal Conclusions using Big Data. *Data Science Philippines 2017 October Meetup, Makati, Metro Manila, Philippines*, Oct 2017.
6. (presentation, poster) **EJ Daza**. Causality in N-of-1 Trials and Studies: A Counterfactual Approach. *Joint Statistical Meetings, Baltimore Convention Center, Baltimore, MD*, Aug 2017.
5. (presentation, poster) **EJ Daza**. Counterfactual-Based Causal Inference for N-of-1 Time Series. *Atlantic Causal Inference Conference, UNC Chapel Hill, Chapel Hill, NC*, May 2017.
4. (presentation) **EJ Daza**. Three Statistical Significant Principles. *Quantified Self Bay Area Meetup: Show & Tell #41, Institute for the Future, Palo Alto, CA*, Mar 2017.
3. (poster) **EJ Daza**. Counterfactual-Based Causal Inference for N-of-1 Time Series. *Stanford University Postdoctoral Association (SURPAS) Postdoc Symposium, Stanford, CA*, Dec 2016.
2. (presentation) **EJ Daza**, WD Kalsbeek. Evaluation of the Random Vehicle Survey in the Annual Inspection and Maintenance Audit of Automobiles by the NCDENR DAQ. *NCDENR DAQ, Raleigh, NC*, Jun 2010.
1. (presentation) N Brownstein, W Kalsbeek, J Tabor, P Entzel, **E Daza**. Non-response in Wave IV of the Add Health Study. *Add Health Users Conference, UNC Chapel Hill, Carolina Population Center, Chapel Hill, NC*, 2010.

MEDIA
COVERAGE

3. Online patient-provider e-cigarette consultations: Perceptions of safety and harm.
 - Physician advice to patients on e-cigarettes varies, reveals knowledge gaps, study shows. *Science Daily*, 26 Aug 2016.
2. Likelihood of unemployed smokers vs nonsmokers attaining reemployment in a one-year observational study.
 - For smokers, finding a job is harder. *Fox News*, 12 Apr 2016.
 - For smokers, finding a job is harder. *Reuters*, 11 Apr 2016.
 - Cigarette smoking could burn your job prospects. *CBS News*, 11 Apr 2016.
 - Smokers less likely to get hired and earn less: Study. *NBC News*, 11 Apr 2016.

TEACHING,
MENTORING

1. A Statistical New World. *American Statistical Association “Promoting the Practice and Profession of Statistics” Video Competition Winners Announced*, 2011.

University of California Irvine Samueli School of Engineering, Irvine, CA.

Main Lecturer

- BMI 295: Engineering Human Potential: Guest lecture on n-of-1 studies. 18 May 2020.

Kollective Hustle Mentorship Program, Daly City, CA.

Mentor: 28 Jun 2019 – present.

University of California Irvine Samueli School of Engineering, Irvine, CA.

Main Lecturer

- BMI 295: Engineering Human Potential: Guest lecture on n-of-1 studies. 20 May 2019.

Filipino Americans in Science Technology Engineering Arts Math (FASTER), Berkeley, CA.

Main Lecturer

- FASTER Conference 2018: Guest lecture on n-of-1 studies. 06 Oct 2018.

Stanford Division of Epidemiology, Stanford, CA.

Main Lecturer

- HRP 226: Advanced Epidemiologic and Clinical Research Methods: “It’s About Time: Using Self-Track Health Data to Design Personalized Single-Subject Randomized Trials.” 28 Feb 2018.
- HRP 226: Advanced Epidemiologic and Clinical Research Methods: “Design Trumps Analysis: Drawing Causal Conclusions using Observational Data (Very Carefully).” 10 Jan 2018.

Stanford Prevention Research Center (SPRC), Stanford, CA.

Main Lecturer

- SPRC / Primary Care and Population Health (PCPH) Seminar Series: “Big (Multiple Causes of Death) Data: A Machine Learning Approach to Mortality.” 1 Dec 2016.
- SPRC/PCPH Seminar Series: “P is for ‘Pill’: Researcher Non-adherence to the Proper Use of P-values.” 12 May 2016.

Co-mentor (informal): PhD candidate in epidemiology / masters student in statistics, PhD candidate in computer science, masters-level project biostatistician

Stanford Medicine Quantitative Sciences Unit (QSU), Palo Alto, CA.

Co-lecturer

- QSU Research Methods Seminar: “The IMP: Interference Manipulating Permutation.” 4 Oct 2016.

UNC Chapel Hill, Chapel Hill, NC.

Teaching Assistant

- BIOS 600: Principles of Statistical Inference. Fall 2010.

Tutor: PhD candidate in nutrition, PhD candidate in clinical psychology, MPH candidate in biostatistics, PhD candidate in political science

Cornell University, Ithaca, NY.

Tutor: PhD candidate in education

ACADEMIC
SERVICE

Reviewing & Editing

Editing

- *Creator and Chief Editor*: Stats-of-1: Inference for the Individual.
- *Topic Editor*: Frontiers Research Topic: Creating Evidence from Real World Patient Digital Data (2019)

Reviewing

- *Articles*: Biometrics (2019), Journal of the Royal Statistical Society - Series A (2019), Translational Behavioral Medicine (2017), American Journal of Clinical Nutrition (2017), The Stata Journal (2017), American Journal of Epidemiology (2016), Statistics in Medicine (2015, 2016)
- *Abstracts*: American Public Health Association 2016 Annual Meeting (2016)

Consultation & Collaboration

Stanford University. Oct 2015 – present.

- *Co-investigator* (Epidemiology). Individualized Migraine Attack Prediction with Self-Reported and Passively Collected Data. PI: Lorene Nelson, PhD.
- *Consultant* (Epidemiology). Migraine App Study. PI: Ealon Joelson, MD; co-PI: Lorene Nelson, PhD.
- *Collaborator* (Primary Care and Population Health): Disparities and Culture: Outcomes and Vitality Research (DISCOVeR Lab). PI: Latha Palaniappan, MD, MS.
- *Study Biostatistician* (SPRC). Tobacco-Related Disease Research Program (TR-DRP) Award: Toward Equity in Smokefree Worksite Policies. PI: Judith Prochaska, PhD.

UNC Chapel Hill. Jun 2009 – Sep 2015.

- *Collaborator* (CPC): Malawi Mothers and Infants, sub-study of BAN Study. PI: Margaret E. Bentley, PhD; co-PI: Linda S. Adair, PhD.

Coding Projects

UNC Chapel Hill. 2012 – 2017.

- *Stata*: created command “xtrccipw” for conducting weighted GEE analysis with inverse probability weights for longitudinal data with dropout or truncation

MEMBERSHIPS,
AFFILIATIONS

Memberships

International Collaborative Network (ICN) for N-of-1 Clinical Trials and Single-Case Experimental Designs (SCEDs), Quantified Self, American Statistical Association, Health Data Exploration Network, American Public Health Association, American Association for the Advancement of Science, Filipino Americans in Science Technology Engineering Arts Math (FASTER)

Affiliations

Open Humans, PatientsLikeMe

TECHNICAL
SKILLS

Analysis

Statistics: causal inference, n-of-1 / single-case / single-subject study design/analysis, longitudinal/panel analysis, missing data (selection bias from attrition, censoring, truncation), generalized estimating equations, mixed/random effects, Bayesian inference, survey sampling, time series, survival/time-to-event

Statistical Learning: random forests, elastic net, principal components analysis, multinomial classification, association rule mining

Programming

R, SQL, AWS, Python, Stata, SAS, SUDAAN, Mplus

OTHER SKILLS,
INTERESTS

Musical Performance, Composition, & Production: Piano (36 years), electric bass (16 years), certified concert pianist, vocal performance & production for “A Statistical New World”.

Student Theatre: Technical & production work, acting, and administration & management (6 years).

Physical Activity: Rock climbing (10 years), Krav Maga (1 year).

Languages: Tagalog/Filipino (native), Spanish (beginner/intermediate).

PROFESSIONAL
REFERENCES

Hilary Placzek, PhD, MPH (hplaczek@gmail.com)	manager (Clarify)
Volodymyr Serhiyenko, PhD (volodymyr.serhiyenko@gmail.com)	colleague (Clarify)
Lorene Nelson, PhD (lnelson@stanford.edu)	co-PI (N1CPM)
Michael Baiocchi, PhD (baiocchi@stanford.edu)	mentor (SPRC)
Michael G. Hudgens, PhD (mhudgens@email.unc.edu)	diss. advisor (UNC)
Amy H. Herring, ScD (amy.herring@duke.edu)	diss. co-advisor (UNC)
Valerie Flax, PhD (flax@unc.edu)	collaborator (CPC)
Patrick J. Smith, PhD, MPH (smith562@mc.duke.edu)	colleague (UNC)