

Jeffrey P. Rewley (Lienert)

Curriculum Vitae

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APPOINTMENTS

University of Pennsylvania & Philadelphia VA Medical Center
Advanced Fellow in Health Services Research

Philadelphia, PA
2019 - 2022

EDUCATION

University of Oxford & National Institutes of Health
Ph.D. Social Epidemiology

Oxford, UK & Bethesda, MD
May 2019

Harvard School of Public Health
M.S. Epidemiology

Boston, MA
May 2014

Franklin & Marshall College
B.A. Biochemistry (minor: Applied Mathematics)

Lancaster, PA
May 2012

PUBLICATIONS

Journal Articles

Rewley J, Smith-Fawzi MK, McAdam K, Kaaya S, Todd J, Andrews A, and Onnela JP.
Network spillover effects and follow-up correlates in a behavioral HIV intervention in Tanzania. *BMJ Open* 2020;10:e033759. doi: 10.1136/bmjopen-2019-033759

Kaaya S, Siril H, McAdam K, Ainebyona A, Somba M, McAdam E, Oljemak K, Todd J, Andrew I, Semwanga A, Mleli N, Makongwa S, Liu Y, **Lienert J**, Haberlen S, and Fawzi MKS. 2020. Agents of Change: comparing HIV-related risk behavior of people attending ART clinics in Dar es Salaam with members of their social networks. *PloS One*, 15(9), p.e0238240.

Rewley J, Reed-Tsochas F, Marcum CS, and Koehly L. 2020. A passive monitoring tool using hospital administrative data enables earlier specific detection of healthcare-acquired infections. *Journal of Hospital Infection* 106(3), pp.562-569.

Rewley J. 2020. Specimen pooling conserves additional testing resources when persons' infection status is correlated: A simulation study. *Epidemiology*, 31(6), pp.832-835.

- Changolkar S, **Rewley J**, Balachandran M, Rareshide CAL, Snider CK, Day SC, and Patel MS. 2020. Phenotyping Physician Practice Patterns and Associations with Response to a Nudge in the Electronic Health Record for Influenza Vaccination: A Quasi-Experimental Study. *PloS One*, 15(5), p.e0232895.
- Lienert J** and Patel M. 2020. Patient phenotypes help explain variation in response to a social gamification weight loss intervention. *American Journal of Health Promotion*, 34(3), pp.277-284.
- Lienert J**, Reed-Tsochas F, Koehly L, and Marcum CS. 2019. Using hospital administrative data to infer patient-patient contact via the consistent co-presence algorithm. *2019 IEEE International Conference on Big Data (Big Data)*, Los Angeles, CA, USA, 2019, pp. 2756-2762.
- Haenssger M, Charoenboon N, Zanello G, Mayxay M, Reed-Tsochas F, Lubell Y, Wertheim H, **Lienert J**, Xayavong T, Khine Zaw Y, Theplhamkong A, Sithongdeng N, Khamsoukthavong N, Phanthavong C, Boualaiseng S, Vongsavang S, Wibunjak K, Chai-In P, Thavethanutthanawin P, Althaus T, Greer RC, Nedsuwan S, Wangrangsimakul T, Limmathurotsakul D, Elliott E, and Ariana P. 2019. Antibiotic Knowledge, Attitudes, and Practices: New Insights from Cross-Sectional Rural Health Behaviour Surveys in Low- and Middle-Income Southeast Asia. *BMJ Open*, 9(8), p.e028224.
- Lienert J**, Koehly L, Reed-Tsochas F, and Marcum CS. 2019. An efficient counting method for the colored triad census. *Social Networks* 58:136-42.
- Smith Fawzi MC, Siril H, Liu Y, McAdam K, Ainebyona D, McAdam E, Somba M, Oljemark J, Mleli N, **Lienert J**, Andrew I, Haberen S, Simwinga A, Todd J, Makongwa S, Li N, and Kaaya S. 2019. Agents of change among people living with HIV and their social networks: stepped-wedge randomised controlled trial of the *NAMWEZA* intervention in Dar es Salaam, Tanzania. *BMJ Global Health*. 4:e000946.
- Haenssger M, Charoenboon N, Mayxay M, Reed-Tsochas F, Jones C, Kosaikanont R, Prapattong P, Lubell Y, Newton P, Keomany S, Wertheim H, **Lienert J**, Xayavong T, Khine Zaw Y, Greer R, Althaus T, Nedsuwan S, Intralawan D, Wangrangsimakul T, Cheah PY, Limmathurotsakul D, and Ariana P. 2018. Research protocol: antibiotics and activity spaces: An exploratory study of behaviour, marginalisation, and knowledge diffusion. *BMJ Global Health*. 3(2):e00621.
- Lienert J**, Marcum CS, Finney J, Reed-Tsochas F, and Koehly L. 2017. Social influence on 5-year survival in chemotherapy co-presence network. *Network Science* 5(3), 308-327.
- Lienert J**, Tarko L, Uchino M, Christen WG, Li JZ, and Schaumberg DA. 2016. Long-term natural history of dry eye disease from the patient's perspective. *Ophthalmology* 123:425-33.

- Chai J, Fink G, Kaaya S, Danaei G, Fawzi W, Ezzati M, **Lienert J**, Fawzi MC. 2016. Association between intimate partner violence and poor child growth: results from 42 demographic and health surveys. *Bulletin of the World Health Organization*. 94(5):331.
- Kaaya S, Garcia ME, Li N, **Lienert J**, Twayigize W, Spiegelman D, Smith Fawzi MC. 2016. Association of maternal depression and infant nutritional status among women living with HIV in Tanzania. *Maternal & child nutrition*. 12(3):603-13.
- Blackburn J, Cleveland J, Griffin R, Davis G, **Lienert J**, and McGwin G Jr. 2012. Tattoo frequency and types among homicides and other deaths, 2007-2008: a matched case-control study. *Am J Forensic Med Pathol* 33:202-5.
- Lienert J**, Griffin R, Blackburn J, McGwin G Jr. 2012. The epidemiology of lawn trimmer injuries in the United States, 2000-2009. *J Safety Res* 43:137-9.
- McGwin G Jr, **Lienert J**, Kennedy JI Jr. 2010. Formaldehyde exposure and asthma in children: a systematic review. *Environ Health Perspect* 118:313-317.

Manuscripts in Submission

- Valente T and **Rewley J**. Contagion and Interpersonal Influence: Distinguishing Mechanisms of Behavior Change Using Social Network Theory. Submitted to *Nature Human Behavior*.
- Rewley J** and Patel M. A typology of minute-to-minute step counts and their correlates within a behavioral gamification intervention. Submitted to *International Journal of Epidemiology*.
- Rewley J** and Patel M. Team diversity increases step counts in cooperative, but not competitive arms of a behavioral intervention trial. Submitted to *Epidemiology*.
- Cleary JL, Manalel JA, Ashida S, Marcum CS, **Rewley J**, and Koehly L. Interpersonal correlates of dementia caregivers' emotional support networks: considering family history. Revised and resubmitted to *Research on Aging*.
- Rewley J** and Patel M. Loss aversion explains step-count behavior among those with earned, but not endowed gamification rewards in a behavioral intervention trial. Submitted to *Games for Health*.

Manuscripts in Preparation

- Shreves A, **Rewley J**, Marcum CS, Griffin M, and Koehly L. Clinical Trajectories of Patients with Screened Genetic Disorders.
- Rewley J**, Koehly L, Marcum CS, Reed-Tsochas F. Detection of patients with asymptomatic infection via electronic medical records.

Rewley J and Aysola J. Reinforcing ties predict tobacco use among a population of primary care practice patients.

AWARDS AND HONORS

- 2020 Tyroler Student Paper Prize Award Finalist, Society for Epidemiologic Research
- 2018 Best Dissertation in Progress Award, Mathematical Sociology Section, American Sociological Association
- 2017 National Human Genome Research Institute Intramural Research Award
- 2017 3rd Year Graduate Research Prize, Nuffield Department of Medicine
- 2017 1st Place Poster Award, Society for Epidemiologic Research Conference
- 2017 Best Student Paper Award, International Network of Social Network Analysis
- 2017 NIH Postbaccalaureate Mentor Award, National Institutes of Health
- 2014 Meaningful Modelling of Epidemiological Data Scholar, African Institute for the Mathematical Sciences
- 2013 Epidemiology Departmental Scholarship, Harvard School of Public Health
- 2012 Phi Beta Kappa Honor Society, Franklin & Marshall College

GRANTS AND FELLOWSHIPS

- 2017 Antibiotics and Activity Spaces: An Exploratory Study of Behaviour, Marginalisation, and Knowledge Diffusion; Economic and Social Research Council (£237,633, Co-Investigator)
- 2017 NIH Summer Research Mentor Award, National Institutes of Health (\$11,000)
- 2016 Fellows Award for Research Excellence, National Institutes of Health (\$1,000)
- 2014 NIH Oxford Cambridge Scholars Fellowship, National Institutes of Health (\$250,000)

INVITED TALKS

- 2021, SAGE Research Methods, SAGE Publications
“Identifying population subgroups who best respond to interventions using latent class analysis”
- 2020, Innovative Discovery Series, Value Institute, Christiana Health Care

“Using electronic medical records and machine learning to predict hospital acquired infection and asymptomatically-infected patients”

2019, Temple Economics Society, Temple University

“Secondary analyses leveraging behavioral gamification interventions to examine sociobehavioral mechanisms of behavior change”

2019, Careers in Mathematics Conference and Section NExT Symposium, Kutztown University
Panel on Careers in Mathematics

2019, Social Networks & Health Workshop, Duke University

“Constructing Networks from Electronic Medical Records”

2019, SAGE Research Methods Videos, SAGE Publishing

“Studying the impact of patient co-presence in hospitals on administrative data”

<https://dx.doi.org/10.4135/9781526498984>

2019, Duke Network Analysis Center, Duke University.

“Using co-presence networks from hospital administrative data to predict infection and identify subclinical infection”

2018. Joint Math Colloquium, Franklin & Marshall College.

“The health effects of patient-patient co-presence in a chemotherapy ward using hospital administrative data and electronic medical records”

PRESENTATIONS

Rewley J and Patel M. 2021. A Typology of Daily Physical Activity Measured By Wearable Devices: An Observational Study. Academy Health, virtual.

Rewley J and Aysola J. 2021. Social Reinforcement Among Homogenous Alters Is Associated with Individual Smoking Behaviors of Primary Care Patients: An Observational Study. Academy Health, virtual.

Rewley J and Aysola J. 2021. Primary Care Social Network Characteristics Vary By Race/Ethnicity. Academy Health, virtual.

Rewley J and Patel M. 2021. Team diversity increases step counts in collaborative arms, and reduces them in competitive arms of a behavioral gamification intervention trial. SER 2021, virtual.

Rewley J and Aysola J. 2020. Social network characteristic of primary care patients associated with tobacco use. APHA 2020, virtual & Sunbelt 2020, virtual.

- Lienert J.** 2019. A passive monitoring tool using hospital administrative data enables earlier detection of nosocomial infections. Population Health Science Workshop, Philadelphia, PA.
- Lienert J,** and Patel M. 2019. Patient phenotypes help explain variation in response to a social gamification weight loss intervention. University of Pennsylvania and Carnegie Mellon University Roybal Conference, Hershey, PA.
- Changolkar S, **Lienert J**, Rareshide C, Snider CK, and Patel M. 2019. Using EHR Data to Identify Clinician Phenotypes with Differential Responses to a Nudge for Influenza Vaccination. Society of General Internal Medicine, Pittsburgh, PA.
- Lienert J**, Reed-Tsochas F, Marcum CS, and Koehly L. 2019. Ward co-presence time as a diagnostic indicator for nosocomial infection. Academy Health, Washington, DC & Sunbelt, Montreal, CA.
- Lienert J.** 2018. Analyzing healthcare sequences in social networks. ESRC Research Methods Festival, Bath, UK.
- Lienert J**, Koehly L, Finney J, Marcum CS, Reed-Tsochas F. 2018. Detection of subclinical infection and structure of co-presence networks help explain hospital-acquired infection. NetSci 2018, Paris, France & Sunbelt 2018, Utrecht, Netherlands.
- Cleary J, **Lienert J**, Ashida S, Marcum CS, and Koehly L. 2017. Factors Influencing emotional support provision to caregivers of individuals affected by Alzheimer's disease. NHGRI Research Symposium, Bethesda, MD.
- Shreves A, Marcum CS, Finney J, Koehly L, and **Lienert J.** 2017. Clinical trajectories of patients with and without screened genetic disorders in the UK. NIH Summer Student Poster Day, Bethesda, MD.
- Lienert J**, Koehly L, Finney J, Marcum CS, Reed-Tsochas F. 2017. An efficient counting method for the colored triad census. North American Social Networks Conference (NASN), Washington, DC.
- Cleary J, Thakur H, Eni P, **Lienert J**, Lea D, Marcum CS, and Koehly LM. 2017. Using a network approach to explore coping resources needed by families affected by inborn errors of metabolism. NASN, Washington, DC.
- Thakur H, **Lienert J**, Marcum CS, Prokhorov A, Wilkinson A, and Koehly L. 2017. Measuring relationalized *Respeto* and understanding its impact on smoking behavior among mexican heritage adults residing in the united states. NASN, Washington, DC.
- Lienert J**, Reed-Tsochas F, Finney J, Koehly L, and Marcum CS. 2017. Potential detection of patients with undiagnosed nosocomial MRSA via administrative data. Society for Healthcare Epidemiology of America Conference 2017, St Louis, MO; Society for

Epidemiologic Research Conference, Seattle, WA; and NIH OxCam Workshop 2018, Cambridge, UK.

Lienert J, Marcum CS, Finney J, Reed-Tsochas F, and Koehly L. 2016. Social influence on 5-year survival in a chemotherapy co-presence network. Sunbelt XXXVI, Newport Beach, CA.

Lienert J, Marcum CS, Finney J, Reed-Tsochas F, and Koehly L. 2015. Ward transfer networks in hospitals. Sunbelt XXXV. Brighton, UK.

Lienert J, Fawzi M, Kaaya S, Haberlen S, Siril H, Li N, McAdam K, Ainebyona D, Sombal M, McAdam E, Oljemak K, Todd J, Andrew I, Simwinga A, Mleli N, Makongwa S, Arthur G, Liu Y, Onnela JP. 2014. Participants in the Agents of Change study influence follow-up and health outcomes of members of their social network. International Aids Society Conference, Melbourne, Australia.

RESEARCH POSITIONS

- 2017-2018 Research Officer with Dr. Marco Haenssger, PhD
Department of Tropical Medicine, University of Oxford, Oxford, UK
Serving as an expert in social network analysis on a study of antibiotic usage in Laos and Thailand. Involved in drafting the now-funded grant proposal, devising the social network portion of the questionnaire, and eventually analyzing the results.
- 2012-2014 Research Assistant with Mary Kay Smith-Fawzi, ScD
Department of Global Health and Social Medicine, Harvard Medical School, Boston, MA
Coordinated an international research team in leading an HIV behavioral intervention in Tanzania, as well as data cleaning and analysis.
- 2007-2011 Research Assistant to Gerald McGwin, PhD
Department of Epidemiology, University of Alabama at Birmingham, Birmingham, AL
In addition to conducting independent research, I managed the Crash Injury Reporting and Engineering network (CIREN) study and assisted doctoral students with data management and abstraction from medical records and autopsy reports.

TEACHING EXPERIENCE

Introduction to Statistics, National Institutes of Health, Summer 2017

Introduction to Social Network Analysis, University of Oxford, Spring 2016 & 2018.

Introduction to Epidemiology and Biostatistics in Global Health, Harvard School of Public Health, Winter 2014.

SAT Preparatory Class, Kaplan Inc., 2012-2014.

STUDENT ADVISING

Alaina Shreves, College of William & Mary

Thesis: “Clinical Trajectories of Genetic Disorders: Sickle Cell Disease”

Highest Honors

PROFESSIONAL SERVICE

Editorial Board Member: *Clinical Medicine Research*

Ad Hoc reviewer for: *Nature Computational Science, IJERPH, Healthcare: The Journal of Delivery Science and Innovation, Journal of General Internal Medicine, Connections, Network Science, Journal of Epidemiology and Community Health, Journal of Dermatology Research and Therapy, Medical Sciences,*

Abstract and poster reviewer for: Society for Epidemiologic Research Annual Conference, Fellows Award in Research Excellence, NIH Postbaccalaureate Poster Day, American Public Health Association Annual Meeting, Academy Health Annual Meeting, Best Student Paper Award Committee (International Network for Social Network Analysis)

Developed and maintained an algorithm to automatically redact transcripts for anonymized analysis

Managed a lab wiki, including archiving posts and onboarding new lab members

RELATED PROFESSIONAL SKILLS

Programming Languages: R, SAS, Python

Technical Skills: GIS, survey design, database management, Linux, computational clusters, network analysis, statistics

PROFESSIONAL AFFILIATIONS

Academy Health

Society for Healthcare Epidemiology of America

American Sociological Association

International Network of Social Network Analysis

American Public Health Association

American Statistical Association

Society for Epidemiologic Research