

ELLICOTT C. MATTHAY,¹ PHD MPH

CONTACT INFORMATION

Department of Epidemiology and Biostatistics
University of California, San Francisco
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San Francisco, CA 94143

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EDUCATION

University of California, Berkeley

May 2018

PhD, Epidemiology

Berkeley, California

Dissertation: “A population-based study of the epidemiology and influence of community violence on self-harm in California, 2005-2013”

Jennifer Ahern (chair), Maya Petersen, Jennifer Skeem.

University of Washington

August 2014

MPH, Global Health Metrics and Evaluation

Seattle, Washington

Thesis: “Measuring effective coverage of measles immunization in low-resource settings: A method and application from the evaluation of Salud Mesoamérica 2015”

Bernardo Hernández-Prado (chair), Ali Mokdad, Stephen Lim

Tufts University

May 2011

BA, Mathematics; BA, Community Health

Medford, Massachusetts

Senior Honors Thesis: “Religion and spirituality in the lives of adolescents: Connections to obesity-related health behaviors”

Raymond Hyatt (chair), Edith Balbach

RESEARCH AREAS AND INTERESTS

Population health
Social epidemiology
Causal inference
Alcohol and cannabis policy
Suicide and self-harm
Community violence
Firearm violence
Evaluation of social programs and policies
Epidemiologic methods
Injury epidemiology
Psychiatric epidemiology
Global health

¹ Maiden name: Katherine Ellicott Colson

PROFESSIONAL EXPERIENCE

Postdoctoral Scholar May 2020 – April 2022
NIAAAA K99: Joint impacts of local alcohol and cannabis policies and outlet densities on violence San Francisco, California
Center for Health and Community
University of California, San Francisco

Postdoctoral Scholar July 2018 – present
Evidence for Action program of the Robert Wood Johnson Foundation San Francisco, California
Center for Health and Community and Department of Epidemiology and Biostatistics
University of California, San Francisco

Affiliate January 2018 - present
Risk-Resilience Research Berkeley, California
School of Social Welfare
University of California, Berkeley

Affiliate June 2018 - present
Research Data Analyst III Aug 2014 – June 2018
Division of Epidemiology Berkeley, California
School of Public Health
University of California, Berkeley

Post-Bachelor Fellow Aug 2011 – August 2014
Institute for Health Metrics and Evaluation Seattle, Washington
Department of Global Health
University of Washington

Visiting Fellow Summer 2013
Department of Economics Lusaka, Zambia
University of Zambia

Patient Care Management Intern January 2011
Health Horizons International Montellano, Dominican Republic

American Cancer Society Junior Research Fellow Summer 2010
Massachusetts General Hospital Boston, Massachusetts

Program Evaluation Intern Spring 2010
Boston Chinatown Neighborhood Center Boston, Massachusetts

Public Health Research Assistant Summer 2009
Tufts University School of Medicine Boston, Massachusetts

SELECTED HONORS

AWARDS AND HONORS

- American Journal of Public Health “Public Health of Consequence” Study (November 2019)
- Outstanding Graduate Student Instructor, University of California, Berkeley (2018)
- Annals of Internal Medicine Best Article of 2017
- Best Poster in Health Policy and Social Services, California Medical Association Conference (2017)
- Tyroler Student Paper Prize Award for the best submitted paper by a student in a doctoral program with a concentration in epidemiology, Society for Epidemiologic Research, (2017)
- Staff Spot Award for special contributions to a specific team or project, accomplished over a relatively short period of time, University of California, Berkeley (2016)
- Phi Beta Kappa, Tufts University (2011)
- Summa Cum Laude, Tufts University (2011)
- Honos Civicus for exemplary civic engagement, Tufts University (2011)
- Highest Senior Thesis Honors in Community Health (Tufts University, 2011)
- Dean’s List every semester, Tufts University
- American Cancer Society Engel Fellowship for exemplary passion and commitment in cancer research (2010)

SCHOLARSHIPS AND FELLOWSHIPS

- Harry Frank Guggenheim Foundation Dissertation Fellowship Award (\$20,000, 2017)

RESEARCH SUPPORT

Current

K99 AA028256-01

05/01/20 - 04/30/22

Ellicott Matthay (PI)

NIH K99/R00 Pathway to Independence Award

Joint impacts of local alcohol and cannabis policies and outlet densities on violence

This study examines the joint impacts of local alcohol and cannabis policies on violence in California before and after recreational cannabis legalization in 2018. Geospatial analyses will assess how alcohol and cannabis policies in 241 cities and counties impact outlet density and co-location, and how outlet densities affect emergency department visits, inpatient hospitalizations, and deaths due to self-harm and assault across California.

Role: PI

Previous

Harry Frank Guggenheim Dissertation Fellowship Award

08/20/17 - 08/09/18

Matthay (PI)

Impacts of exposure to community violence on self-harm in California: A multi-level population-based study

This doctoral research addresses the impacts of exposure to community violence on self-harm.

Role: PI

DP2 HD080350

09/19/13 - 08/31/18

Jennifer Ahern (PI)

NIH Director's New Innovator Award Program

A Rigorous System to Determine the Health Impacts of Policies and Programs

This research will establish a new system to determine the health and disparities impacts of policies and programs, and apply this system to assess the effects of criminal justice policies and programs in California.

Role: Research Data Analyst 3

UNIVERSITY SERVICE

Delegate

Graduate Assembly
University of California, Berkeley

September 2017 – May 2018
Berkeley, California

Secretary

Epidemiology PhD Program Representative
School of Public Health Student Government
University of California, Berkeley

April 2016 – April 2017
April 2016 – April 2018
Berkeley, California

TEACHING TRAINING AND EXPERIENCE

TRAINING

- Summer Institute for Preparing Future Faculty, UC Berkeley Graduate Division, 2017.
- Instructional Techniques in Biostatistics, UC Berkeley School of Public Health, Fall 2015.
- Graduate Student Instructor Professional Standards and Ethics Online Course, UC Berkeley, Fall 2015.
- Teaching Conference for First-Time Graduate Student Instructors, UC Berkeley, Fall 2015.
- Monthly teaching skills workshops, Peer Health Exchange, September 2008 – May 2011.

COURSES AND WORKSHOPS TAUGHT

- Facilitator and Guest Expert: Multilevel Modeling, Advanced Concepts and Research Methods in Health Disparities, UC San Francisco, Spring 2020.
- Graduate Student Instructor, Advanced Epidemiologic Methods, UC Berkeley School of Public Health, Spring 2017.
- Graduate Student Instructor, Epidemiologic Methods II, UC Berkeley School of Public Health, Fall 2015.
- Instructor, STATA Bootcamp, Central Statistical Office, Lusaka, Zambia, Summer 2013.
- Instructor, STATA Bootcamp, University of Washington School of Public Health, Fall 2013.
- Senior Health Educator, Peer Health Exchange, Boston Public Schools, September 2008 – May 2011.

INVITED TALKS

- In-state and interstate associations of gun shows with firearm deaths and injuries. Civil Justice Research Initiative Gun Violence Litigation Symposium, June 2019.
- Matching in epidemiologic research. Epidemiologic Methods II, UC Berkeley School of Public Health, Fall 2017.
- Assessing the contribution of malaria vector control and other maternal and child health interventions in reducing all-cause under-five mortality in Zambia. Methods in Social Epidemiology, UC Berkeley School of Public Health, annually in spring semester, 2015-2020.

- Monitoring Data Quality. Survey Methodology, University of Washington, Spring 2014.
- Overview of Impact Evaluation of Salud Mesoamerica 2015. Survey Methodology, University of Washington, Spring 2014.

MEMBERSHIPS AND PROFESSIONAL ACTIVITIES

MEMBERSHIPS

- Interdisciplinary Association for Population Health Science (2018 - present)
- Society for Epidemiologic Research (2015 – present)
- American Public Health Association (2015 – present)
- Berkeley Institute for Data Science (2015 – present)
- Population Association of America (2017 – present)

JOURNAL PEER REVIEW

- *American Journal of Epidemiology*
- *Epidemiology*
- *Epidemiologic Reviews*
- *American Journal of Public Health*
- *The BMJ*
- *Social Science & Medicine*
- *Millbank Quarterly*
- *Journal of Studies on Alcohol and Drugs*
- *Journal of Epidemiology and Community Health*
- *Journal of Urban Health*
- *Health and Place*
- *Injury Epidemiology*
- *BMJ Open*
- *BMC Medical Research Methodology*

SKILLS

Software: Expert in Stata, R, and Microsoft Office; proficient in parallel and cluster computing methods, N-Vivo, and ArcGIS; experience with Matlab, Python, and Efforts to Outcomes; basic C++ programming

Language: Spanish (proficient)

Other: Certified Wilderness First Responder

PEER-REVIEWED PUBLICATIONS

PUBLISHED

1. Fields AT, Matthay ZA, Nunez-Garcia B, **Matthay EC**, Bainton RJ, Callcut RA, Kornblith LZ. (2020). *Shock*, doi: 10.1097/SHK.0000000000001622.
2. **Matthay EC**, Glymour MM. (2020). A graphical catalogue of threats to validity: Linking social science with epidemiology. *Epidemiology*, 31(3), 376-384.
3. **Matthay EC**, Hagan E, Gottlieb L, Vlahov D, Adler N, Glymour MM. (2020). Alternative causal inference methods in population health research: Evaluating tradeoffs and triangulating evidence. *Social Science & Medicine - Population Health*, 10, 100526.
4. Tan M, Vlahov D, Hagan E, Gottlieb L, **Matthay EC**, Glymour MM, Adler N. Building evidence on Making Health a Shared Value: Insights and considerations for research. *Social Science & Medicine-Population Health*, 9, 100474.
5. **Matthay EC**, Rudolph KE, Zimmerman SC, Goin D, Farkas K, Ahern J. Firearm and non-firearm violence after Operation Peacemaker Fellowship in Richmond, California 1996-2016. *American Journal of Public Health*, 109(11), 1605-11. **Named “Public Health of Consequence” Study of the issue.**
6. **Matthay EC**, Farkas K, Ahern J. (2019). Racial and ethnic differences in associations of community violence with self-harm: A population-based case-control study. *Annals of Epidemiology*, <https://doi.org/10.1016/j.annepidem.2019.04.004>.
7. Goin DE, Gomez AM, Farkas K, Zimmerman S, **Matthay EC**, Ahern J. (2019). Exposure to community homicide during pregnancy and adverse birth outcomes: A within-community matched design. *Epidemiology*, 30(5), 713-722.
8. Farkas K, **Matthay EC**, Rudolph KE, Goin DE, Ahern J. (2019). Mental and substance use disorders among legal intervention injuries in California, 2005-2014. *Preventive Medicine*, 121, 136-140.
9. Rowe C, **Matthay EC**, Ahern J. (2019). Nonfatal assault injury trends in California, 2005 to 2015. *Journal of Interpersonal Violence*, <https://doi.org/10.1177/0886260518825287>.
10. **Matthay EC**, Rudolph KE, Goin D, Farkas K, Skeem J, Ahern J. (2019). Within-community variation in violence and risk of self-harm in California: a population-based case-crossover study. *Epidemiology*, 30(2), e5-e7.
11. **Matthay EC**, Farkas K, Skeem J, Ahern J. (2018). Exposure to community violence and self-harm in California: A multi-level, population-based, case-control study. *Epidemiology*, 29(5), 697-706.

12. **Matthay EC**², Bui AL², Coates MM². (2018). Years of life lost due to encounters with law enforcement in the USA, 2015-2016. *Journal of Epidemiology and Community Health*, 72, 715-718.
13. Ahern J, **Matthay EC**, Goin DE, Farkas K, Rudolph KE. (2018). Acute changes in community violence and increases in hospital visits and deaths from stress-responsive diseases. *Epidemiology*, 29(5), 684-691.
14. **Matthay EC**, Galin J, Rudolph K, Farkas K, Wintemute G, Ahern J. (2017). In-State and interstate associations between gun shows and firearm deaths and injuries: A quasi-experimental study. *Annals of Internal Medicine*, 167(12), 837-844. **Named one of Annals of Internal Medicine's Best Articles of 2017.**
15. Crow BT, **Matthay EC**, Schatz SP, DeBelsio MD, Nuckton TJ. (2017). The body mass index of San Francisco cold-water swimmers: Comparisons to U.S. national and local populations, and pool swimmers. *International Journal of Exercise Science*, 10(8): 1250-1262.
16. **Matthay EC**, Galin JG, Ahern J. (2017). Changing patterns in rates and means of suicide in California, 2005 to 2013. *American Journal of Public Health*, 107(3):427-429, doi:10.2195/AJPH.2016.303624.
17. Galin J, Abrams B, Leonard SA, **Matthay EC**, Goin DE, Ahern J. (2017). Living in violent neighborhoods is associated with gestational weight gain outside the recommended range. *Pediatric and Perinatal Epidemiology*, 31(1):37-46, doi: 10.1111/ppe.12331.
18. **Colson KE**, Galin J, Ahern J. (2016). Spatial proximity to incidents of community violence is associated with fewer suicides in urban California. *Journal of Urban Health*, doi: 10.1007/s11524-016-0072-7.
19. Ahern J, **Colson KE**, Margerison-Zilko C, Hubbard A, Galea S. (2016) Predicting the Population Health Impacts of Community Interventions: The Case of Alcohol Outlets and Binge Drinking. *American Journal of Public Health*, 106(11):1938-1943, doi: 10.2105/ajph.2016.303425.
20. Rudolph KE, **Colson KE**, Stuart EA, Ahern J. (2016). Optimally combining propensity score subclasses. *Statistics in Medicine*, doi: 10.1002/sim.7046.
21. **Colson KE**, Rudolph KE, Zimmerman SC, Goin DE, Stuart EA, van der Laan MJ, Ahern J. (2016). Optimizing matching and analysis combinations for estimating causal effects. *Scientific Reports*, doi: 10.1038/srep23222.

² Joint authors contributed equally

22. Ng M, **Colson KE**, Dwyer-Lindgren L, Achoki T, Fullman N, Schneider M, Mulenga P, Hangoma P, Masiye F, Gakidou E. (2016). Assessing the contribution of malaria vector control and other maternal and child health interventions in reducing all-cause under-five mortality in Zambia. *American Journal of Tropical Medicine and Hygiene*, doi:10.4269/ajtmh.15-0315.
23. Balkin E, Thompson D, **Colson KE**, Lam CG, Matthay K. (2016). Physician perspectives on palliative care for children with neuroblastoma: An international context. *Pediatric Blood and Cancer*, doi: 10.1002/pbc.25900.
24. Mokdad AH, Gagnier MC, **Colson KE**, Zúñiga-Brenes P, Ríos-Zertuche D, Palmisano EB, Alfaro-Porras E, Anderson BW, Desai S, Gillespie CW, Giron SL, Haakenstad A, Mateus J, McKay A, Mokdad AA, Murphy T, Naghavi P, Nelson J, Orozco M, Ranganathan D, Salvatierra B, Schaefer A, Usmanova G, Varela Villegas A, Wilson S, Wulf S, Hernandez B, Lozano R, Iriarte E. (2015). Missed opportunities for immunization in Salud Mesoamérica: Potential impact on coverage and days at risk. *PLOS ONE* 10(10): e0139680.
25. Mokdad AH, Gagnier MC, **Colson KE**, Zúñiga-Brenes P, Ríos-Zertuche D, Palmisano EB, Alfaro-Porras E, Anderson BW, Desai S, Gillespie CW, Giron SL, Haakenstad A, Mateus J, McKay A, Mokdad AA, Murphy T, Naghavi P, Nelson J, Orozco M, Ranganathan D, Salvatierra B, Schaefer A, Usmanova G, Varela Villegas A, Wilson S, Wulf S, Hernandez B, Lozano R, Iriarte E. (2015). Health and Wealth in Mesoamerica: findings from Salud Mesoamérica 2015. *BMC Medicine* 13:164.
26. **Colson KE**, Zúñiga-Brenes P, Ríos-Zertuche D, Conde-Glez C, Gagnier MC, Palmisano E, Ranganathan D, Usmanova U, Salvatierra B, Nazar A, Tristao I, Sanchez Monin E, Anderson BW, Haakenstad A, Murphy T, Lim S, Hernandez B, Lozano R, Iriarte E, Mokdad AH (2015). Comparative estimates of crude and effective coverage of immunization in low-resource settings: Findings from Salud Mesoamérica 2015. *PLOS ONE* 10(7): e0130697.
27. **Colson KE**, Potter A, Conde-Glez C, Hernandez B, Ríos-Zertuche D, Zúñiga-Brenes P, García-Cisneros S, Olamendi-Portugal M, Nazar A, Salvatierra B, Lozano R, Iriarte E, Mokdad AH. Use of a commercial ELISA for the detection of measles-specific immunoglobulin G (IgG) in dried blood spots collected from children living in low-resource settings. *Journal of Medical Virology* doi: 10.1002/jmv.24136.
28. Smith KB, Iezzoni LI, Kilbridge KL, Pajolek H, **Colson KE**, Park ER. (2015). Body image perceptions among women with pre-existing physical disability who developed breast cancer: A qualitative exploration. *Psycho-Oncology*, doi: 10.1002/pon.3791.
29. **Colson KE**, Dwyer-Lindgren L, Achoki T, Fullman N, Schneider M, Mulenga P, Hangoma P, Ng M, Masiye F, Gakidou E. (2015). Benchmarking health system performance across districts in Zambia: a systematic analysis of levels and trends in key

maternal and child health interventions from 1990 to 2010. *BMC Medicine* 13:69. doi:10.1186/s12916-015-0308-5.

30. Mokdad AH, **Colson KE**, Zúñiga-Brenes P, Ríos-Zertuche D, Palmisano EB, Alfaro-Porras E, Anderson BW, Desai S, Gagnier MC, Gillespie CW, Giron SL, Haakenstad A, Mateus J, McKay A, Mokdad AA, Murphy T, Naghavi P, Nelson J, Orozco M, Ranganathan D, Salvatierra B, Schaefer A, Usmanova G, Varela Villegas A, Wilson S, Wulf S, Hernandez B, Lozano R, Iriarte E. (2015). Salud Mesoamérica 2015 Initiative: Design, implementation, and baseline findings. *Population Health Metrics* 13:3. doi:10.1186/s12963-015-0034-4.
31. **US Burden of Disease Collaborators**. (2013). The state of US health, 1990-2010: burden of diseases, injuries, and risk factors. *Journal of the American Medical Association*, 310(6), 591-608. doi: 10.1001/jama.2013.13805.
32. Lozano R, Naghavi M, Foreman K, Lim S, Shibuya K,..., **Colson KE**, ... , Lopez AD, Murray CJL. [189 total authors]. (2012). Global and regional mortality from 235 causes of death for 20 age groups in 1990 and 2010: a systematic analysis for the Global Burden of Disease Study 2010. *The Lancet*, 380, 2095-2128.
33. Murray CJL, Vos T, Lozano R, Naghavi M, Flaxman AD, Michaud C, Ezzati M, Shibuya K, Salomon JA,..., **Colson KE**, ... , Lopez AD. [353 total authors]. (2012). Disability-adjusted life years (DALYs) for 291 diseases and injuries in 21 regions, 1990-2010: a systematic analysis for the Global Burden of Disease Study 2010. *The Lancet*, 380, 2197-2223.
34. Vos T, Flaxman AD, Naghavi M, Lozano R, Michaud C, Ezzati M, Shibuya K, Salomon JA,..., **Colson KE**,... , Lopez AD, Murray CJL. [355 total authors]. (2012). Years lived with disability (YLDs) for 1160 sequelae of 289 diseases and injuries, 1990–2010: a systematic analysis for the Global Burden of Disease Study 2010. *The Lancet*, 380, 2163–2196.
35. Lim SS, Vos T, Flaxman AD, Danaei G, Shibuya K,..., **Colson KE**,... , Lopez AD, Murray CJL, Ezzati M. [209 total authors]. (2012). A comparative risk assessment of burden of disease and injury attributable to 67 risk factors and risk factor clusters in 21 regions, 1990–2010: a systematic analysis for the Global Burden of Disease Study 2010. *The Lancet*, 380, 2224–2260.

UNDER REVIEW

1. **Matthay EC**, Hagan E, Joshi S, Tan M, Vlahov D, Adler N, Glymour MM. The revolution will be hard to evaluate: How simultaneous change in multiple policies affects estimation of the health effects of social policies. Under review at *American Journal of Epidemiology*.

2. **Matthay EC**, Farkas K, Goin DE, Rudolph KE, Ahern J. Association of openings and closings of firearm dealers with firearm deaths and injuries: A differences-in-differences analysis. Under review at *Annals of Epidemiology*.
3. **Matthay EC**, Hagan E, Gottlieb L, Tan M, Vlahov D, Adler N, Glymour MM. (Em)powering population health research: Considerations for plausible and actionable effect sizes. Under review at *Social Science & Medicine*.
4. **Matthay EC**, Duchowny KA, Riley AR, Galea S. Projected all-cause deaths attributable to COVID-19-related unemployment in the United States. Under review at *American Journal of Public Health*.
5. Matthay ZA, Kornblith AE, **Matthay EC**, ... , Kornblith LZ. [22 total authors]. The DISTANCE study: Determining the impact of social distancing on trauma epidemiology during the COVID-19 epidemic. Under review at *Annals of Surgery*.
6. Zimmerman SC, **Matthay EC**, Rudolph KE, Goin D, Farkas K, Rowe C, Ahern J. California's Mental Health Services Act and mortality due to suicide, homicide, and acute effects of alcohol: A quasi-experimental study. Under review at *Health Services Research*.
7. Farkas K, **Matthay EC**, Rudolph KE, Goin DE, Zimmerman S, Ahern J. Association of law enforcement use of force training reforms with injuries and deaths due to legal intervention in Richmond, California: A quasi-experimental study. Under review at *Health Affairs*.
8. Li CX, **Matthay EC**, Rowe C, Bradshaw PT, Ahern J. Conducting case-control studies using survey data with complex sampling designs: A simulation study. Under review at *American Journal of Epidemiology*.

MANUSCRIPTS IN PREPARATION

1. **Matthay EC**, Elser H, Kiang MV, Glymour MM, Schmidt LA, Humphreys K. Association of state cannabis commercialization with violent injuries. Planned submission to *JAMA*.
2. **Matthay EC**, Gottlieb L, Hagan E, Tan M, Vlahov D, Adler N, Glymour MM. Analytic methods for estimating the health effects of social policies in the presence of policy clustering. Planned submission to *Epidemiologic Reviews*.
3. **Matthay EC**, Schmidt LA. Home delivery of legal intoxicants in the age of COVID-19. Planned submission to *Addiction*.
4. **Matthay EC**, Glymour MM, Schmidt LA. A classification of state recreational cannabis laws from 2012 to 2017. Planned submission to *Addiction*.

5. Levin D, **Matthay EC**, Ahern J, Petersen M, Herd D, Karriker-Jaffe K. Long-term effects of alcohol outlet density on relapse. Planned submission to *Journal of Studies on Alcohol and Drugs*.

COMMENTARIES AND LETTERS

1. **Matthay EC**. Suicide falls by a third globally: Overall trends hide extreme heterogeneity across and within countries. (2019). *BMJ*, 364, <https://doi.org/10.1136/bmj.l416>. *Invited commentary*.
2. **Matthay EC**, Galin J, Farkas K, Rudolph K, Wintemute G, Ahern J. (2018). Associations between Gun Shows and Firearm Deaths and Injuries. *Annals of Internal Medicine*, 169(1), 66.
3. Ahern J, **Matthay EC**, Goin DE, Farkas K, Rudolph KE. (2018). The Authors Respond. *Epidemiology*, Epub ahead of print. doi: 10.1097/EDE.0000000000000881.
4. **GBD 2010 Country Collaboration**. (2013). GBD 2010 country results: a global public good. *The Lancet*, 381(9871), 965-970. doi: 10.1016/S0140-6736(13)60283-4.

ACADEMIC CONFERENCE PRESENTATIONS

ORAL PRESENTATIONS

1. **Matthay EC**³, Glymour MM. Evaluating identifiability of the health effects of social policies in the presence of policy clustering. *Annual Meeting of the Society for Epidemiologic Research*. Virtual; December 2020.
2. **Matthay EC**³. Discussant and organizer for symposium: Translational social epidemiology: Identifying and evaluating policy interventions that address the health implications of social stratification. *Annual Meeting of the Society for Epidemiologic Research*. Virtual; December 2020.
3. **Matthay EC**, Farkas K, Goin DE, Rudolph KE, Ahern J. Association of openings and closings of firearm dealers with firearm injuries and deaths: A differences-in-differences analysis. *Annual Meeting of the Population Association of America*. Washington, DC, April 2020 (Cancelled due to COVID-19).
4. Farkas K, **Matthay EC**, Rudolph KE, Goin DE, Zimmerman S, Ahern J. Association of law enforcement use of force training reforms with injuries and deaths due to legal intervention in Richmond, California: An application of the Synthetic Control Method. *Annual Meeting of the Population Association of America*. Washington, DC, April 2020 (Cancelled due to COVID-19).

5. **Matthay EC**³, Galin J, Rudolph K, Farkas K, Wintemute G, Ahern J. In-State and interstate associations between gun shows and firearm deaths and injuries: A quasi-experimental study. *Civil Justice Research Initiative Gun Violence Litigation Symposium*. Berkeley, CA; June 2019
6. **Matthay EC**, Rudolph KE, Zimmerman SC, Goin D, Farkas K, Ahern J³. Studying local-level policies and firearm violence: A quasi-experimental example from the Operation Peacemaker Fellowship in Richmond, California. *Annual Meeting of the Society for Epidemiologic Research*. Minneapolis, MN; June 2019.
7. **Matthay EC**³, Hagan E, Gottlieb L, Vlahov D, Adler N, Glymour MM. Causal inference without experimentation: Integrating language and methods in epidemiology, econometrics, and program evaluation. *Annual Meeting of the Population Association of America*, Austin, TX, April 2019.
8. Goin DE³, Gomez A, Farkas K, Zimmerman S, **Matthay E**, Ahern J. Exposure to community homicide during pregnancy and preterm birth: A within-community matched design. *Annual Meeting of the Population Association of America*, Austin, TX, April 2019.
9. **Matthay EC**³, Farkas K, Skeem J, Ahern J. Exposure to community violence and risk of self-harm in California: A multi-level population-based case-control study. *Annual Meeting of the Society for Epidemiologic Research*. Baltimore, MD; June 2018.
10. **Matthay EC**, Rudolph KE, Goin DE, Farkas K, Ahern J³. Novel use and combinations of population-based big data for the study of rare outcomes and transient ecological exposures. *Annual Meeting of the Society for Epidemiologic Research*. Baltimore, MD; June 2018.
11. Farkas K³, **Matthay EC**, Ahern J. Police use of force training reforms and injuries and deaths due to legal intervention in Richmond, California. *Annual Meeting of the Society for Epidemiologic Research*. Baltimore, MD; June 2018.
12. Li C³, **Matthay EC**, Rowe C, Bradshaw PT, Ahern J. Conducting case-control studies using survey data with complex sampling designs: A simulation study. *Annual Meeting of the Society for Epidemiologic Research*. Baltimore, MD; June 2018.
13. Ahern J³, Zimmerman S, **Matthay EC**, Goin D, Farkas K, Rudolph K. Effects of the Mental Health Services Act on suicide in California: a synthetic control approach. Symposium: Changes in United States health policy: implications for substance use and injury. *Annual Meeting of the Society for Epidemiologic Research*. Baltimore, MD; June 2018.

14. Farkas K³, **Matthay EC**, Rudolph KE, Goin D, Ahern J. Mental illness and substance use disorders among legal intervention injury cases in California, 2005-2015. *Annual Meeting of the American Public Health Association*. Atlanta, GA; November 2017.
15. **Matthay EC**³, Galin J, Rudolph KE, Farkas K, Wintemute G, Ahern J. Local effects of gun shows on firearm deaths and injuries in California: an investigation of potential within-state and cross-border associations. *Annual Meeting of the Society for Epidemiologic Research*. Seattle, WA; June 2017. **Plenary presentation** in receipt of **Tyroler Student Paper Prize Award** for the best submitted paper by a student in a doctoral program with a concentration in epidemiology.
16. Farkas K³, **Matthay EC**, Rudolph KE, Goin D, Ahern J. Injuries and deaths due to legal intervention in California: trends, rates, and comorbid mental illness. *Annual Meeting of the Society for Epidemiologic Research*. Seattle, WA; June 2017.
17. Ahern J³, **Matthay EC**, Goin D, Rudolph K, Farkas K. Health effects of community violence beyond injuries and deaths. *Annual Meeting of the Society for Epidemiologic Research*. Seattle, WA; June 2017.
18. Ahern J³, **Colson KE**, Margerison-Zilko C, Hubbard A, Galea S. How does a “big effect” translate to population impact? *Epidemiology Congress of the Americas*. Miami, FL, June 2016.
19. **Colson KE**³, Galin J, Ahern J. Association between suicide and homicide in urban neighborhoods: A spatial analysis. *International Conference on Urban Health*. San Francisco, CA: April 2016.
20. Ahern J, **Colson KE**², Zimmerman S², Rudolph KE, Goin D. A rigorous system to evaluate the health impacts of California programs and policies using big data and optimized analyses. *Annual Meeting of the American Public Health Association*. Chicago, IL; November 2015.
21. Ahern J³, **Colson KE**, Rudolph KE, Zimmerman S, Goin D. Does maximizing covariate balance achieve the best estimate? Comparative performance of matching methods for estimating treatment effects. *Annual Meeting of the Society for Epidemiologic Research*. Denver, CO; June 2015.
22. **Colson KE**, Dwyer-Lindgren L, Fullman N³, Achoki T, Schneider M, Hangoma P, Ng M, Masiye F, Gakidou E. Assessing the contribution of malaria control interventions on reductions in all-cause under-5 mortality in Zambia. *63rd Annual Meeting of the American Society of Tropical Medicine and Hygiene*. New Orleans, LA: November 2014.

³ Presenting author

23. **Colson KE**³, Gagnier M, Palmisano E, Hernández-Prado B, Lozano R, Mokdad AH. Barriers to institutional delivery among indigenous populations of Central America: Results from the Salud Mesoamerica 2015 baseline evaluation. *Symposium of the Global Center for Integrated Health of Women, Adolescents and Children and the Program in Education and Research in Latin America*. Seattle, WA; 2013.
24. **Colson KE**³, Gagnier M, Palmisano E, Ranganathan D, Zúñiga-Brenes P, Ríos-Zertuche D, Ibararan P, Murphy T, Anderson BW, Salvatierra B, Nazar A, Conde-Glez CJ, Hernández-Prado B, Lozano R, Mokdad AH. Comparative estimates of immunisation coverage from three different sources: results from the SM2015 evaluation. *Global Health Metrics and Evaluation Conference*. Seattle, WA; June 2013. **Plenary presentation**.

POSTER PRESENTATIONS

1. **Matthay EC**³, Elser H, Kiang MV. Association of state cannabis liberalization with self-directed and interpersonal violence injuries. *Annual meeting of the Society for Epidemiologic Research*. Virtual; December 2020.
2. **Matthay EC**³, Kiang MV, Elser H, Humphreys K, Schmidt L, Glymour MM. Association of recreational cannabis laws with self-harm and assault injuries. *Annual meeting of the Interdisciplinary Association for Population Health Science*. Virtual; October 2020.
3. Farkas K³, **Matthay EC**, Goin DE, Rudolph KE, Ahern J. Association of mental illness with legal intervention injury: A case-control study. *Annual Meeting of the Society for Epidemiologic Research*. Minneapolis, MN; June 2019.
4. **Matthay EC**³, Rudolph KE, Zimmerman S, Goin DE, Farkas K, Ahern J. Impacts of the Operation Peacemaker Fellowship in Richmond, California on firearm deaths and injuries: A quasi-experimental study. *Annual Meeting of the Population Association of America*. Austin, TX; April 2019.
5. **Matthay EC**³, Rudolph KE, Zimmerman S, Goin DE, Farkas K, Ahern J. Impacts of the Operation Peacemaker Fellowship in Richmond, California on firearm deaths and injuries: A quasi-experimental study. *Annual Meeting of the Interdisciplinary Association for Population Health Science*. Washington, DC; October 2018. **Awarded First Place Poster Prize**.
6. Rowe C³, **Matthay EC**, Ahern J. Geographic heterogeneity in firearm-related homicide trends in California, 2005 to 2016. *Annual Meeting of the Society for Epidemiologic Research*. Baltimore, MD; June 2018.
7. Rowe C³, **Matthay EC**, Ahern J. Interpersonal violent injury trends in California, 2005 to 2016. *Annual Meeting of the Society for Epidemiologic Research*. Baltimore, MD; June 2018.

8. Zimmerman S³, **Matthay EC**, Rudolph KE, Goin D, Ahern J. Software to assess the effects of data-generating assumptions on estimator performance. *Annual Meeting of the Society for Epidemiologic Research*. Baltimore, MD; June 2018.
9. **Matthay EC**³, Farkas K, Skeem J, Ahern J. Exposure to community violence and self-harm in California: A multi-level population-based study. *Annual Meeting of the Population Association of America*, Denver, CO, April 2018.
10. Levin D³, Ahern J, **Matthay EC**, Herd D, Karriker-Jaffe K, Petersen M. Long-term effects of Alcoholics Anonymous on Relapse. *Annual Meeting of the Population Association of America*, Denver, CO, April 2018.
11. Bui AL³, Coates MM, **Matthay EC**. Quantifying years of life lost due to encounters with law enforcement in the United States, 2015-2016. California Medical Association Conference 2017, Anaheim, CA, October 2017. *Awarded Best Poster in Health Policy and Social Services*.
12. Bui AL³, Coates MM, **Matthay EC**. Quantifying years of life lost due to encounters with law enforcement in the United States, 2015-2016. American College of Physicians Southern California 2017 Meeting, Marina del Rey, CA, September 2017.
13. Zimmerman S³, **Matthay EC**, Rudolph KE, Goin D, Farkas K, Ahern J. Prediction modeling to choose the best analysis approach using features of the data. *Annual Meeting of the Society for Epidemiologic Research*. Seattle, WA; June 2017.
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15. Ahern J³, **Matthay EC**, Rudolph K, Goin D, Galin J, Farkas K, Zimmerman S. Novel study designs to leverage large-scale population health data to quantify health impacts of policies and programs. *The NIH Common Fund, High Risk High Reward Research Symposium*. Bethesda, MD; December 2016.
16. Ahern J³, **Colson KE**², Zimmerman S², Rudolph KE, Goin D. Web-based simulation application to optimize design and analysis decisions for studies of the health impacts of policies and programs. *Annual Meeting of the Society for Epidemiologic Research*. Denver, CO; June 2015.
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18. **Colson KE**³, Gagnier MC, Palmisano E, Anderson BW, Haakenstad A, Hernández-Prado B, Mokdad AH. Contraceptive knowledge and use among indigenous populations

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BLOG POSTS AND METHODS NOTES

BLOG POSTS

1. **Matthay EC**. (Dec 11, 2019). Determining the causal effects of interventions: Instrument-based study designs. <https://www.evidenceforaction.org/determining-causal-effects-interventions-instrument-based-study-designs>
2. **Matthay EC**, Glymour MM. (Nov 20, 2019). Determining the causal effects of interventions: Alternative methods for evaluation. <https://www.evidenceforaction.org/determining-causal-effects-interventions-alternative-methods-evaluation>
3. **Matthay EC**, Glymour MM. (Nov 3, 2019). Methods: The framework for building high-quality evidence to inform decision-making. <https://www.evidenceforaction.org/methods-framework-building-high-quality-evidence-inform-decision-making>
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6. **Matthay EC**. (March 24, 2020). Using complex systems modeling for social good: An interview with George Kaplan. <https://www.evidenceforaction.org/using-complex-systems-modeling-social-good-interview-george-kaplan>
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1. **Matthay EC**. (2019). Study designs based on controlling confounders versus using instrumental variables. <https://www.evidenceforaction.org/sites/default/files/E4A-Methods-Note-One.pdf>

2. **Matthay EC.** (2019). Identifying and choosing an instrument-based study design. <https://www.evidenceforaction.org/sites/default/files/E4A-Methods-Note-Instrument-Based-Study-Designs.pdf>
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