Samuel M. Jenness, PhD

Curriculum vitae

Department of Epidemiology
Rollins School of Public Health
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Education

2015 **PhD** **Epidemiology**
School of Public Health, University of Washington

2005 **MPH** **Health Law & Bioethics**
School of Public Health, Boston University

2002 **BA** **Philosophy**
College of Arts & Sciences, Boston University

Academic Positions

2021–present **Associate Professor (with tenure)**

2016–2021 **Assistant Professor**
Department of Epidemiology, Emory University

2020–present **Full Member**
Population Biology, Ecology, and Evolution Program, Emory University

2015–2016 **Postdoctoral Research Associate**
Center for Studies in Demography and Ecology, University of Washington

Other Research Positions

2006–2011 **Research Scientist**
HIV Epidemiology Program, New York City Department of Health & Mental Hygiene

2002–2006 **Research Analyst**
HIV/AIDS Bureau, Massachusetts Department of Public Health

Peer-Reviewed Publications

106. Onwubiko UN, Murray SM, Rao A, Chamberlain AT, Sanchez TH, Benkeser D, Holland DP, **Jenness SM**, Baral SD. Individual & Joint Associations of Sexual Stigma and Mental Distress with PrEP Uptake, Adherence and Persistence Among US Gay and Bisexual Men. *Social Science & Medicine.* 2024. Epub ahead of print. DOI: 10.1016/j.socscimed.2024.117493.

105. Traeger MW, Mayer KH, Krakower DS, Gitin S, **Jenness SM**, Marcus JL. Potential Impact of Doxycycline Post-Exposure Prophylaxis Prescribing Strategies on Incidence of Bacterial Sexually Transmitted Infections. *Clinical Infectious Diseases.* 2023. Epub ahead of print. DOI: 10.1093/cid/ciad488.

104. Kiti MC, Sacoor C, Aguolu OG, Zelaya A, Chen H, Kim SS, Cavele N, Jamisse E, Tchavana C, Jose A, Macicame I, Joaquim O, Ahmed N, Liu CY, Yildirim I, Nelson K, **Jenness SM**, Maldonado H, Kazi M, Srinivasan R, Mohan VR, Melegaro A, Malik F, Bardaji A, Omer SB, Lopman B. Social Contact Patterns in Rural and Urban Settings, Mozambique, 2021–2022. *Emerging Infectious Diseases.* 2025; 31(1): 94–103.

103. Chen YN, Zhou J, Kirkham HS, Witt EA, **Jenness SM**, Wall KM, Kamaleswaran R, Naimi AI, Siegler AJ. Understanding the Typology of PrEP Persistence Trajectories among Male PrEP Users in the U.S. *Open Forum Infectious Diseases.* 2024; 11(11): ofae584.

102. Traeger MW, Krakower D, Mayer KH, **Jenness SM**, Marcus JL. Use of Doxycycline and Other Antibiotics as Bacterial Sexually Transmitted Infection Prophylaxis in a U.S. Sample of Primarily Gay and Bisexual Men. *Sexually Transmitted Diseases.* 2024; 51(12): 763–771.

101. Harrington KRV, Gandhi NR, Shah NS, Naidoo K, Auld SC, Andrews JR, Brust JCM, Lutchminarain K, Coe M, Willis F, Campbell A, Cohen T, **Jenness SM**, Waller L. The impact of COVID-19 national lockdowns on drug-resistant tuberculosis in KwaZulu-Natal, South Africa: a spatial analysis. *Annals of Epidemiology.* 2024; 97: 44–51.

100. Aguolu OG, Kiti MC, Nelson K, Liu CY, Sundaram M, Gramacho S, **Jenness SM**, Melegaro A, Sacoor C, Bardaji A, Macicame I, Jose A, Cavele N, Amosse F, Uamba M, Jamisse E, Tchavana C, Giovanni Maldonado Briones H, Jarquín C, Ajsivinac M, Pischel L, Ahmed N, Mohan VR, Srinivasan R, Samuel P, John G, Ellington K, Augusto Joaquim O, Zelaya A, Kim S, Chen H, Kazi M, Malik F, Yildirim I, Lopman B, Omer SB. Comprehensive Profiling of Social Mixing Patterns in Resource Poor Countries: A Mixed Methods Research Protocol. *PLoS One.* 2024; 19(6): e0301638.

99. **Jenness SM**, Wallrafen-Sam K, Schneider I, Kennedy S, Akiyama MJ, Spaulding AC. Dynamic Contact Networks of Residents of an Urban Jail in the Era of SARS-CoV-2. *Epidemics.* 2024; 47: 100772.

98. Janulis P, **Jenness SM**, Risher K, Phillips G, Mustaski B, Birkett M. Substance Use and Variation in Sexual Partnership Rates among Young MSM and Young Transgender Women: Diaggregating Between and Within-Person Associations. *Drug and Alcohol Dependence.* 2023; 252: 110968.

97. Klumb C, Morris M, Goodreau SM, **Jenness SM**. Improving and Extending STERGM Approximations Based on Cross-Sectional Data and Tie Durations. *Journal of Computational and Graphical Statistics.* 2024; 33(1): 166-180.

96. Hamilton DT, Wang LY, Hoover KW, Smith DK, Delaney KP, Li J, Hoyte T, **Jenness SM**, Goodreau SM. Potential contribution of PrEP uptake by adolescents 15-17 years old to achieving the "Ending the HIV Epidemic" incidence reduction goals in the US South. *PLoS One.* 2023; 18(11): e0288588.

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94. Kraft TS, Seabright E, Alami S, **Jenness SM**, Hooper P, Beheim B, Davis H, Cummings DK, Rodriguez DE, Gayuba MG, Miner E, de Lamballerie X, Inchauste L, Priet S, Trumble BC, Stieglitz J, Kaplan H, Gurven MD. Metapopulation Dynamics of SARS-CoV-2 Transmission in a Small-Scale Amazonian Society. *PLoS Biology.* 2023; 21(8): e3002108.

93. Janulis P, Goodreau SM, Morris M, Birkett M, Phillips G, Risher K, Mustanski B, **Jenness SM**. Partnership Types and Coital Frequency as Predictors of Gonorrhea and Chlamydia among Young MSM and Young Transgender Women. *International Journal of STD & AIDS.* 2023; 34(10): 694–701.

92. Mann LM, Sanchez T, Stephenson R, Sullivan PS, **Jenness SM**. The Impact of the COVID-19 Pandemic on Sexual Behavior and HIV Prevention and Treatment Services among U.S. Men Who Have Sex with Men in the Post-Lockdown Era. *American Journal of Men's Health.* 2023; 17(2): 15579883231168602.

91. Hamilton DT, Hoover KW, Smith DK, Delaney KP, Wang LY, Li J, Hoyte T, **Jenness SM**, Goodreau SM. Achieving the "Ending the HIV Epidemic in the U.S." Incidence Reduction Goals among At-Risk Populations in the South. *BMC Public Health.* 2023; 23(1): 716.

90. Jones J, **Jenness SM**, Le Guillou A, Sullivan PS, Gift TL, Delaney KP, Chesson H. Estimated Number of Incident HIV Infections in Men Who Have Sex with Men Attributable to Gonorrhea and Chlamydia, per Gonococcal or Chlamydial Infection, in the United States. *Sexually Transmitted Diseases.* 2023; 50(2): 83–85.

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87. Chandra C, Morris M, Van Meter C, Goodreau SM, Sanchez T, Janulis P, Birkett M, **Jenness SM**. Comparing Sexual Network Mean Active Degree Measurement Metrics among Men Who Have Sex with Men. *Sexually Transmitted Diseases.* 2022; 49(12): 808–814.

86. Mann LM, Le Guillou A, Goodreau SM, Marcus JL, Sanchez T, Weiss KM, **Jenness SM**. Correlations Between Community-Level HIV Preexposure Prophylaxis Coverage and Individual-Level Sexual Behaviors among US Men Who Have Sex with Men. *AIDS.* 2022; 36(14): 2015–2023.

85. Maloney KM, Benkeser D, Sullivan PS, Kelley C, Sanchez T, **Jenness SM**. Sexual Mixing by Diagnosed HIV Status and Pre-Exposure Prophylaxis Use among Men Who Have Sex with Men: Stochastic Reclassification to Address Information Bias in Egocentric Network Data. *Epidemiology.* 2022; 33(6): 808–16.

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75. Kiti MC, Aguola OG, Liu C, Mesa AR, Regina R, Woody M, Willebrand K, Couzens C, Bartelsmeyer T, Nelson KN, **Jenness SM**, Riley S, Melegaro A, Adhmed F, Malik F, Lopman BA, Omer SB. Social Contact Patterns among Employees in 3 U.S. Companies During Early Phases of the COVID-19 Pandemic, April to June 2020. *Epidemics.* 2021; 36: 100481.

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73. **Jenness SM**, Knowlton G, Smith DK, Marcus JL, Anderson EJ, Siegler AJ, Jones J, Sullivan PS, Enns E. A Decision Analytics Model to Optimize Investment in Interventions Targeting the HIV PrEP Cascade of Care. *AIDS.* 2021; 35(9): 1479–89.

72. Janulis P, Goodreau SM, Birkett M, Phillips G, Mustanski B, **Jenness SM**. Temporal Variation in One-Time Partnership Rates among Young Men Who Have Sex with Men and Transgender Women. *Journal of Acquired Immune Deficiency Syndrome.* 2021; 87(3): e214–e221.

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70. Lopman B, Liu CY, Le Guillou A, Handel A, Lash TL, Isakov AP, **Jenness SM**. A Model of COVID-19 Transmission and Control on University Campuses. *Scientific Reports.* 2021; 11(1): 5900.
Web App: [https://epimodel.shinyapps.io/covid-university/]

69. Cassels S, Mwenda K, Biney A, **Jenness SM**. Is It the Timing? Short-Term Mobility and Coital Frequency in Agbogbloshie, Ghana. *Archives of Sexual Behavior.* 2021; 50(2): 589–600.

68. Maloney KM, Le Guillou A, Driggers R, Sarkar S, Anderson EA, Malik AA, **Jenness SM**. Projected Impact of Concurrently Available Long-Acting Injectable and Daily-Oral HIV Pre-Exposure Prophylaxis. *Journal of Infectious Diseases.* 2021; 223(1): 72–82.

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58. Nelson KN, **Jenness SM**, Mathema B, Lopman BA, Auld SC, Shah NS, Brust JC, Ismail N, Omar SV, Brown TS, Allana S, Campbell A, Moodley P, Mlisana K, Gandhi NR. Social Mixing and Clinical Features Linked with Transmission in a Network of Extensively Drug-Resistant (XDR) Tuberculosis Cases is KwaZulu-Natal, South Africa. *Clinical Infectious Diseases*. 2020; 70(11): 2396–2402.

57. Weiss KM, Jones JS, Anderson EJ, Gift T, Chesson H, Bernstein K, Workowski K, Tuite A, Rosenberg ES, Sullivan PS, **Jenness SM**. Optimizing Coverage versus Frequency for Sexually Transmitted Infection Screening of Men Who Have Sex with Men. *Open Forum Infectious Diseases*. 2019; 6(10): ofz405.

56. Weiss KM, Jones J, Katz DA, Gift TL, Bernstein K, Workowski K, Rosenberg E, **Jenness SM**. Epidemiological Impact of Expedited Partner Therapy for Men Who Have Sex with Men: A Modeling Study. *Sexually Transmitted Diseases*. 2019; 46(11): 697–705.

55. Siegler A, Brock JB, Hurt CB, Ahlschlager L, Dominguez K, Kelley C, **Jenness SM**, Wilde G, Jameson S, Bailey-Herring G, Mena LA. Advancing PrEP Delivery: Protocol for a Randomized Controlled Trial for Use of ePrEP to Expand PrEP Access to Non-Urban Young MSM. *Journal of Medical Internet Research, Research Protocols*. 2019; 8(6): e13982.

54. Chapin-Bardales J, Rosenberg ES, Sullivan PS, **Jenness SM**, Paz-Bailey G. Trends in Number and Composition of Sex Partners among Men Who Have Sex with Men in the United States, National HIV Behavioral Surveillance, 2008–2014. *Journal of Acquired Immune Deficiency Syndrome.* 2019; 81(3): 257–265.

53. Hamilton D, Rosenberg ES, **Jenness SM**, Sullivan PS, Wang LY, Dunville RL, Barrios LC, Aslam M, Goodreau SM. Modeling the Joint Effects of Adolescent and Adult PrEP for Sexual Minority Males in the United States. *PLoS One.* 2019; 14(5): e0217314.

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51. Jones J, Weiss K, Mermin J, Dietz P, Rosenberg ES, Gift T, Chesson H, Sullivan PS, Lyles C, Bernstein K, **Jenness SM**. Proportion of Incident HIV Cases among Men Who Have Sex with Men Attributable to Gonorrhea and Chlamydia: A Modeling Analysis. *Sexually Transmitted Diseases.* 2019; 46(6): 357–363.

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49. **Jenness SM**, Maloney K, Smith SK, Hoover KW, Rosenberg ES, Goodreau SM, Weiss KM, Liu AY, Rao D, Sullivan PS. Addressing Gaps in HIV Preexposure Prophylaxis Care to Reduce Racial Disparities in HIV Incidence in the United States. *American Journal of Epidemiology.* 2019; 188(4): 743–752.

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44. Jones J, Guest JL, Sullivan PS, Kramer M, **Jenness SM**, Sales J. Concordance Between Monetary and Sexual Delay Discounting in Men Who Have Sex with Men. *Sexual Health.* 2018; 15(3): 214–222.

43. Luo W, Katz DA, Hamilton DT, McKenney J, **Jenness SM**, Goodreau SM, Stekler JD, Rosenberg ES, Sullivan P, Cassels S. Development of an Agent-Based Model to Investigate the Impact of HIV Self-Testing Programs for Men Who Have Sex with Men in Atlanta and Seattle. *Journal of Medical Internet Research, Public Health Surveillance.* 2018; 4(2): e58.

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41. **Jenness SM**, Goodreau SM, Morris M. EpiModel: An R Package for Mathematical Modeling of Infectious Disease over Networks. *Journal of Statistical Software.* 2018; 84(8): 1-47.

40. Goodreau SM, Hamilton DT, **Jenness SM**, Sullivan PS, Valencia RK, Wang LY, Dunville RL, Barrios LC, Rosenberg ES. Targeting Strategies for HIV Pre-Exposure Prophylaxis among Adolescent Sexual Minority Males in Higher Prevalence Areas of the United States: A Modeling Study. *Journal of Adolescent Health.* 2018; 62(3): 311–319.

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37. Neaigus A, Reilly KH, **Jenness SM**, Hagan H, Wendel T, Gelpi-Acosta C, Marshall DM. Trends in HIV and HCV Risk Behaviors and Prevalent Infection among People Who Inject Drugs in New York City, 2005–2012. *Journal of Acquired Immune Deficiency Syndrome*. 2017; 75 Suppl 3: S325–S332.

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25. **Jenness SM**, Neaigus A, Wendel T, Gelp-Acosta C, Hagan H. Spatial Recruitment Bias in Respondent-Driven Sampling: Implications for HIV Prevalence Estimation in Urban Heterosexuals. *AIDS & Behavior*. 2014; 18(12): 2366–73.

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23. Neaigus A, Reilly KH, **Jenness SM**, Wendel T, Marshall DM, Hagan H. Multi-level Risk Factors for Greater HIV Infection of Black Men Who Have Sex with Men in New York City. *Sexually Transmitted Diseases*. 2014; 41(7): 433–9.

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9. **Jenness SM**, Kobrak P, Wendel T, Neaigus A, Murrill CS, Hagan H. Patterns of Exchange Sex among High-Risk Heterosexual Men and Women. *Journal of Urban Health*. 2011; 88(2): 329–41.

8. **Jenness SM**, Begier E, Neaigus A, Murrill CS, Wendel T, Hagan H. Unprotected Anal Intercourse and Sexually Transmitted Diseases in High-Risk Heterosexual Women. *American Journal of Public Health*. 2011; 101(4): 745–50.

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5. **Jenness SM**, Hagan H, Liu KL, Wendel T, Murrill CS. Continuing HIV Risk in New York City Injection Drug Users: The Association of Syringe Source and Syringe Sharing. *Substance Use & Misuse.* 2011; 46(2-3): 192–200.

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1. **Jenness SM**, Murrill CS, Liu KL, Wendel T, Begier E, Hagan H. Missed Opportunities for HIV Testing among High-Risk Heterosexuals. *Sexually Transmitted Diseases.* 2009; 36(11): 704–10.

Conference Presentations & Invited Talks

37. Modeling HIV Transmission Across Dynamic Sexual Networks with EpiModel. *Exploring Sexual Network Structure in HIV Models Meeting, Bill & Melinda Gates Foundation*. 2024.

36. How Social Networks Drive Infectious Disease Transmission, and How They Can Be Used to Improve Prevention. *Department of Epidemiology Seminar, University of Florida*. 2023.

35. Modeling Infectious Disease Dynamics Across Temporal Networks with EpiModel. *Duke Social Networks and Health Conference*. 2023.

34. The Role of HIV Partner Services in the Modern Biomedical HIV Prevention Era: A Network Modeling Study. *Sexually Transmitted Diseases Prevention Conference*. 2022.

33. The Role of ART-Based Prevention Tools in Reducing HIV Disparities among US Men Who Have Sex with men. *Translating Research into Prevention (TRIP) Seminar, Division of HIV Prevention, Centers for Disease Control and Prevention*. 2022.

32. Statistical Approaches to Modeling Epidemics Across Temporal Contact Networks. *Seminar in Network Analysis at Carolina (SNAC), University of North Carolina*. 2022.

31. Statistical Approaches to Modeling Epidemics Across Temporal Contact Networks. *Data Science in the Social and Behavioral Sciences Workshop, Statistical and Applied Mathematical Sciences Institute, National Science Foundation*. 2021.

30. Statistical Approaches to Modeling Epidemics Across Temporal Contact Networks. *Isaac Newton Institute for Mathematical Sciences, Models Old and New Seminar Series*. Cambridge, UK; 2020.

28. Epidemic Models for Projecting the COVID-19 Global Pandemic. *Oxford College at Emory University Special Seminar*. Atlanta; 2020.
Recording: [https://youtu.be/D-AY5nxXmV0]

28. Infectious Disease Dynamics and the COVID-19 Global Pandemic. *Emory University School of Medicine Seminar*. Atlanta; 2020.

27. Network Transmission Models to Identify Novel Strategies for HIV/STI Prevention. *City University of New York School of Public Health, Department of Epidemiology & Biostatistics Seminar*. New York City; 2019.

26. Linking Network Science and Epidemic Modeling to Optimize HIV/STI Prevention. *University of Alabama at Birmingham School of Public Health Epidemiology Seminar.* Birmingham; 2019.

25. Innovations in Methods and Applications of Mathematical Modeling for HIV PrEP. *Society of Epidemiological Research Annual Meeting.* Seattle; 2019.

24. Models for the HIV Prevention and Care Continuum in Atlanta and Beyond. *Emory University Center for AIDS Research Network Seminar.* Atlanta; 2019.

23. Network Modeling of HIV/STI Transmission Dynamics with EpiModel. *NIH Modeling Infectious Disease Agents Study (MIDAS) Annual Meeting.* Bethesda MD; 2019

22. Linking Network Science and Agent-Based Modeling for HIV/STI Prevention. *Center for Drug Use and HIV Research Seminar, New York University Global College of Public Health.* New York; 2019.

21. Network Transmission Models to Identify Novel Strategies for HIV and STI Prevention. *Infectious Disease Epidemiology Seminar, Columbia University Mailman School of Public Health.* New York; 2019.

20. Integrating Agent-Based Models for Infectious Disease and Statistical Methods for Dynamic Networks with EpiModel. *Sunbelt Conference of the International Network for Social Network Analysis.* Utretch (Netherlands); 2018.

19. Validation of Network Data for Dynamic Network Models of HIV/STI Transmission. *Integration of Empirical Data in Network Epidemiology Satellite, NetSci Conference*. Paris; 2018.

18. Network Modeling for Epidemics with EpiModel. *University of Minnesota School of Public Health Seminar.* Minneapolis; 2018.

17. Modeling Feedback Effects Between Sexual Behavior and Use of HIV/STI Prevention Tools. *Modeling Social Dynamics & Health Behavior Conference, University of Pittsburgh School of Public Health.* Pittsburgh; 2018.

16. Network Models for HIV/STI Transmission Dynamics: Statistical Methods and Computational Tools. *Society for Prevention Research Symposium.* Washington DC; 2018.

15. EpiModel: Software Tools for Modeling Infectious Disease over Dynamic Contact Networks. *NIH Modeling Infectious Disease Agents Study (MIDAS) Annual Meeting.* Bethesda MD; 2018.

13. Agent-Based Modeling and Network Analysis for Infectious Disease Epidemiology: Methods, Software, and Applications. *Department of Epidemiology and Biostatistics Seminar, Drexel University.* Philadelphia; 2018.

13. Network Modeling for Epidemics with EpiModel. *Public Health Dynamics Lab, University of Pittsburgh School of Public Health.* Pittsburgh; 2018.

12. Mathematical Models for Infectious Disease Transmission Dynamics over Complex Contact Networks: Statistical Methods and Applications for HIV/STI Prevention Science. *Northwestern University Institute on Complex Systems (NICO) Seminar.* Chicago; 2017.

11. STI Incidence Following HIV PrEP Initiation among United States Men Who Have Sex with Men. *National Coalition of STD Directors Seminar.* Atlanta; 2017.

10. Network Modeling for Infectious Disease Dynamics: A Brief Workshop. *University of California San Francisco PhD Program in Epidemiology and Translational Science.* San Francisco; 2016.

9. Mathematical Models for Infectious Disease Transmission Dynamics over Networks: Statistical Methods, Software Tools, and Applications for HIV/STI Prevention Science. *Northwestern University Center for Prevention Implementation Methodology (Ce-PIM) Grand Rounds.* Chicago; 2016.

8. Data-Driven Stochastic Modeling of HIV Epidemics over Networks using EpiModel. *Applying Simulation Science to HIV Prevention (NIAID/NIMH Research Consultation).* Washington DC; 2016.

7. Impact of CDC's HIV Preexposure Prophylaxis Guidelines among MSM in the United States. *CDC National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention Meeting.* Atlanta; 2016.

6. Network-Based Mathematical Models to Evaluate Interference within HIV Prevention Trials. *Harvard University Department of Biostatistics Causal Inference Working Group.* Boston; 2015.

5. HIV-1 Transmission Across Sexual Networks: Mathematical Methods for Evaluating HIV Prevention Strategies in Sub-Saharan Africa. *Emory University Department of Epidemiology Seminar.* Atlanta; 2015.

4. HIV-1 Transmission Across Sexual Networks: Implications for Comprehensive Prevention Strategies in Sub-Saharan Africa. *University of Washington Center for Studies in Demography & Ecology.* Seattle; 2015.

3. The Design, Implementation, and Analysis of Respondent-Driven Sampling and Venue-Based Sampling Studies. *New York University Grand Rounds.* New York; 2011.

2. Reconsidering the Internet as an HIV/STD Risk for Men Who Have Sex with Men. *New York City Department of Health HIV Grand Rounds.* New York; 2010.

1. HIV Testing among an Urban High-Risk Heterosexual Population: Implications for Routine and Risk-Based Testing Strategies. *New York City Department of Health Epidemiology Grand Rounds.* New York; 2008.

SOFTWARE

EpiModel Tools for simulating mathematical models of infectious disease. Epidemic model classes include deterministic compartmental models, stochastic individual contact models, and stochastic network models using temporal exponential random graph models.
Website: [http://epimodel.org/]

EpiModelHIV Extension package to EpiModel for simulating network models for HIV transmission dynamics, in target populations of heterosexual couples in Sub-Saharan Africa and men who have sex with men (MSM) in the United States, with a focus on assessing emerging biomedical HIV prevention technologies.
Website: [http://github.com/statnet/EpiModelHIV/]

tergmLite Methods for simulating dynamic contact networks with ERGMs using a sparse matrix representation of the networks, resulting in an improvement in the efficiency and speed of epidemic models.
Website: [http://github.com/statnet/tergmLite/]

EpiModelHPC Supports simulating large-scale stochastic network models on modern high-performance computing systems. Functionality provided to simulate models in parallel using either single-node, multiple-core or multiple-node setups.
Website: [http://github.com/statnet/EpiModelHPC/]

EpiABC Implementation of Approximate Bayesian Computation with Sequential Monte Carlo Methods (ABC-SMC) optimized for use with EpiModel R package epidemic simulations running on High-Performance Computing (HPC) cluster environments.
Website: [http://github.com/EpiModel/EpiABC/]

Extramural Research Funding

Current

Principal Investigator

Sexually Transmitted Infection Responses and Recommendations Under PrEP (STIRRUP) 2022–2027
NIH R01 MH128130

A study using big data combined with epidemic modeling and economic decision analysis methods to optimize screening and treatment for bacterial STIs within comprehensive HIV PrEP care.

Modeling the Impact of Behavioral Feedback on the Transmission of Acute Infectious Diseases (Co-PI) 2023–2025
NSF 2327697

A study that combines clinical and behavioral surveys with mathematical modeling to understand the transmission dynamics of acute infectious diseases given time varying contact patterns during illness.

Site Principal Investigator

Over-the-Counter PrEP: Acceptability, Feasibility, and Potential Impact of Access Without a Prescription (OFFSCRIPT) 2024–2027
NIH R21 MH136855

A study to evaluate the impact and feasibility of reducing barriers to initiation of HIV PrEP through removing the need for a medication prescription. *Site PI for Emory.*

SILOS: Structural Inequities across Layers of Social-Context as Drivers of HIV and Substance Use 2024–2029
NIH R01 DA061247

A study of the social and structural factors leading to racial/ethnic differences in HIV transmission and substance use among young men who have sex with men and transgender women. *Site PI for Emory.*

Cabotegravir PrEP: Actionable Robust Evidence for Translation into Practice (CABARET) 2022–2027
NIH R01 AI174862

A study to evaluate the real-world use, clinical outcomes, and optimal investment of resources for long-acting injectable PrEP, informing implementation strategies to maximize impact. *Site PI for Emory.*

Leveraging Data Synthesis to Identify Optimal and Robust Strategies for HIV Elimination among Substance-Using MSM 2022–2027
NIH R01 DA055502

A study using network analysis and mathematical modeling to identify addressing substance-related drivers of HIV transmission and opportunities for HIV prevention among MSM. *Site PI for Emory.*

Expedited Partner Therapy and the HIV Prevention Cascade Among MSM in Peru 2019–2024
NIH R01 MH118973

A partner-linked clinical trial and modeling study on using partner-delivered antibiotic treatment for gonorrhea and chlamydia to prevent recurrent within-partnership STI transmission. *Site PI for Emory.*

Co-Investigator

Emory Center for Infectious Disease Modeling & Analytics and Training Hub (CIDMATH) 2023–2028
CDC U38 75279

A Center grant to facilitate rapid understanding of the epidemiological situations to guide public health decision-making.

LITE Cohort to Identify Determinants of Viral Suppression in MSM and Transfeminine Individuals Living with HIV 2023–2028 *NIH UG3 AI176853*

A mixed-methods web-based cohort study investigating the drivers of HIV viral non-suppression among key populations in the U.S. and identifying novel approaches to VL monitoring and treatment using modeling.

Integrating the Visualization and Use of Stigma Data to Maximize the Impact of the Ending the HIV Epidemic Initiative 2022–2027 *NIH R01 MH132150*

A study combining data visualization, implementation research, and epidemic modeling methods to understand the impact of stigma mitigation on EHE pillars and local HIV incidence.

Investigation of COVID-19 Disease Parameters for Transmission Models in Low-Resource Settings 2022–2027 *NIH R01 AI161399*

An empirical mixed-methods study identify COVID-19-specific parameters for low-income settings to be implemented in mathematical models for prevention and pandemic response.

GlobalMix: Comprehensive Profiling of Social Mixing Patterns in Resource Poor Countries 2019–2024 *NIH R01 HD097175*

A multi-site descriptive study to collect social contact data from urban and rural populations in Guatemala, Pakistan, India, and Mozambique using social contact diaries and wearable sensors.

Completed

Principal Investigator

EpiModel 2.0: Integrated Network Models for HIV/STI Prevention Science 2018–2023 *NIH R01 AI138783*

A methodological project to development of framework and software tools to project the impact of innovative HIV/STI prevention tools, providing robust computational infrastructure for external users.

Modeling Antiretroviral-Based Prevention among Men Who Have Sex with Men in the US 2017–2020 *NIH R21 MH112449*

A descriptive study that collected sexual network data from men who have sex with men across the US, to support our modeling activities software for HIV transmission dynamics and interventions.

Local Models for Comprehensive HIV Prevention Planning 2016–2017 *NIH P30 AI050409*

A feasibility study that developed a model of HIV transmission dynamics in Atlanta and Seattle. Funded through a competitive internal review of the Emory Centers for AIDS Research Developmental Core.

Site Principal Investigator

Modeling the Evolutionary and Public Health Impact of HIV Adaptation in Response to Vaccination 2017–2021 *NIH R01 GM125440*

A modeling project that investigated the population-level impact of an HIV evolutionary response to a partially effective vaccine similar to RV144 to quantify viral adaptation.

Washington State 2018–2020
HIV Prevention Models *WA DOH 23192*

A modeling study using dynamic epidemic models paired with health economic optimization models to evaluate optimal HIV prevention strategies for the Washington State Department of Health.

Co-Investigator

Making it Last: An RCT of a Home Care System 2017–2023
to Promote Persistence in PrEP Care *NIH R01 MH114692*

A clinical trial to develop a home-based monitoring and support system to replace quarterly, in-person provider visits for ongoing HIV PrEP care, measuring the levels of retention in PrEP.

NEEMA: Enhancing Models of HIV, Viral Hepatitis, STIs, and 2014–2024
Tuberculosis to Inform and Improve Public Health *CDC U38 PS004646*

Ongoing cooperative agreement for policy-oriented economic and epidemic modeling projects for infectious disease control. EpiModel Research Lab funded to model the impact of federal HIV/STI policy.

CONTEXT: The Role of Casual Contact and 2018–2023
Migration in XDR Tuberculosis Transmission *NIH R01 AI38646*

An empirical mixed-methods study that integrates geospatial, genomic, and social network data to characterize the contributions of casual contact and migration to XDR TB transmission in Africa.

CorporateMix: Comprehensive Profiling of Social Mixing 2019–2023
Patterns in Workplace Settings *CDC U01 CK000572*

A descriptive study of social mixing patterns in corporate office settings to better parameterize epidemic models, and thus evaluate infectious disease interventions using seasonal influenza pandemics.

Surveillance via Wastewater Monitoring and Self-Collection of 2021–2023
COVID-19 Samples in Correctional Settings *Gates Foundation*

An empirical mixed-methods study involving wastewater surveillance, testing, and modeling data to guide public health interventions to prevent SARS-CoV-2 transmission in correctional settings.

Healthmindr: Theoretically Based Mobile App to Increase 2017–2023
PrEP Uptake among Men Who Have Sex with Men *NIH R01 DA045612*

A clinical trial to test the efficacy of a mobile phone application to promote PrEP uptake in 3 US cities, with self-administered assessments for behavioral risk, HIV testing, and PrEP initiation.

ePrEP: An RCT of an Electronic HIV PrEP Care 2017–2022
System among Rural Men Who Have Sex with Men *NIH U19 HD089881*

A clinical trial to test a home-care system for PrEP allowing rural MSM to initiate and maintain PrEP clinical care combining behavioral surveillance with app-based telemedicine.

CePIM: Center for Prevention 2016–2018
Implementation Methodology *NIH P30 DA027828*

A NIDA Center for Excellence addressing HIV prevention as it relates to drug use and abuse, implementation science, and network science. Funded as an *Early-Stage Investigator*.

Statistical Methods for Network Epidemiology 2011–2016
NIH R01 HD068395

A methodological project building the statistical theory, methods, and computer software to establish a principled approach to network epidemiology, with a focus on a modeling platform for epidemics.

Peer-Driven Intervention to Seek, Test & Treat for HIV 2011–2015
NIH R01 DA032083

A clinical trial that evaluated the efficacy of a multi-level enhanced peer-driven intervention to identify and HIV test high-risk heterosexuals, and to link newly diagnosed infected persons to HIV medical care.

Teaching

Semester Courses

Emory EPI 512 (1 credit) 2021–present
Current Topics in Infectious Disease Epidemiology

Emory EPI 570 (3 credits) 2017–present
Infectious Disease Dynamics: Theory and Models

Short Courses

Network Modeling for Epidemics 2024–present
Part of the Summer Institute in Statistics and Modeling in Infectious Diseases (SISMID)

Network Modeling for Epidemics 2013–2023
University of Washington

Modeling for HIV/STI Prevention Science 2017
Harvard University School of Public Health

Network Statistics in Health Research 2014–2015
University of Ghent (Belgium)

Modeling Epidemics with EpiModel 2014–2015
INSNA Sunbelt Conference

Guest Lectures

Emory EPI 546 (HIV Epidemiology) 2017–2023
Topic: Mathematical Modeling for HIV Epidemiology

Emory EPI 569 (Concepts and Methods in Infectious Disease Epi) 2017–2023
Topic: Contact Networks for Infectious Diseases

Emory EPI 591 (Social Epidemiology) 2021, 2023
Topic: Network Science for HIV Epidemiology

Emory BSHE 535 (Social Determinants of Health) 2016–2020
Topic: Agent-Based Modeling of Social Determinants of Health

Emory EPI 550 (STI Epidemiology) 2016
Topic: Mathematical Modeling for STI Epidemics

Emory EPI 590 (Implementation Science) 2016
Topic: Mathematical Modeling for Implementation Science Research

Mentoring

Post-Doctoral Fellows

Baylor Fain	*Primary Fellowship Mentor*	2024–present
Dehao (Billy) Chen	*Primary Fellowship Mentor*	2023–present
Adrien Le Guillou	*Primary Fellowship Mentor*	2019–present

PhD Students

Primary Mentor

Jonathan Tingle	*Dissertation Committee Chair*	2022–present
Christina Chandra	*Dissertation Committee Chair*	2020–present
Udodirim Onwubiko	*Dissertation Committee Co-Chair*	2021–2024
Laura Mann	*Dissertation Committee Chair*	2018–2023
Emeli Anderson	*Dissertation Committee Chair*	2017–2022
Kevin Maloney	*Dissertation Committee Chair*	2018–2021

Secondary Mentor

Carmen Alvarez (PBEE)	*Dissertation Committee Member*	2022–present
Maria Garcia Quesada	*RA Advisor*	2022–2024
Carol Liu	*Dissertation Committee Member*	2022–2024
Enoch Chen	*Dissertation Committee Member*	2020–2023
Kristin Harrington	*Dissertation Committee Member*	2020–2022
Jordan Johnson	*RA Advisor*	2019–2020
Jason Gantenberg	*Dissertation Committee Member*	2019–2021
Supriya Sarkar	*Dissertation Committee Member*	2018–2021
Kristin Nelson	*Dissertation Committee Member*	2016–2018
Johana Bardales	*Dissertation Committee Member*	2016–2018
Jeb Jones	*Dissertation Committee Member*	2016

MPH/MSPH/MS Students

Primary Mentor

Ifeyinwa Ejisoby-Nwosu	*RA Advisor*	2024–present
Neha Mokashi	*RA Advisor*	2023–2024

Bevin Manuelpillai	*RA Advisor*	2023–2024
Benjamin Goldberg	*RA Advisor*	2022–2023
Isaac Schneider	*RA Advisor, Thesis Chair*	2022–2023
Karina Wallrafen-Sam	*RA Advisor, Thesis Chair*	2022–2023
Kathyrn Krupinsky	*RA Advisor, Thesis Chair*	2020–2022
Ann Shen	*Thesis Chair*	2020–2021
Shiyun Qin	*Thesis Chair*	2020–2021
Connor Van Meter	*RA Advisor, Thesis Chair*	2018–2020
Yuan Zhao	*RA Advisor*	2018–2019
Ramya Ramaraju	*RA Advisor*	2018–2019
Pragati Prasad	*RA Advisor, Thesis Chair*	2017–2019
Farah Ahmed	*Thesis Chair*	2017–2018
Stephen Uong	*Thesis Chair*	2017–2018
Caleb Ebert	*Thesis Chair*	2017–2018
Bonnie Gale	*Thesis Chair*	2017–2018
Kyndall White	*Thesis Chair*	2017–2018
Romana Fetherolf	*Thesis Chair*	2016–2017
Maraia Tremarelli	*RA Advisor*	2016–2017

Department Service

1. MPH/MSPH Admission Committee — 2016–2021
2. PhD Program Committee — 2017–present
3. PhD Admissions Committee — 2017–present
4. PhD Qualifying Exam Committee
   - *Member* — 2018–2021
   - *Chair* — 2022–present
5. Faculty Search Committee — 2019–2021
6. Infectious Disease Epidemiology Certificate Program
   - *Faculty Director* — 2020–present

Grant Review

1. Emory Center for AIDS Research 2017–present
   Development Core Pilot Grant Program
2. Emory University Research Committee 2018
   Interdisciplinary Pilot Grants Subcommittee
3. NIH Study Section
   Population and Public Health Approaches to HIV/AIDS (PPAH)
   - Ad Hoc Review 2019–2021
   - Standing Member 2022–2026

Editorial Service

Editorial Board Roles

Epidemiology	Editorial Board	2022–present
Sexually Transmitted Diseases	Editorial Board	2020–present

Journal Review

AIDS
AIDS & Behavior
AIDS Care
AIDS Patient Care & STDs
American Journal of Epidemiology
American Journal of Public Health
Annals of Epidemiology
Applied Network Science
Bioinformatics
BMC Infectious Diseases
BMC Public Health
Clinical Infectious Diseases
Demography
Drug & Alcohol Dependence
eLife
Emerging Infectious Diseases
Epidemics
Epidemiology
Frontiers in Epidemiology
Infectious Disease Modeling
International Journal of STD & AIDS
Journal of AIDS (JAIDS)
Journal of Infectious Diseases
Journal of the International AIDS Society
Journal of Medical Internet Research
Journal of Statistical Software
Journal of Women's Health
Lancet Infectious Disease
Lancet Public Health
Lancet Regional Health
Nature Communications
Network Science
Open Forum Infectious Diseases
PLoS Medicine
PLoS One
Prevention Medicine
Proceedings of the National Academy of Sciences
R Journal
Sexually Transmitted Diseases
Sexually Transmitted Infections
Social Networks