

# CURRICULUM VITAE

**Aditya Subhash Khanna, Ph.D.**

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## CURRICULUM VITAE

**Aditya Subhash Khanna, Ph.D.**

### PERSONAL INFORMATION

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### EDUCATION

2005                    **B.S.**, Mathematics and Interdisciplinary Major in Physics and Political  
                                 Science, Honors in Mathematics and Physics  
                                 Moravian College  
2009                    **M.S.**, Quantitative Ecology  
                                 University of Washington  
2011                    **M.S.**, Statistics  
                                 University of Washington  
2012                    **Ph.D.**, Quantitative Ecology  
                                 University of Washington  
2013 – 2014           **Senior Fellow**, Department of Global Health  
                                 University of Washington  
2014 – 2015           **Postdoctoral Scholar**, Department of Medicine  
                                 The University of Chicago

### ACADEMIC APPOINTMENTS

10/2017 – 12/2020    Assistant Professor (Research), Department of Medicine, The University of  
                                 Chicago  
01/2021 – 06/2024    Assistant Professor, Department of Behavioral and Social Sciences, Brown  
                                 University School of Public Health  
07/2024-                Associate Professor, Department of Behavioral and Social Sciences, Brown  
                                 University School of Public Health

### OTHER APPOINTMENTS

2015 – 2017    Staff Scientist, Department of Medicine, The University of Chicago

### HONORS AND AWARDS

2017                    UChicago Research Fellows: Award to mentor undergraduate student.  
2016                    Annals of Epidemiology Prize, American College of Epidemiology.  
2016                    Paper featured on the UNAIDS *HIV This Month*.

- 2014 Best Poster for Development and Discovery, University of Washington (UW), Department of Global Health Symposium.
- 2013 Appointed as a gonfalonier at UW Commencement 2013, as one of two graduating doctoral students who exemplify “the ideals of graduate education at UW: excellence in learning, teaching, mentoring and/or research.”

### **MEMBERSHIP IN SOCIETIES**

- 2012-2018 Population Association of America (PAA)
- 2019-2020 Association for Computing Machinery (ACM)
- 2012-present International Network for Social Network Analysis (INSNA)

### **DEPARTMENT, CENTER, AFFILIATED HOSPITAL, OR UNIVERSITY SERVICE**

- 2021-present Biostatistical Core, Center for Alcohol and Addiction Studies, Brown University School of Public Health
- 2021 – 2022 Antiracist Research Committee, Department of Behavioral and Social Sciences, Brown University School of Public Health
- 2022 Nora Kahn Piore Proposal Review Committee
- 2023 Providence/Boston Center for AIDS Research, Development Award Review
- 2024 First Year Exploratory Student Advisor at the College
- 2024 Member of the Ph.D. Admissions Committee for Behavioral and Social Health Sciences at the Brown University School of Public Health
- 2024 Evaluation Committee for the Brown Alumni Impact Award

### **NATIONAL OR INTERNATIONAL SERVICE**

#### **Grant Application Review Boards**

- 09/2020 Reviewer, The Models of Infectious Disease Agent Study (MIDAS), COVID-19 Urgent Grant Program supported by NIGMS.
- 03/2022 Reviewer, Scientific Review Panel for “Population And Public Health Approaches To HIV/AIDS” (PPAH) Study Section.
- 03/2023 Reviewer, ZRG1 EMS-A (70) R, U54 Specialized Center Cooperative Agreements, Special Emphasis Panel “Specialized Centers of Research Excellence (SCORE) on Sex Differences.”
- 10/2023 Reviewer, HLBP-G (1), P01 Program Project Grants (PPG), Special Emphasis Panel “Justice, Equity, & Cardiovascular Health Impacts of Incarceration (JERII)”.

#### **Editorial Responsibilities**

- 2020 - Guest Editor for Special Issue on “Using Mathematical Models to Advance HIV  
2022 Prevention, Treatment and Cure Research”, *Mathematical Biosciences and Engineering*.
- 2023- BMC Public Health
- 2023- PLOS One
- 2023- Population Health Metrics

### **Journal Manuscript Reviewer**

*Acta Biotheoretica, AIDS and Behavior, American Journal of Drug and Alcohol Abuse, Annals of Internal Medicine, Archives of Sexual Behavior, American Journal of Public Health, BMC Infectious Diseases, Bulletin of Mathematical Biology, Cancer, Clinical Infectious Diseases, Epidemics, Frontiers in Oncology, Harm Reduction Journal, International Journal of Environmental Research and Public Health, International Journal of Behavioral Medicine, Journal of the Acquired Immune Deficiency Syndromes (JAIDS), Journal of the Association of Nurses in AIDS Care (JANAC), Journal of Health Care for the Poor and Underserved, Journal of Homosexuality, Journal of the International AIDS Society (JIAS), Journal of Medical Internet Research, Journal of Racial and Ethnic Health Disparities, Journal of the Royal Society Interface, Mathematical Biosciences, Mathematical Biosciences and Engineering, Network Science, Open Forum Infectious Diseases, PLoS One, Proceedings of the National Academy of Sciences (declined), Public Health Reports, Sankhya, Scientific Reports, Social Science and Medicine, Statistics in Medicine, Theoretical Population Biology, Therapeutic Advances in Infectious Diseases.*

### **EXTERNAL REVIEW FOR UNIVERSITY PROMOTIONS**

- University of California, San Diego

### **SERVICE TO OTHER INSTITUTIONS**

- 2017-2018      Chaired the Grants and Collaboration Committee at the Chicago Center for HIV Elimination (CCHE), Department of Medicine, The University of Chicago.
- 2017-2018      Served on search committees to hire Research Assistant Professors (2018) and Staff Scientists at the Chicago Center for HIV Elimination (CCHE), The University of Chicago (2017-2018).
- 2016 - 2019      Chaired committees to hire Postdoctoral Scholars (2016-2019), Research Data Analysts (2016-2018) and Software Developer (2019) at the Chicago Center for HIV Elimination (CCHE), The University of Chicago.

### **PUBLICATIONS IN PEER-REVIEWED JOURNALS**

\* denotes mentored student/staff for the publication.

† denotes equally contributing authors.

1. **Khanna AS**, Goodreau SM, Gorbach PM, Daar E, Little SJ. Modeling the impact of post-diagnosis behavior change on HIV prevalence in Southern California men who have sex with men (MSM). *AIDS Behav.* 2014 Aug;18(8):1523-31. doi: 10.1007/s10461-013-0646-2. PMID: 24165985; PMCID: PMC4004722.
2. Cassels S, Jenness SM, **Khanna AS**. Conceptual framework and research methods for migration and HIV transmission dynamics. *AIDS Behav.* 2014 Dec;18(12):2302-13. doi: 10.1007/s10461-013-0665-z. PMID: 24257897; PMCID: PMC4029933.
3. **Khanna AS**, Dimitrov DT, Goodreau SM. What can mathematical models tell us about the relationship between circular migrations and HIV transmission dynamics? *Math Biosci Eng.* 2014 Oct;11(5):1065-90. doi: 10.3934/mbe.2014.11.1065. PMID: 25347807; PMCID: PMC4211275.

4. **Khanna A**, Goodreau SM, Wohlfeiler D, Daar E, Little S, Gorbach PM. Individualized diagnosis interventions can add significant effectiveness in reducing human immunodeficiency virus incidence among men who have sex with men: insights from Southern California. *Ann Epidemiol*. 2015 Jan;25(1):1-6. doi: 10.1016/j.annepidem.2014.09.012. Epub 2014 Oct 7. PMID: 25453725; PMCID: PMC4255290.
5. **Khanna AS**, Roberts ST, Cassels S, Ying R, John-Stewart G, Goodreau SM, Baeten JM, Murnane PM, Celum C, Barnabas RV. Estimating PMTCT's Impact on Heterosexual HIV Transmission: A Mathematical Modeling Analysis. *PLoS One*. 2015 Aug 11;10(8):e0134271. doi: 10.1371/journal.pone.0134271. PMID: 26262889; PMCID: PMC4532442.
6. Morgan E, Skaathun B, Michaels S, Young L, **Khanna A**, Friedman SR, Davis B, Pitrak D, Schneider J; UConnect Study Team. Marijuana Use as a Sex-Drug is Associated with HIV Risk Among Black MSM and Their Network. *AIDS Behav*. 2016 Mar;20(3):600-7. doi: 10.1007/s10461-015-1195-7. PMID: 26400079; PMCID: PMC4777642.
7. **Khanna AS**, Michaels S, Skaathun B, Morgan E, Green K, Young L, Schneider JA; uConnect Study Team. Preexposure Prophylaxis Awareness and Use in a Population-Based Sample of Young Black Men Who Have Sex With Men. *JAMA Intern Med*. 2016 Jan;176(1):136-8. doi: 10.1001/jamainternmed.2015.6536. PMID: 26571368; PMCID: PMC4790097.
8. Roberts ST<sup>†</sup>, **Khanna AS**<sup>†</sup>, Barnabas RV, Goodreau SM, Baeten JM, Celum C, Cassels S. Estimating the impact of universal antiretroviral therapy for HIV serodiscordant couples through home HIV testing: insights from mathematical models. *J Int AIDS Soc*. 2016 May 11;19(1):20864. doi: 10.7448/IAS.19.1.20864. PMID: 27174911; PMCID: PMC4865806.
9. Morgan E, **Khanna AS**, Skaathun B, Michaels S, Young L, Duvoisin R, Chang M, Voisin D, Cornwell B, Coombs RW, Friedman SR, Schneider JA. Marijuana Use Among Young Black Men Who Have Sex With Men and the HIV Care Continuum: Findings From the uConnect Cohort. *Subst Use Misuse*. 2016 Nov 9;51(13):1751-9. doi: 10.1080/10826084.2016.1197265. Epub 2016 Aug 11. PMID: 27556866; PMCID: PMC5031235.
10. Schneider JA, Kozloski M, Michaels S, Skaathun B, Voisin D, Lancki N, Morgan E, **Khanna A**, Green K, Coombs RW, Friedman SR, Laumann E, Schumm P; uConnect and BARS study teams. Criminal justice involvement history is associated with better HIV care continuum metrics among a population-based sample of young black MSM. *AIDS*. 2017 Jan 2;31(1):159-165. doi: 10.1097/QAD.0000000000001269. PMID: 27662544; PMCID: PMC5127721.
11. **Khanna AS**, Schumm P, Schneider JA. Facebook network structure and awareness of preexposure prophylaxis among young men who have sex with men. *Ann Epidemiol*. 2017 Mar;27(3):176-180. doi: 10.1016/j.annepidem.2016.11.006. Epub 2016 Nov 29. PMID: 28003117; PMCID: PMC5359033.
12. Schneider JA, Cornwell B, Jonas A, Behler R, Lancki N, Skaathun B, Michaels S, **Khanna AS**, Young LE, Morgan E, Duvoisin R, Friedman S, Schumm P, Laumann EO. Network dynamics and HIV risk and prevention in a population-based cohort of Young Black Men Who have Sex with Men. *Network Science*. 2017 Feb: 1-29. doi: 10.1017/nws.2016.27
13. Young LE, Michaels S, Jonas A, **Khanna AS**, Skaathun B, Morgan E, Schneider JA; uConnect Study Team. Sex Behaviors as Social Cues Motivating Social Venue Patronage

- Among Young Black Men Who Have Sex with Men. *AIDS Behav.* 2017 Oct;21(10):2924-2934. doi: 10.1007/s10461-017-1679-8. PMID: 28097618; PMCID: PMC5513785.
14. Young LE, Schumm P, Alon L, Bouris A, Ferreira M, Hill B, **Khanna AS**, Valente TW, Schneider JA. PrEP Chicago: A randomized controlled peer change agent intervention to promote the adoption of pre-exposure prophylaxis for HIV prevention among young Black men who have sex with men. *Clin Trials.* 2018 Feb;15(1):44-52. doi: 10.1177/1740774517730012. Epub 2017 Sep 1. PMID: 28862483; PMCID: PMC5799010.
  15. Skaathun B, **Khanna AS**, Morgan E, Friedman SR, Schneider JA. Network Viral Load: A Critical Metric for HIV Elimination. *J Acquir Immune Defic Syndr.* 2018 Feb 1;77(2):167-174. doi: 10.1097/QAI.0000000000001584. PMID: 29112042; PMCID: PMC5762423.
  16. Gore D\*, Ferreira M, **Khanna AS**, Schneider J. Human Immunodeficiency Virus Partner Notification Services Among a Representative Sample of Young Black Men Who Have Sex With Men Demonstrates Limited Service Offering and Potential Benefits of Clinic Involvement. *Sex Transm Dis.* 2018 Sep;45(9):636-641. doi: 10.1097/OLQ.0000000000000806. PMID: 29465643; PMCID: PMC6089660.
  17. **Khanna AS**, Goodreau SM, Michaels S, Schneider JA. Using Partially-Observed Facebook Networks to Develop a Peer-Based HIV Prevention Intervention: Case Study. *J Med Internet Res.* 2018 Sep 14;20(9):e11652. doi: 10.2196/11652. PMID: 30217793; PMCID: PMC6231846.
  18. Harawa NT, Brewer R, Buckman V, Ramani S, **Khanna A**, Fujimoto K, Schneider JA. HIV, Sexually Transmitted Infection, and Substance Use Continuum of Care Interventions Among Criminal Justice-Involved Black Men Who Have Sex With Men: A Systematic Review. *Am J Public Health.* 2018 Nov;108(S4):e1-e9. doi: 10.2105/AJPH.2018.304698. PMID: 30383433; PMCID: PMC6215366.
  19. Duncan DT, Hickson DA, Goedel WC, Callander D, Brooks B, Chen YT, Hanson H, Eavou R, **Khanna AS**, Chaix B, Regan SD, Wheeler DP, Mayer KH, Safren SA, Carr Melvin S, Draper C, Magee-Jackson V, Brewer R, Schneider JA. The Social Context of HIV Prevention and Care among Black Men Who Have Sex with Men in Three U.S. Cities: The Neighborhoods and Networks (N2) Cohort Study. *Int J Environ Res Public Health.* 2019 May 30;16(11):1922. doi: 10.3390/ijerph16111922. PMID: 31151275; PMCID: PMC6603520.
  20. Chen YT, Issema RS, **Khanna AS**, Pho MT, Schneider JA; UConnect Study Team. Prescription Opioid Use in a Population-Based Sample of Young Black Men Who Have Sex with Men: A Longitudinal Cohort Study. *Subst Use Misuse.* 2019;54(12):1991-2000. doi: 10.1080/10826084.2019.1625400. Epub 2019 Jun 14. PMID: 31198077; PMCID: PMC6764892.
  21. Molina Y, **Khanna A**, Watson KS, Villines D, Bergeron N, Strayhorn S, Strahan D, Skwara A, Cronin M\*, Mohan P, Walton S, Wang T, Schneider JA, Calhoun EA. Leveraging system sciences methods in clinical trial evaluation: An example concerning African American women diagnosed with breast cancer via the Patient Navigation in Medically Underserved Areas study. *Contemp Clin Trials Commun.* 2019 Jul 19;15:100411. doi: 10.1016/j.conctc.2019.100411. PMID: 31406947; PMCID: PMC6682374.
  22. **Khanna AS**<sup>†</sup>, Schneider JA<sup>†</sup>, Collier N, Ozik J, Issema R\*, di Paola A, Skwara A\*, Ramachandran A\*, Webb J, Brewer R, Cunningham W, Hilliard C, Ramani S, Fujimoto K, Harawa N; BARS Study Group and Getting to Zero IL Research Evaluation and Data (RED) Committee. A modeling framework to inform preexposure prophylaxis initiation and

- retention scale-up in the context of 'Getting to Zero' initiatives. *AIDS*. 2019 Oct 1;33(12):1911-1922. doi: 10.1097/QAD.0000000000002290. PMID: 31490212; PMCID: PMC6760326.
23. Chen YT, Issema RS, Hotton A, **Khanna AS**, Ardestani BM, Schneider JA, Rudolph A. Sex Partner Behavior Variation Related to Network Position of and Residential Proximity to Sex Partners Among Young Black Men Who Have Sex with Men. *AIDS Behav*. 2020 Aug;24(8):2327-2335. doi: 10.1007/s10461-020-02792-7. PMID: 31970580; PMCID: PMC7375005.
  24. Hotton AL, Chen YT, Schumm P, **Khanna AS**, Brewer R, Skaathun B, Issema RS, Ramani S, Ramachandran A, Ozik J, Fujimoto K, Harawa NT, Schneider JA. Socio-Structural and Neighborhood Predictors of Incident Criminal Justice Involvement in a Population-Based Cohort of Young Black MSM and Transgender Women. *J Urban Health*. 2020 Oct;97(5):623-634. doi: 10.1007/s11524-020-00428-8. PMID: 32180129; PMCID: PMC7560631.
  25. Duncan DT, Hickson DA, Goedel WC, Callander D, Brooks B, Chen YT, Hanson H, Eavou R, **Khanna AS**, Chaix B, Regan SD, Wheeler DP, Mayer KH, Safren SA, Carr Melvin S, Draper C, Magee-Jackson V, Brewer R, Schneider JA. The Social Context of HIV Prevention and Care among Black Men Who Have Sex with Men in Three U.S. Cities: The Neighborhoods and Networks (N2) Cohort Study. *Int J Environ Res Public Health*. 2019 May 30;16(11):1922. doi: 10.3390/ijerph16111922. PMID: 31151275; PMCID: PMC6603520.
  26. Young LE, Ramachandran A, Schumm LP, **Khanna AS**, Schneider JA. The potential of online social networking data for augmenting the study of high-risk personal networks among young men who have sex with men at-risk for HIV. *Soc Networks*. 2020 Oct;63:201-212. doi: 10.1016/j.socnet.2020.06.003. Epub 2020 Jul 2. PMID: 33100488; PMCID: PMC7583251.
  27. Schneider JA, Young L, Ramachandran A, Michaels S, Cohen H, Robinson I, Alon L, Hill B, Nakasone S, Balenciaga M, Motley D, Bouris A, **Khanna A**, Ferreira M, Valente T, Schumm P; PrEP Chicago Network Intervention Team. A Pragmatic Randomized Controlled Trial to Increase PrEP Uptake for HIV Prevention: 55-Week Results From PrEPChicago. *J Acquir Immune Defic Syndr*. 2021 Jan 1;86(1):31-37. doi: 10.1097/QAI.0000000000002518. PMID: 33306562; PMCID: PMC7722461.
  28. Bowman B, Psychogyiou M, Papadopoulou M, Sypsa V, **Khanna A**, Paraskevis D, Chanos S, Friedman SR, Hatzakis A, Schneider J. Sexual Mixing and HIV Transmission Potential Among Greek Men Who have Sex with Men: Results from SOPHOCLES. *AIDS Behav*. 2021 Jun;25(6):1935-1945. doi: 10.1007/s10461-020-03123-6. Epub 2021 Feb 8. PMID: 33555414; PMCID: PMC8081711.
  29. Strayhorn SM, Bergeron NQ, Strahan DC, Villines D, Fitzpatrick V, Watson KS, **Khanna A**, Molina Y. Understanding the relationship between positive and negative social support and the quality of life among African American breast cancer survivors. *Support Care Cancer*. 2021 Sep;29(9):5219-5226. doi: 10.1007/s00520-021-06098-9. Epub 2021 Feb 25. PMID: 33630156; PMCID: PMC8295223.
  30. **Khanna AS**, Edali M\*, Ozik J, Collier N, Hotton A, Skwara A\*, Ardestani BM\*, Brewer R, Fujimoto K, Harawa N, Schneider JA. Projecting the number of new HIV infections to formulate the "Getting to Zero" strategy in Illinois, USA. *Math Biosci Eng*. 2021 May 6;18(4):3922-3938. doi: 10.3934/mbe.2021196. PMID: 34198418; PMCID: PMC8281377.

31. Brewer R, Ramani SL, **Khanna A**, Fujimoto K, Schneider JA, Hotton A, Wilton L, Escobedo T, Harawa NT. A Systematic Review up to 2018 of HIV and Associated Factors Among Criminal Justice-Involved (CJI) Black Sexual and Gender Minority Populations in the United States (US). *J Racial Ethn Health Disparities*. 2021 Jul 22:1–46. doi: 10.1007/s40615-021-01076-7. Epub ahead of print. PMID: 34296420; PMCID: PMC8297427.
32. Molina Y, Strayhorn SM, Bergeron NQ, Strahan DC, Villines D, Fitzpatrick V, Calhoun EA, Fitzgibbon ML, Kim SJ, Watson KS, **Khanna AS**. Navigated African American breast cancer patients as incidental change agents in their family/friend networks. *Support Care Cancer*. 2021 Nov 16. doi: 10.1007/s00520-021-06674-z. Epub ahead of print. PMID: 34783907.
33. Schneider JA, Hayford C, Hotton A, Tabidze I, Wertheim JO, Ramani S, Hallmark C, Morgan E, Janulis P, **Khanna A**, Ozik J, Fujimoto K, Flores R, D'aquila R, Benbow N. Do partner services linked to molecular clusters yield people with viremia or new HIV? results from a historical cohort study. *AIDS*. 2021 Dec 6. doi: 10.1097/QAD.0000000000003140. Epub ahead of print. PMID: 34873085.
34. Boodram B, Mackesy-Amiti ME, **Khanna A**, Brickman B\*, Dahari H, Ozik J. People who inject drugs in metropolitan Chicago: A meta-analysis of data from 1997-2017 to inform interventions and computational modeling toward hepatitis C microelimination. *PLoS One*. 2022 Jan 12;17(1):e0248850. doi: 10.1371/journal.pone.0248850. PMID: 35020725; PMCID: PMC8754317.
35. Fouché T, Del Vecchio N, Papadopoulou M, Sypsa V, Roussos S, Paraskevis D, Chanos S, Dedes N, **Khanna A**, Hotton A, Hatzakis A, Psychogiou M, Schneider JA. A Network Approach to Determine Optimization of PrEP Uptake in Athens, Greece. *AIDS Behav*. 2022 Feb 11. doi: 10.1007/s10461-022-03581-0. Epub ahead of print. PMID: 35147808.
36. Fujimoto K<sup>†</sup>, Nyitray AG, Kuo J, Zhao J, Hwang LY, Chiao E, Giuliano AR, Schneider JA, **Khanna A**<sup>†</sup>. Social networks, high-risk anal HPV and coinfection with HIV in young sexual minority men. *Sex Transm Infect*. 2022 Feb 19:sextrans-2021-055283. doi: 10.1136/sextrans-2021-055283. Epub ahead of print. PMID: 35184046.
37. Lee F\*, Sheeler D\*, Hotton A, Vecchio ND, Flores R, Fujimoto K, Harawa N, Schneider JA, **Khanna AS**. Stimulant use interventions may strengthen 'Getting to Zero' HIV elimination initiatives in Illinois: Insights from a modeling study. *Int J Drug Policy*. 2022 May;103:103628. doi: 10.1016/j.drugpo.2022.103628. Epub 2022 Feb 24. PMID: 35218990; PMCID: PMC9058209.
38. Henderson, V., Strayhorn, S. M., Bergeron, N. Q., Strahan, D. C., Ganschow, P. S., **Khanna, A. S.**, Watson, K., Hoskins, K., & Molina, Y. (2022). Healthcare Predictors of Information Dissemination About Genetic Risks. *Cancer Control*, 29, 107327482211046. <https://doi.org/10.1177/10732748221104666>
39. Hotton AL, Ozik J, Kaligotla C, Collier N, Stevens A, **Khanna AS**, MacDonell MM, Wang C, LePoire DJ, Chang YS, Martinez-Moyano IJ, Mucenic B, Pollack HA, Schneider JA, Macal C. Impact of changes in protective behaviors and out-of-household activities by age on COVID-19 transmission and hospitalization in Chicago, Illinois. *Ann Epidemiol*. 2022 Jun 18:S1047-2797(22)00105-3. doi: 10.1016/j.annepidem.2022.06.005. Epub ahead of print. PMID: 35728733.
40. Antos N, Flores R, Harawa N, Vecchio ND, Issema R, Fujimoto K, **Khanna AS**, Paola AD, Schneider JA, Hotton AL. Factors associated with HIV testing and treatment among young



- Black MSM and trans women in three jail systems. *AIDS Care*. 2022 Jul 17;1-8. doi: 10.1080/09540121.2022.2094312. Epub ahead of print. PMID: 35848452.
41. **Khanna AS**, Brickman B\*, Cronin M, Bergeron NQ, Scheel JR, Hibdon J, Calhoun EA, Watson KS, Strayhorn SM, Molina Y. Patient Navigation Can Improve Breast Cancer Outcomes among African American Women in Chicago: Insights from a Modeling Study. *J Urban Health*. 2022 Oct;99(5):813-828. doi: 10.1007/s11524-022-00669-9. Epub 2022 Aug 8. PMID: 35941401; PMCID: PMC9561367.
  42. Ledesma JR, Zou L, Chrysanthopoulou SA, Giovenco D, **Khanna AS**, Lurie MN. Community mitigation strategies, mobility, and COVID-19 incidence across three waves in the United States in 2020. *Epidemiology*. 2022 Sep 21. doi: 10.1097/EDE.0000000000001553. Epub ahead of print. PMID: 36137192.
  43. Lee F\*, **Khanna AS**†, Hallmark CJ, Lavingia R, McNeese M, Zhao J, McNeese ML, Khuwaja S, Ardestani BM\*, Collier N, Ozik J, Hotton AL, Harawa NT, Schneider JA, Fujimoto K. Expanding Medicaid to Reduce Human Immunodeficiency Virus Transmission in Houston, Texas: Insights From a Modeling Study. *Med Care*. 2023 Jan 1;61(1):12-19. doi: 10.1097/MLR.0000000000001772. Epub 2022 Dec 8. PMID: 36477617; PMCID: PMC9733589.
  44. Molina Y, Kao SY, Bergeron NQ, Strayhorn-Carter SM, Strahan DC, Asche C, Watson KS, **Khanna AS**, Hempstead B, Fitzpatrick V, Calhoun EA, McDougall J. The integration of value assessment and social network methods for breast health navigation among African Americans. *Value Health*. 2023 Jun 8:S1098-3015(23)02986-8. doi: 10.1016/j.jval.2023.06.001. Epub ahead of print. PMID: 37301367.
  45. Hotton AL†, Lee F, Sheeler D, Ozik J, Collier N, Edali M, Ardestani BM, Brewer R, Schrode KM, Fujimoto K, Harawa NT, Schneider JA, **Khanna AS**†. Impact of post-incarceration care engagement interventions on HIV transmission among young Black men who have sex with men and their sexual partners: an agent-based network modeling study. *Lancet Reg Health Am*. 2023 Nov 10;28:100628. doi: 10.1016/j.lana.2023.100628. PMID: 38026447; PMCID: PMC10679934.
  46. Fulton J, Novitsky V, Gillani F, Guang A, Steingrimsson J, **Khanna A**, Hague J, Dunn C, Hogan J, Howe K, MacAskill M, Bhattarai L, Bertrand T, Bandy U, Kantor R. Integrating HIV Cluster Analysis in Everyday Public Health Practice: Lessons Learned From a Public Health--Academic Partnership. *J Acquir Immune Defic Syndr*. 2024 Sep 1;97(1):48-54. doi: 10.1097/QAI.0000000000003469. PMID: 39116331; PMCID: PMC11310557.
  47. Kantor R, Steingrimsson J, Fulton J, Novitsky V, Howison M, Gillani F, Bhattarai L, MacAskill M, Hague J, Guang A, **Khanna A**, Dunn C, Hogan J, Bertrand T, Bandy U. Prospective Evaluation of Routine Statewide Integration of Molecular Epidemiology and Contact Tracing to Disrupt Human Immunodeficiency Virus Transmission. *Open Forum Infect Dis*. 2024 Oct 9;11(10):ofae599. doi: 10.1093/ofid/ofae599. PMID: 39474444; PMCID: PMC11521326.
  48. **Khanna AS**, Rousell N\*, Davis T\*, Zhang Y\*, Sheeler D, Cioe P, Martin R, Kahler C. Social network dynamics of tobacco smoking and alcohol use among persons involved with the criminal legal system (PCLS): A modeling study. *Int J Alcohol Drug Res*. 2024 Dec 12;12(2):54–67. doi: 10.7895/ijadr.507. Epub 2024 Oct 1. PMCID: PMC11649028.
  49. **Khanna AS**, Monnig MA, Clark SE\*, Monti PM. Social network characteristics of COVID-19 vaccination and preventive health behaviors: Cross-sectional findings from the US

northeast during the early COVID-19 pandemic. *Vaccine*: X. 2024;21:100577.  
doi:10.1016/j.jvaxx.2024.100577

## SOFTWARE

\* denotes mentored student/staff for the publication.

† denotes equally contributing authors.

50. Jacobs Simon\*, **Khanna Aditya**, Madduri Kamesh, Bader David. *influenceR: Software Tools to Quantify Structural Importance of Nodes in a Network*. Version: 0.1.0. CRAN R package (2015): <https://cran.r-project.org/web/packages/influenceR/index.html>

## SCHOLARLY WORK PUBLISHED IN OTHER MEDIA

51. **Khanna, A.** Sex and the City's Network. Boston University Public Health Post. 2018 May: <https://www.publichealthpost.org/research/using-social-networks-to-eliminate-new-hiv-infections-in-chicago/>

## INVITED PRESENTATIONS

### National

1. **Khanna, AS.** Bio-behavioral models for HIV prevention. Center for Complex Systems, University of Michigan, Ann Arbor, MI, May 2012.
2. **Khanna, AS.** An examination of diagnosis strategies to maximize the preventive potential of post-diagnosis behavior change: insights from Southern California. Public Health Seattle and King County (PHSKC) Brown Bag Series, Seattle, WA, March 2013.
3. **Khanna, AS.** Epidemiology of HIV prevention: networks, models and data. Homer Stryker School of Medicine, Western Michigan University, Kalamazoo, MI. June 2016.
4. **Khanna, AS.** Invited panelist in session "Addressing the leading edge of the HIV Epidemic in the U.S.: Advancing prevention programs for urban YMSM at the HIV Research for Prevention (HIVR4P) Conference, Chicago, IL, October 2016.
5. **Khanna, AS.** Network analysis to reduce new HIV infections among young Black men who have sex with men (BMSM) in Chicago. Third Coast Center for AIDS Research, Feinberg School of Medicine, Northwestern University, Chicago, IL, November 2016.
6. **Khanna, AS.** Biosocial network models for HIV elimination. Department of Public Health Sciences, University of Chicago, Chicago, IL, January 2017.
7. **Khanna, AS.** Biosocial network models for HIV elimination. School of Human Evolution and Social Change, Arizona State University, Tempe, AZ, January 2017.
8. **Khanna, AS.** The Illinois Getting To Zero campaign: Formulating a model-based strategy for eliminating HIV Infections by 2030." Getting to Zero Kick Off event, convened by the AIDS Foundation of Chicago and the Public Health Departments of Chicago and Illinois, Chicago, June 2018.
9. **Khanna, AS.** Network modeling in HIV/STI research." Virtual modeling workshop attended by representatives at the University of Chicago, University of Texas Health Sciences Center at Houston, Northwestern University and representatives of the Chicago and Houston Departments of Public Health, September 2018.

10. **Khanna, AS.** Biosocial network modeling for HIV Elimination”, Department of Biostatistics, Schools of Public Health and Medicine, Indiana University, Indianapolis, January 2020.
11. **Khanna, AS.** Biosocial network modeling to inform initiatives to achieve health equity. School of Public Health, Indiana University, Bloomington, January 2020.
12. **Khanna, AS,** Hotton A, McNulty M, Schneider JA. Getting to Zero in the Context of Structural Racism in Illinois: Modeling for HIV Elimination. Getting to Zero Illinois Webinar Series. September 2020, recording published online: <https://youtu.be/wr1P3OderCw>.
13. **Khanna, AS.** “An Agent-Based Network Model to Simulate a Molecular Cluster-Based HIV Intervention in Chicago”, Oral presentation given to Rami Kantor’s Research Group, Miriam Hospital, Providence RI (Virtual meeting), November, 2020.
14. **Khanna AS.** Identifying Peer Change Agents for HIV Prevention on a Large Social Network. Third Coast Center for AIDS Research. Virtual Seminar. February 2021.
15. McNulty M, **Khanna AS,** Lee F, Hotton A, Pho M, Schneider J. Getting to Zero Illinois: Modeling for HIV Elimination. Joint Advisory-Community Board Meeting for the Getting to Zero Illinois Initiative, Virtual Presentation, July, 2021.
16. **Khanna AS.** Addressing Social-Structural Barriers in HIV Elimination: Lessons Learned from Getting to Zero Illinois, Oral presentation given to the New England Hub of the Justice Community Opioid Innovation Network (JCOIN), April, 2021.
17. **Khanna, AS.** Stimulant use interventions may strengthen ‘Getting to Zero’ HIV elimination initiatives in Illinois: Insights from a modeling study. Invited talk in session titled “Complex Predictive Modeling in Medical Decision Making: Methods and Applications”, The 35<sup>th</sup> New England Statistics Symposium, May, 2022 (Virtual).
18. **Khanna, AS.** Social Network Modeling to Study the Health Impacts of US Carceral Systems, Colloquium seminar at the SEICHE Center for Health and Justice, Yale University (Virtual), November, 2022.
19. **Khanna, AS.** Network Modeling for Pandemic Preparedness. Workshop given during the “Privacy and Ethics in Pandemic Data Collection and Processing” national retreat, January 2023. [https://icerm.brown.edu/topical\\_workshops/tw-23-pep/](https://icerm.brown.edu/topical_workshops/tw-23-pep/)
20. **Khanna, AS.** Social Network Dynamics of Tobacco Smoking and Alcohol Use among Persons Involved with the Criminal Legal System. Emerging Areas of Science IDeA Symposium, Warren Alpert Medical School and Advance-CTR, Providence, RI, June 2023.
21. **Khanna, AS.** “Social Network Analysis for LGBTQ Health Equity: Lessons Learned from HIV Prevention”. Invited methods talk at the LGBTQ Research Symposium (Theme: "Queering Community & Kinship"), University of Kansas (KU) School of Social Welfare, Virtual Seminar, June, 2023.
22. **Khanna, AS.** “Agent-based network modeling methods to inform implementation of HIV elimination initiatives”. Invited presentation at the Providence/Boston Center for AIDS Research (CFAR) Annual Research Symposium, May, 2024.

### **International**

23. **Khanna A,** Roberts ST, Cassels S, Barnabas V. Treatment as prevention for serodiscordant couples and pregnant women. HIV Modeling Consortium Symposium, Kuala Lumpur, Malaysia, June 2013.

24. **Khanna, A.** The use of mathematical modeling in public health decision making. The University of Chicago India Center, New Delhi, India, December 2015.

## OTHER PRESENTATIONS

### **National (First/Presenting Author Only)**

25. “Dynamics of under-powered lasers.” Poster presented at *National Council of Undergraduate Research*, Salt Lake City, UT, March 2003.
26. “Daisyworld.” *American Association of Physics Teachers Meeting*, York, PA, March 2005.
27. “Environmental feedback in Daisyworld.” Oral presentation at *Moravian College Mathematics Conference*, Bethlehem, PA, February 2005.
28. “Circular migrations and HIV transmission dynamics.” Poster presented at *Center for Statistics and Social Sciences, University of Washington, 10th Anniversary Conference*; Seattle, WA, May 2009. (Co-Winner, Best Poster Prize.)
29. “Circular migrations and HIV transmission dynamics.” Oral presentation at *Mathematical Association of America, Annual Meeting, Northwest Section*, Seattle, WA, April 2010.
30. “Combination ART for prevention of mother-to-child HIV transmission can decrease adult HIV incidence in Uganda and South Africa.” Poster presented at *Gates Grand Challenges*, Seattle, WA, Fall 2014.
31. “The BARS study: Building agent-based models of racialized justice systems (BARS) study in Black MSM. Oral presentation (joint with Kayo Fujimoto, Nina Harawa, John Schneider) at *NAESM*, Los Angeles, CA, January 2016.
32. “Introducing BARS: Building Agent-based models for racialized justice systems.” Poster presented at *Research Day*, University of Chicago Medicine, Chicago, IL, March 2017.
33. “The impact of missing data imputation on the selection of peer change agents in a Facebook network of young men who have sex with men.” Oral presentation at *Population Association of America*, Chicago, IL, April 2017.
34. “Towards an Effective PrEP Diffusion Model: Identifying Criteria for Peer Change Agent Selection.” Poster presented at *Third Coast CFAR Research Symposium*, Chicago, IL, October 2017.
35. “Towards an Effective PrEP Diffusion Model: Identifying Criteria for Peer Change Agent Selection.” Oral presentation at *Mentoring Day, CFAR Social and Behavioral Sciences Research Meeting*, San Francisco, CA, October 2017.
36. “Getting to Zero: Triangulating HIV Incidence Predictions from Micro-Level Network Modeling and Macro-Level Incidence Projections.” Oral presentation at *Society for Prevention Research Annual Meeting*, Washington, D.C., June, 2018.
37. “Where should we Focus? PrEP Retention versus PrEP Uptake: Results from the BARS Agent-Based Model of HIV Transmission among Young Black MSM.” Oral presentation at *Adherence 2018*, co-organized by the International Association of Providers and AIDS Care and Columbia University College of Physicians and Surgeons, Miami, FL, June, 2018.
38. “Stimulant Use Interventions May Strengthen ‘Getting to Zero’ HIV Elimination Initiatives in Illinois: Insights from a Modeling Study”. Oral presentation at 2021 Symposium on Substance Use Research (Virtual Meeting), organized by the Rural Addiction Drug Research Center, University of Nebraska, Lincoln, November, 2021.

39. “Social Network Dynamics of Tobacco Smoking and Alcohol Use among Persons Involved with the Criminal Legal System”. Oral presentation at Sunbelt 2023, organized by the International Network for Social Network Analysis, Portland, OR, June 2023.
40. “Integrating HIV Partner Services and Molecular Epidemiology Data to Enhance HIV Transmission Disruption in Rhode Island: Findings from a Public Health-Academic Partnership”, ID Week 2023 organized by the Infectious Diseases Society of America, Boston MA, October 2023.
41. “Integrated Network Analysis of RADx-UP Data to Increase COVID-19 Testing and Vaccination Among Persons Involved with Criminal Legal Systems (PCLS)”, Poster presented at National IDeA Symposium of Biomedical Research Excellence (NISBRE), Washington DC, June 2024.

**International (First Author Only)**

42. “Circular migrations and HIV transmission dynamics: A comparison of compartmental and network modeling.” IAS 2013. Poster presented at *7th IAS Conference on HIV Pathogenesis, Treatment and Prevention*; Kuala Lumpur, Malaysia, July 2013.
43. “Lifelong ART for pregnant women has the potential to reduce heterosexual HIV transmission.” Oral presentation at *Treatment as Prevention Workshop*, Vancouver, BC, April 2014.
44. “Pre-Exposure Prophylaxis (PrEP) knowledge and use in a population-based sample of younger Black Men who have sex with men (YBMSM) in Chicago.” Poster presented at *8th IAS Conference on HIV Pathogenesis, Treatment and Prevention*, Vancouver, BC, July 2015.
45. “Using Partially Observed Facebook Networks to Develop Peer-Based HIV Prevention Interventions: A Chicago case study.” *Sunbelt 2018*, organized by International Network for Social Network Analysis (INSNA), Utrecht, Netherlands, 2018.
46. “Incorporating Temporal Network data to Identify Peer Change Agents (PCAs) to Disseminate Information for an HIV prevention intervention.” *Sunbelt 2019*, organized by International Network for Social Network Analysis (INSNA), Montreal, Quebec, 2019
47. “An Agent-Based Network Model to Assess the Impact of Navigated Care on Stage of Breast Cancer Diagnosis.” *Sunbelt 2019*, organized by International Network for Social Network Analysis (INSNA), Montreal, Quebec, June 2019.
48. “An Agent-Based Network Model to Assess the Impact of Navigated Care on Stage of Breast Cancer Diagnosis.” *Sunbelt 2020*, organized by International Network for Social Network Analysis (INSNA), (Paris, converted to Virtual Meeting), June 2020.
49. “Social Network Dynamics of Tobacco Smoking and Alcohol Use among Persons Involved with the Criminal Legal System”. Oral Presentation at 8th Annual Alcohol Epidemiology Symposium of the Kettil Bruun Society, Johannesburg, South Africa, June 2023.
50. “Associations between vaccine attitudes and COVID-19 precautionary behaviors: A social network study from the northeastern United States”. Poster Presentation at 17<sup>th</sup> Vaccine Congress, Glasgow, Scotland, United Kingdom, September 2023.
51. “Integrated Network Analysis of RADx-UP Data to Increase COVID-19 Testing and Vaccination Among Persons Involved with Criminal Legal Systems (PCLS)”, Oral

presentation at *Sunbelt 2024*, organized by International Network for Social Network Analysis (INSNA), Edinburgh, Scotland, United Kingdom, June 2024.

52. “Integrated Network Analysis of RADx-UP Data to Increase COVID-19 Testing and Vaccination Among Persons Involved with Criminal Legal Systems (PCLS)”, Poster presentation at 18th Vaccine Congress, Lisbon, Portugal, September 2024.

## GRANTS

### Current Active Grants

1. PI Dahari, H. My role: Subaward PI at Brown. NIGMS: “Computational modeling for HCV vaccine trial design and optimal vaccine-based combination interventions” (R01 AI 158666), 04/01/21-03/31/26, \$437,545.
2. PI Kantor, M. My role: Co-Investigator. “Real Time Phylogeny and Contact Tracing to Disrupt HIV Transmission” (R01 AI 136058), 03/05/2018 - 02/28/2025 (NCE), \$653,674 (Subaward amount).
3. **PI Khanna**, My role: Principal Investigator. “Integrated Network Analysis of RADx-UP Data to Increase COVID-19 Testing and Vaccination Among Persons Involved with Criminal Legal Systems (PCLS)” (R21 MD 019388), 09/21/2023-06/30/2025, \$ 486,899.
4. PI Hotton, My role: Subaward PI at Brown. “Computational modeling to evaluate socio-structural interventions for HIV and substance use” (1R01DA057350), 09/30/2023 - 08/29/2028, \$145,347 (Subaward amount).
5. PI Stein, My role: Subaward PI at Brown. “Newport Mental Health CCBHC Improvement and Advancement (CCBHC-NP4)” (H79SM086969), 09/30/2023 - 09/29/2026. \$27,390 (Subcontract award amount).
6. **MPI Khanna**, Micalizzi. My role: MPI. “Characterizing Lifetime Cancer Risk from Early Alcohol Use Trajectories: An Evidence Synthesis and Simulation Modeling Study” (Legoretta Cancer Center Pilot Award), 01/01/2025 - 12/31/2025.

### Grants Under Review

7. **PI Khanna**, My role: Principal Investigator. “Modeling Substance Use Trajectories and Sexual Behavior in Adolescents and Young Adults: A Systems Science Approach to HIV/STI Prevention Using Existing Data” (R01DA064052), 07/01/2025 - 06/30/2030, \$ 4,033,306 (Pending IRG Review).

### Completed Grants

8. PI Monti, P. My role: Research Project Lead. NIGMS: “COBRE: Center for Addiction and Disease Risk Exacerbation”. Research Project Title: “Incarceration’s Syndemic Effects: Tobacco Smoking, Alcohol Use and Cardiovascular Disease” (P20 GM 130414), 10/01/2021 - 07/31/2024, \$493,640 (*Research Project portion only*).

9. PI Cu-Uvin, My role: Co-Investigator. “Providence/Boston Center for AIDS Research” (P30AI042853), 07/01/2023 - 06/30/2028, \$378,433 (Brown University Subaward Amount),
10. PI Lurie, M. My role: Co-Investigator. NSF: “PIPP Phase I: Mobility Analysis for Pandemic Prevention” (NSF Award Number CCF-2154941), 08/01/2022 - 01/31/2024, \$999,211
11. PI Stein. My role: Subaward PI at Brown. “Newport County, RI BIPOC, Older Adult & Children's Engagement & Expansion Program” (H79SM085689). 09/30/2021-09/29/2023, \$72,219 (Subaward amount).
12. PI Dahari, H. My role: Subaward PI at Brown. NIGMS: “Computational Discovery of Effective Hepatitis C Intervention Strategies” (R01 GM 121600), 08/01/18-07/31/23 (NCE), \$1,613,020.
13. PI Hotton, AL. My role: Subaward PI at Brown. NIMH: “Computational approaches to understand the impact of social determinants of health on HIV care continuums” (R21 MH 128116), 07/08/21-06/30/22, \$12,312.
14. PI Cu-Uvin, S. My role: Development Award PI. NIAID: “Agent-based network modeling methods to inform implementation of HIV elimination initiatives” (P30 AI 042853), 02/01/21-01/31/22, \$40,000.
15. PI Stein L. My role: Subaward PI at Brown. CMHS: “Rhode Island Certified Community Behavioral Health Clinic (RI-CCBHC) Expansion”, 10/01/2021-04/30/2022, \$38,139.
16. PI Stein, L. My role: Subaward PI at Brown. CMHS: “Thrive CMHC Expansion-Services for Individuals with Serious Emotional/Mental/ or Comorbid Disorders Impacted COVID-19”, 10/01/2021-04/30/2022, \$75,181.
17. PI Schneider, JA. My role: Subaward PI at Brown. NIAID: “Next-Generation Phylodynamics-targeted Partner Service Models for Combined HIV Prevention” (R01 AI 136056), 02/06/18-01/31/23, \$34,948. (Subaward Amount)
18. **PI Khanna, A.** My role: Principal Investigator. NIDA: “Modeling combination biomedical substance use interventions to inform a getting to zero implementation for black men who have sex with men” (R03 DA 049662), 07/01/2019-06/30/21, \$162,000.
19. PI McNulty, MC. My role: Subaward PI at Brown. AIDS Foundation of Chicago/Pritzker Family Foundation: “Getting to Zero Illinois Implementation”, 08/01/19-07/31/21, \$117,786.

20. **MPI Khanna**, Molina, Watson. My role: MPI. NCI: “Assessing and modeling network-level consequences of patient navigation” (R21 CA215252), 04/01/18-03/31/21, \$ 463,045.
21. PI Novak, R. My role: Subaward PI at Brown, UChicago. CDC: “Syphilis in Chicago: Epidemiology, Sexual Networking and *Modeling for Prevention*” (U01 PS005172), 5/1/17-4/30/21 NCE, \$75,180.
22. PI Schneider, JA. My role: Subaward PI at Brown. NIDA: “HIV intervention models for criminal justice involved substance-using Black MSM” (R01 DA 039934), 07/01/15-04/30/21, \$772,059.
23. PI D’Aquila, R. My role: Development Award PI. NIAID: “Towards an Effective PrEP Diffusion Model: Identifying Criteria for Peer Change Agent Selection” (P30 AI 117943), 04/01/18-3/31/19, \$35,094.
24. PI Schneider, J. My role: Co-Investigator. NIAID: “Public health targeting of PrEP at HIV positives’ bridging networks”, 04/01/15 – 03/31/19, \$181,759.

## TEACHING AND MENTORING ROLES

### Courses

2005-2006	Full-time Teacher	Advanced Placement Statistics; Honors Physics; Geometry; and Algebra. Trinity Collegiate School, Darlington, SC (approximately 20 high school students in each class).
2007-2008	Instructor	Course titled “Analysis for Biologists II” (QSCI 292), Center for Quantitative Science, University of Washington. Approximately 15 undergraduate students.
2007-2012	Teaching Assistant	Teaching Assistant for several quarters of “Statistical Inference in Applied Research I” (QSCI 482), “Analysis for Biologists I” (QSCI 291), and “Analysis for Biologists I” (QSCI 292).

### Guest Lectures and Rounds

2010	Guest Lecture	Statistical Software and Applications, University of Washington
2012	Guest Lecture	Seminar in Quantitative Ecology, University of Washington
2013	Guest Lecture	Social Networks and Health (BIO A 423), University of Washington
2015-2016	Series of Lectures at Summer Workshop	Youth Health Leadership Core: Epidemiology Research, The University of Chicago
2015-2016	Series of Guest Lectures	Mathematics Research Experiences for Undergraduates, The University of Chicago



2016	Guest Lecture	Critical Readings in Epidemiology, The University of Chicago
2019	Guest Lecture	Quantitative Methods Fellowship, The University of Chicago
2021	Guest Lecture	Interdisciplinary Perspectives on Disability and Death in the Global South (PHP 2710), Brown University
2021	Guest Lecture	Journal Club with Ph.D. Students in Behavioral and Social Sciences, Brown University
2021	Guest Lecture	Seminar in Substance Use Etiology for Postdoctoral Scholars in the T32 program in the Center for Alcohol and Addiction Studies (CAAS), Brown University
2021	Colloquium Seminar	Spatial Structures in the Social Sciences (S4), Brown University.
2022	Guest Lecture	Interdisciplinary Perspectives on Disability and Death in the Global South (PHP 2710), Brown University
2023	Seminar	<i>Love Data Week 2023</i> , theme: “Sharing Data. Seeking Justice. Building Trust”.
2023	Colloquium Seminar	Data Science Institute (DSI), Brown University
2023	Guest Lecture	Interdisciplinary Perspectives on Disability and Death in the Global South (PHP 2710), Brown University
2023	Guest Lecture	Seminar in Substance Use Etiology for Postdoctoral Scholars in the T32 program in the Center for Alcohol and Addiction Studies (CAAS), Brown University
2023	CAAS Rounds	“Social Network Dynamics of Tobacco Smoking and Alcohol Use among Persons Involved with the Criminal Legal System”
2024	Colloquium Seminar	Providence/Boston Center for AIDS Research (CFAR)
2024	Guest Lecture	Interdisciplinary Perspectives on Disability and Death in the Global South (PHP 2710), Brown University
2024	Colloquium Seminar	“Modeling Social Relations using ERGMs”, Inter-University Networks Research Group, Virtual

Research Supervision

2015	Mathematics Research Experience for Undergraduates Project Supervisor	Nathan Gill, Mathematics, The University of Chicago
2016	Undergraduate Summer Research Project	Alex Cordover, Statistics, The University of Chicago
2017	Staff Research Project	Daniel Gore, BA, Chicago Center for HIV Elimination, The University of Chicago
2017	Undergraduate Summer Research Project	Abigail Skwara, Mathematics, The University of Chicago
2018-2019	Supervisor for Research Data Analyst	Abigail Skwara, BA, Chicago Center for HIV Elimination, The University of Chicago

2017-2019	Postdoctoral Research Co-Mentor	Arthi Ramachandran, Ph.D., Chicago Center for HIV Elimination, The University of Chicago
2018-2020	Postdoctoral Research Co-Mentor	Babak Mahdavi Ardestani, Ph.D., Chicago Center for HIV Elimination, The University of Chicago
2019-2020	Supervisor for Research Data Analyst	Michael Cronin, B.A., Chicago Center for HIV Elimination, The University of Chicago
2020-2021	Postdoctoral Research Co-Mentor	Mert Edali, Ph.D., Chicago Center for HIV Elimination, The University of Chicago
2020-2021	Supervisor for Staff Software Engineer	Daniel Sheeler, M.S., Chicago Center for HIV Elimination, The University of Chicago
2020-2021	Supervisor for Research Data Analyst	Bryan Brickman, B.A., Chicago Center for HIV Elimination, The University of Chicago
2020-2022	Postdoctoral Research Co-Mentor	Francis Lee, Ph.D., Chicago Center for HIV Elimination, The University of Chicago
2022-2023	Research Project Supervisor	Tori Davis, Brown University MPH Student
2022-2023	Research Project Supervisor	Yurui Zhang, Brown University MS (Data Science) Student
2023	Research Project Mentor	Joseph Leszczynski, MPH program, IDeA Networks of Biomedical Research Excellence (INBRE)
2023	Research Project Supervisor	Noah Rousell, Brown University, BA (Computer Science/Behavioral Science) Student
2023	Research Project Supervisor	Qinmiao Deng, Brown University MS (Data Science) Student
2024-present	Research Project Supervisor	Ryan Eng, Brown University, BA (Computer Science, in progress)
2024-present	Research Project Supervisor	Julian Beaudry, Brown University, BA (Computer Science, in progress)

Student Advisory Committees

2024-2026	Exploratory Advisor	Six first-year students at Brown University in accordance with the Open Curriculum
2024	Ph.D. Dissertation Committee Member (External member)	Ariel Hoadley, Temple University, Department of Social and Behavioral Sciences

**COMPUTING SKILLS**

- Modeling expertise: Agent-based network modeling; statistical computing; network and spatial data analysis; predictive analytics.
- Computing Environments: Unix/Linux environments; High performance cluster computing.
- Experienced in open source software development and maintenance (<https://cran.r-project.org/web/packages/influenceR/index.html>) and version control (Git).
- Languages: R (expert), Python (fluent), Mathematica (familiar), C (familiar).

## NATURAL LANGUAGES

- Native: Hindi, English
- Fluent: Marathi
- Beginner: Portuguese

## MEDIA AND PUBLIC DISSEMINATION

- Provided expert scientific input to reporters at
  - Vermont Digger (April 2021): <https://vtdigger.org/2021/04/07/experts-urge-flexibility-with-vermonts-reopening-timeline/>
  - *Chattanooga Times Free Press* (February 2021): <https://www.timesfreepress.com/news/local/story/2021/feb/20/covid-19-testing-record-lows/541942/>
  - *Chattanooga Times Free Press* (January 2021): <https://www.timesfreepress.com/news/local/story/2021/jan/26/uk-covid-19-variant-confirmed-tennessee/540450/#/questions/3108781>
  - *Denver Post* (August 2020): <https://www.denverpost.com/2020/08/09/colorado-coronavirus-covid-modeling-data/>
  - *Tampa Bay Times* (August 2020): <https://www.tampabay.com/news/health/2020/08/05/florida-adds-record-high-coronavirus-hospitalizations-225-deaths-wednesday/>
  - *ABC News* (July 2020): <https://abcnews.go.com/Politics/transparency-questions-hospitals-directed-report-covid-data-hhs/story?id=71803141>
  - *The New York Times* (June 2020): <https://www.nytimes.com/2020/06/15/health/coronavirus-underlying-conditions.html>
  - *WJCT Public Radio*, Jacksonville, FL (June 2020): <https://news.wjct.org/first-coast/2020-06-16/fscj-data-scientist-says-the-way-fla-presents-covid-19-numbers-is-misleading>
  - *Chicago Sun-Times* (May 2020)
  - *Knoxville News Sentinel*, Knoxville, TN (April 2020): <https://www.knoxnews.com/story/news/2020/04/16/guide-making-sense-covid-19-models-coronavirus-forecast/5131056002/>,
  - *Chicago Tribune* (March 2020)
- Featured story on the UChicago Research Computing Website, “The HIV Epidemic vs the Social Network”, April 2015, <https://rcc.uchicago.edu/hiv-epidemic-versus-social-network>