

## PERSONAL

Kimberly A. Powers  
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Department of Epidemiology  
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## EDUCATION

PhD	The University of North Carolina at Chapel Hill, Epidemiology (Minor: Biostatistics) Dissertation: HIV transmission dynamics: infectivity, sexual partnership patterns, and the role of early infection	2010
MSPH	The University of North Carolina at Chapel Hill, Epidemiology Thesis: Improved detection of acute HIV-1 infection in sub-Saharan Africa: development of a risk score algorithm	2006
BA	Hamilton College, Mathematics (Minor: Physics)	1998

## PROFESSIONAL EXPERIENCE

Associate Professor, Department of Epidemiology The University of North Carolina at Chapel Hill, Chapel Hill, North Carolina, USA	2019-present
Assistant Professor, Department of Epidemiology The University of North Carolina at Chapel Hill, Chapel Hill, North Carolina, USA	2013-2019
Postdoctoral Fellow, Division of Infectious Diseases and Department of Epidemiology The University of North Carolina at Chapel Hill, Chapel Hill, North Carolina, USA	2010-2013
Visiting Researcher, Department of Infectious Disease Epidemiology Imperial College, London, England	2010
Visiting Scholar, Department of Infectious Disease Epidemiology London School of Hygiene and Tropical Medicine, London, England	2007
Research Assistant, Center for Infectious Diseases The University of North Carolina at Chapel Hill, Chapel Hill, North Carolina, USA	2004-2010
Graduate Research Assistant, Theoretical Biology and Biophysics Group Los Alamos National Laboratory, Los Alamos, New Mexico, USA	2002-2003
Research Scientist, Center for Health Promotion and Disease Prevention The University of New Mexico, Albuquerque, New Mexico, USA	2001-2002
Consultant Innovative Health Solutions, Brookline, Massachusetts, USA	1998-2001

**HONORS**

Gillings School of Global Public Health Teaching Excellence and Innovation Award	2020
Clinical Research Loan Repayment Program Award, National Institute of Allergy and Infectious Diseases	2019-present
Clinical Research Loan Repayment Program Award, National Institute of Mental Health	2016-2018
Invited Attendee, National Centers for AIDS Research (CFAR) Social and Behavioral Sciences Research Network Conference, University of California, San Francisco	2017
Invited Attendee, National CFAR Meeting, University of Washington	2015
Postdoctoral Award for Research Excellence, UNC Chapel Hill	2011
Delta Omega Honorary Society in Public Health, UNC School of Public Health	2010
Rebecca James Baker Memorial Scholarship, UNC Department of Epidemiology	2010
School-wide Student Travel Award, UNC School of Public Health	2009
Cornoni-Huntley Scholarship, UNC Department of Epidemiology	2008
Kaplan Student Publication Award, UNC Department of Epidemiology	2008
Student Poster Contest Winner, UNC Department of Epidemiology	2006
University Merit Assistantship, UNC Graduate School	2003-2004
<i>Summa cum laude</i> , Hamilton College	1998
Phi Beta Kappa, Hamilton College	1998
Dirvin Family Prize Scholarship, Hamilton College	1997
Hans H. Schambach Scholarship, Hamilton College	1994-1998

**MEMBERSHIPS**

Adolescent Trials Network Mathematical Modeling Core	2017-present
North Carolina HIV Prevention Working Group	2013-present
HIV Modelling Consortium	2011-2015
Seek, Test, Treat, and Retain Corrections Modeling Group	2009-2010
International AIDS Society	2008-present

**BIBLIOGRAPHY****Book chapter**

1. Ribeiro RM, Powers KA, Talal AH, Perelson AS. Modeling the viral dynamics of HCV in patients treated with pegylated interferon alpha 2b. In: Schinazi R, ed. *Framing the Knowledge of Viral Hepatitis*: 2006, IHL Press, pages 407-420.

**Papers under review**

(\*Student work for which K Powers was primary substantive & methodological mentor; †K Powers was senior author; ‡Student work for which K Powers was primary methodological mentor)

1. \*†Billock RM, Mucha PJ, Samoff E, Dennis AM, Pence BW, Lund JL, Powers KA. Network interconnectivity and community detection in the HIV/syphilis syndemic among men who have sex with men. (Resubmission requested by *Sexually Transmitted Diseases*, May 30, 2020)
2. ‡Wong NS, Powers KA, Tucker JD, Lee SS, Goh BT, Zhao P, Chen L, Wang C, Yang LG, Zheng H, Huang S, Mitchell KM. Modeling the impact of a sex work crackdown on syphilis transmission among female sex workers and their clients in South China. (Revised manuscript submitted to *Sexually Transmitted Infections*, June 5, 2020)
3. Levintow SN, Pence BW, Powers KA, Sripaipan T, Ha TV, Chu VA, Quan VM, Latkin CA, Go VF. Estimating the effect of depression on HIV transmission risk behaviors among people who inject drugs in Vietnam: a causal approach. (Resubmission requested by *AIDS and Behavior*, May 10, 2020)
4. Levintow SN, Pence BW, Powers KA, Breskin A, Sripaipan T, Ha TV, Chu VA, Quan VM, Latkin CA, Go VF. Depression, antiretroviral therapy initiation, and HIV viral suppression among people who inject drugs in Vietnam. (Submitted to *AIDS*, April 6, 2020)

**Refereed papers/articles**

(\*Student work for which K Powers was primary substantive & methodological mentor; †K Powers was senior author; ‡Student work for which K Powers was primary methodological mentor)

1. ‡Rucinski KB, Powers KA, Pettifor AE, Black V, Pence BW, Chi BH, Rees H, Schwartz SR. Trajectories of fertility intentions among women living with HIV in South Africa. *AIDS Care* 2020 (e-published February 2, 2020).
2. ‡Learner ER, Powers KA, Torrone EA, Pence BW, Fine JP, Miller WC. The influence of screening, misclassification, and reporting biases on reported chlamydia case rates among young women in the US, 2000 through 2017. *Sexually Transmitted Diseases* 2020; 47(6): 369-375.
3. ‡DeLong S, Powers KA, Pence BW, Maman S, Dunkle KL, Selin A, Twine R, Gomez-Olive FX, MacPhail C, Kahn K, Pettifor AE. Longitudinal trajectories of physical intimate partner violence among adolescent girls in rural South Africa: findings from HPTN 068. *Journal of Adolescent Health* 2020 (e-published February 12, 2020).
4. Haber NA, Lesko CR, Fox MP, Powers KA, Harling G, Edwards J, Salomon J, Lippman SA, Bor J, Chang AY, Anglemeyer A, Pettifor A. Limitations of the UNAIDS 90-90-90 metrics: a simulation-

- based comparison of cross-sectional and longitudinal metrics for the HIV care continuum. *AIDS* 2020; 34(7): 1047-1055.
5. Graybill LA, Kasaro M, Freeborn K, Walker JS, Poole C, Powers KA, Mollan KR, Rosenberg NE, Vermund SH, Mutale W, Chi BH. Incident HIV among pregnant and breast-feeding women in sub-Saharan Africa: a systematic review and meta-analysis. *AIDS* 2020; 34(5): 761-776.
  6. Rucinski KB, Schwartz SR, Powers KA, Pence BW, Chi BH, Black V, Rees S, Pettifor AE. Fertility intentions and clinical care attendance among women living with HIV in South Africa. *AIDS and Behavior* 2020; 24(6): 1585-1591.
  7. \*Billock RM, Powers KA, Pasquale DK, Samoff E, Mobley VL, Miller WC, Eron JJ, Dennis AM. Prediction of HIV transmission cluster growth with statewide surveillance data. *Journal of Acquired Immune Deficiency Syndromes* 2019; 80(2): 152-159.
  8. Nguyen N, Powers KA, Miller WC, Howard AG, Halpern CT, Hughes JP, Wang J, Twine R, Gomez-Olive X, MacPhail C, Kahn K, Pettifor AE. Sexual partner types and incident HIV infection among rural South African adolescent girls and young women enrolled in HPTN 068: a latent class analysis. *Journal of Acquired Immune Deficiency Syndromes* 2019; 82(1): 24-33.
  9. DiPrete BL, Pence BW, Golin CE, Knight K, Flynn PM, Carda-Auten J, Groves JS, Powers KA, White BL, Napravnik S, Wohl DA. Antiretroviral adherence following prison release in a randomized trial of the imPACT intervention to maintain suppression of HIV viremia. *AIDS and Behavior* 2019; 23(9): 2386-2395.
  10. Miller WC, Rutstein SE, Phiri S, Kamanga G, Nsona D, Pasquale D, Rucinski KB, Chen JS, Golin CE, Powers KA, Dennis AM, Hosseinipour MC, Eron JJ, Chege W, Hoffman IF, Pettifor AE. Randomized, controlled pilot study of antiretrovirals and a behavioral intervention for persons with acute HIV infection: opportunity for interrupting transmission. *Open Forum Infectious Diseases* 2019; 6(1): ofy341.
  11. Dennis AM, Rucinski KB, Rutstein SE, Powers KA, Pasquale DK, Phiri S, Hosseinipour MC, Kamanga G, Nsona D, Massa C, Hoffman IF, Pettifor AE, Miller WC. HIV-1 transmission among persons with acute HIV-1 infection in Malawi: demographic, behavioral and phylogenetic relationships. *Clinical Infectious Diseases* 2019; 69(5): 853-860.
  12. Neilan AM, Patel K, Agwu AL, Bassett IV, Amico KR, Crespi CM, Gaur AH, Horvath KJ, Powers KA, Rendina HJ, Hightow-Weidman LB, Li X, Naar S, Nachman S, Parsons JT, Simpson KN, Stanton BF, Freedberg KA, Hudgens MG, Ciaranello A. Model-based methods to translate Adolescent Medicine Trials Network for HIV/AIDS Interventions (ATN) findings into policy recommendations: Rationale and Protocol for a Modeling Core (ATN 161). *JMIR Research Protocols* 2019; 8(4): e9898.
  13. Ogburn D, Schoenbach V, Edmonds A, Pence BW, Powers KA, White BL, Dzialowy N, Samoff E. Depression, ART adherence, and receipt of case management services by adults with HIV in North Carolina, Medical Monitoring Project, 2009-2013. *AIDS and Behavior* 2019; 23(4): 1004-1015.
  14. Powers KA, Price MA, Karita E, Kamali A, Kilembe W, Allen S, Hunter E, Bekker L-G, Lakhi S, Inambao M, Anzala O, Latka M, Fast PE, Gilmour J, Sanders EJ. Prediction of extended high viremia among newly HIV-1-infected persons in sub-Saharan Africa. *PLoS One* 2018; 13(4): e0192785.

15. \*<sup>†</sup>Billock RM, Samoff E, Cope AB, Sampson LA, Hurt CB, Powers KA. Repeat HIV testing by transmission risk group and rurality of residence in North Carolina. *Sexually Transmitted Diseases* 2018; 45(10): 684-689.
16. <sup>‡</sup>Rucinski KB, Powers KA, Schwartz SR, Pence BW, Chi BH, Black V, Rees H, Pettifor AE. Longitudinal patterns of unmet need for contraception among HIV-infected women on antiretroviral therapy in South Africa. *PLoS One* 2018; 13(12): e0209114.
17. <sup>‡</sup>Bengtson AM, Pence BW, Powers KA, Weaver MA, Mimiaga MJ, Gaynes BN, O’Cleirigh C, Christopoulos K, Matthews WC, Crane H, Mugavero M. Trajectories of depressive symptoms among a population of HIV-infected men and women in routine HIV care in the United States. *AIDS and Behavior* 2018; 22(10): 3176-3187.
18. <sup>‡</sup>Rucinski KB, Rutstein SE, Powers KA, Pasquale DK, Dennis AM, Phiri S, Hosseinipour MC, Kamaga G, Nsona D, Massa C, Hoffman IF, Miller WC, Pettifor AE. Sustained sexual behavior change following acute HIV diagnosis in Malawi. *Sexually Transmitted Diseases* 2018; 45(11):741-746.
19. Wood D, Lancaster KE, Boily MC, Powers KA, Donnell D, Cohen MS, Dimitrov DT. Recruitment of female sex workers in HIV prevention trials: can efficacy endpoints be reached more efficiently? *Journal of Acquired Immune Deficiency Syndromes* 2018; 77(4): 350-357.
20. Learner ER, Torrone EA, Fine JP, Pence BW, Powers KA, Miller WC. Chlamydia prevalence trends among women and men entering the National Job Training Program from 1990 through 2012. *Sexually Transmitted Diseases* 2018; 45(8): 554-559.
21. Chi BH, Rosenberg NE, Mweemba O, Powers KA, Zimba C, Maman S, Kasaro M, Mollan KR, Stringer JSA, Mutale W. Involving both parents in HIV prevention during pregnancy and breastfeeding: a proposal. *Bulletin of the World Health Organization* 2018; 96(1): 69-71.
22. Lancaster KE, MacLean SA, Lungu T, Mmodzi P, Hosseinipour M, Hershov RB, Powers KA, Pence BW, Hoffman IF, Miller WC, Go VF. Socioecological factors related to hazardous alcohol use among female sex workers in Lilongwe, Malawi: a mixed methods study. *Substance Use & Misuse* 2018; 53(5): 782-791.
23. Powers KA, Samoff E, Weaver MA, Sampson LA, Miller WC, Leone PA, Swygard H. Longitudinal trajectories of HIV care retention in North Carolina. *Journal of Acquired Immune Deficiency Syndromes* 2017; 74 (Suppl 2): S88-S95.
24. <sup>†</sup>Sanders EJ, Price MA, Karita E, Kamali A, Kilembe W, Bekker LG, Lakhi S, Inambao M, Anzala O, Fast PE, Gilmour J, Powers KA. Differences in acute retroviral syndrome by HIV-1 subtype in a multicentre cohort study in Africa. *AIDS* 2017; 31(18): 2541-2546.
25. \*<sup>†</sup>Chagomerana MB, Miller WC, Pence BW, Hosseinipour MC, Hoffman IF, Flick RJ, Tweya H, Mumba S, Chibwandira F, Powers KA. PMTCT Option B+ does not increase preterm birth risk and may prevent extreme prematurity: a retrospective cohort study in Malawi. *Journal of Acquired Immune Deficiency Syndromes* 2017; 74(4): 367-374.
26. Leung KY, Powers KA, Kretzschmar M. Gender asymmetry in concurrent partnerships and HIV prevalence. *Epidemics* 2017; 19: 53-60.

27. Lancaster KE, Lungu T, Mmodzi P, Hosseinipour MC, Chadwick K, Powers KA, Pence BW, Go VF, Hoffman IF, Miller WC. The association between substance use and sub-optimal HIV treatment engagement among HIV-infected female sex workers in Lilongwe, Malawi. *AIDS Care* 2017; 29(2): 197-203.
28. Cope AB, Powers KA, Serre ML, Escamilla V, Emch ME, Leone PA, Mobley VL, Miller WC. Later HIV diagnosis is associated with living near an HIV testing site but testing farther away. *AIDS Care* 2016; 11: 1423-1427.
29. Lancaster KE, Powers KA, Lungu T, Mmodzi P, Hosseinipour MC, Chadwick K, Go VF, Pence BW, Hoffman IF, Miller WC. The HIV care continuum among female sex workers: a key population in Lilongwe, Malawi. *PLoS One* 2016; 11(1): e0147662.
30. Lancaster KE, Go VF, Lungu T, Mmodzi P, Hosseinipour MC, Chadwick K, Powers KA, Pence BW, Hoffman IF, Miller WC. Substance use and HIV infection awareness among HIV-infected female sex workers in Lilongwe, Malawi. *International Journal of Drug Policy* 2016; 30: 124-131.
31. Rutstein SE, Pettifor AE, Phiri S, Kamanga G, Hoffman IF, Hosseinipour MC, Rosenberg NE, Nsona D, Pasquale D, Tegha G, Powers K, Phiri M, Tembo B, Chegwe W, Miller WC. Incorporating acute HIV screening into routine HIV testing at sexually transmitted infection clinics and HIV testing and counseling centers in Lilongwe, Malawi. *Journal of Acquired Immune Deficiency Syndromes* 2016; 71: 272-280.
32. Powers KA, Miller WC. Building on the HIV cascade: a complementary ‘HIV States and Transitions’ framework for describing HIV diagnosis, care, and treatment at the population level. *Journal of Acquired Immune Deficiency Syndromes* 2015; 69: 341-347.
33. <sup>‡</sup>Nguyen N, Powers KA, Hughes J, MacPhail C, Piwowar-Manning E, Patel E, Gomez-Olive X, Kahn K, Pettifor AE. Sexual partnership patterns among South African girls enrolled in HPTN 068: measurement challenges and implications for HIV/STI transmission. *Sexually Transmitted Diseases* 2015; 42: 612-618.
34. <sup>\*</sup>Lesko CR, Sampson LA, Miller WC, Clymore J, Leone PA, Swygard H, Powers KA. Measuring the HIV care continuum using public health surveillance data in the United States. *Journal of Acquired Immune Deficiency Syndromes* 2015; 70(5): 489-494.
35. Cope AB, Powers KA, Kuruc JD, Leone PA, Anderson JA, Ping L, Kincer LP, Swanstrom R, Mobley VL, Foust E, Gay CL, Eron JJ, Cohen MS, Miller WC. Ongoing HIV transmission and the HIV care continuum in North Carolina. *PLoS One* 2015; 10(6): e0127950.
36. Sanders EJ, Wahome E, Powers KA, Werner L, Fegan G, Lavreys L, Mapanje C, McClelland RS, Garrett N, Miller WC, Graham SM. Targeted screening of at-risk adults for acute HIV-1 infection in sub-Saharan Africa. *AIDS* 2015; 29 (Suppl 3): S221-S230.
37. Tan NX, Tan GX, Yang LG, Yang B, Powers KA, Emch ME, Tucker JD. Temporal trends in syphilis and gonorrhea incidences in Guangdong Province, China. *Journal of Infectious Diseases* 2014; 209(3): 426-30.
38. Cohen MS, Smith MK, Muessig KE, Powers KA, Kashuba AD. Antiretroviral treatment of HIV-1 prevents transmission of HIV-1: where do we go from here? *Lancet* 2013; 382: 1515-1524.

39. Smith MK, Rutstein SE, Powers KA, Fidler S, Miller WC, Cohen MS. The detection and management of acute and early HIV infection: A clinical and public health emergency. *Journal of Acquired Immune Deficiency Syndromes* 2013; 63 Suppl 2: S187-199.
40. Miller WC, Powers KA, Smith KE, Cohen MS. Community viral load as a measure for assessment of HIV treatment as prevention. *Lancet Infectious Diseases* 2013; 13: 459-464.
41. Muessig KE, Smith MK, Powers KA, Lo YR, Burns DN, Grulich AE, Phillips AN, Cohen MS. Does ART prevent HIV transmission among MSM? *AIDS* 2012; 26: 2267-2273.
42. Smith MK, Powers KA, Muessig KE, Miller WC, Cohen MS. HIV treatment as prevention: the utility and limitations of ecological observation. *PLoS Medicine* 2012; 9: e1001260.
43. Cohen MS, § Dye C, § Fraser C, § Miller WC, § Powers KA, § Williams BG. § HIV treatment as prevention: Debate and commentary – Will early infection compromise treatment-as-prevention strategies? *PLoS Medicine* 2012; 9: e1001232. §All authors contributed equally.
44. Cohen MS, Muessig KE, Smith MK, Powers KA, Kashuba AD. Antiviral agents and HIV prevention: controversies, conflicts and consensus. *AIDS* 2012; 26: 1585-1598.
45. Powers KA, Ghani AC, Miller WC, Hoffman IF, Pettifor AE, Kamanga G, Martinson FEA, Cohen MS. The role of acute and early HIV infection in the spread of HIV and implications for transmission prevention strategies in Lilongwe, Malawi: a modelling study. *Lancet* 2011; 378: 256-268.
46. Powers KA, Hoffman IF, Ghani AC, Hosseinipour MC, Pilcher CD, Price MA, Pettifor AE, Chilongozi DA, Martinson FE, Cohen MS, Miller WC. Sexual partnership patterns in Malawi: Implications for HIV/STI transmission. *Sexually Transmitted Diseases* 2011; 38: 657-666.
47. Smith MK, Powers KA, Kashuba A, Cohen MS. HIV-1 treatment as prevention: The good, the bad, and the challenges. *Current Opinion in HIV and AIDS* 2011; 6: 315-325.
48. Baggaley RF, Powers KA, Boily MC. What do mathematical models tell us about the emergence and spread of drug-resistant HIV? *Current Opinion in HIV and AIDS* 2011; 6: 131-140.
49. Miller WC, Rosenberg NE, Rutstein SE, Powers KA. The role of acute and early HIV infection in the sexual transmission of HIV. *Current Opinion in HIV and AIDS* 2010; 5: 277-282.
50. Ribeiro R, Germanidis G, Powers KA, Pellegrin B, Nikolaidis P, Perelson AS, Pawlotsky JM. Hepatitis B virus kinetics under therapy sheds light on differences between e-antigen positive and negative infection. *Journal of Infectious Diseases* 2010; 202: 1309-1318.
51. Powers KA, Poole C, Pettifor AE, Cohen MS. Rethinking the heterosexual infectivity of HIV-1: a systematic review and meta-analysis. *Lancet Infectious Diseases* 2008; 8: 553-563.
52. Hoffman IF, Martinson FEA, Powers KA, Chilongozi DA, Msiska ED, Kachipapa EI, Mphande CD, Hosseinipour MC, Chanza HC, Stephenson R, Tsui AO. The year-long effect of HIV-positive test results on pregnancy intentions, contraceptive use, and pregnancy incidence among Malawian women. *Journal of Acquired Immune Deficiency Syndromes* 2008; 47: 477-483.
53. Powers KA, Miller WC, Pilcher CD, Mapanje C, Martinson FE, Fiscus SA, Chilongozi DA, Namakhwa D, Price MA, Galvin SR, Hoffman IF, Cohen MS. Improved detection of acute HIV-1 infection in sub-Saharan Africa: development of a risk score algorithm. *AIDS* 2007; 21: 2237-2242.

54. Fiscus SA, Pilcher CD, Miller WC, Powers KA, Hoffman IF, Price M, Chilongozi DA, Mapanje C, Krysiak R, Gama S, Martinson FE, Cohen MS. Rapid, real-time detection of acute HIV infection in patients in Africa. *Journal of Infectious Diseases* 2007; 195: 416-424.
55. Pilcher CD, Joaki G, Hoffman IF, Martinson FEA, Mapanje C, Stewart PW, Powers KA, Galvin S, Chilongozi D, Gama S, Price MA, Fiscus SA, Cohen MS. Amplified transmission of HIV-1: comparison of HIV-1 concentrations in semen and blood during acute and chronic infection. *AIDS* 2007; 21: 1723-1730.
56. Lau GKK, Cooksley H, Ribeiro RM, Powers KA, Shudo E, Bowden S, Hui CK, Anderson J, Sorbel J, Mondou E, Rousseau F, Lewin S, Perelson AS, Locomini S, Naoumov NV. Impact of early viral kinetics on T-cell reactivity during antiviral therapy in chronic hepatitis B. *Antiviral Therapy* 2007; 12: 705-718.
57. Powers KA, Ribeiro RM, Patel K, Ribeiro RM, Patel K, Pianko S, Nyberg L, Pockros P, Conrad AJ, McHutchison J, Perelson AS. Kinetics of hepatitis C virus reinfection after liver transplantation. *Liver Transplantation* 2006; 12: 207-216.
58. Talal AH, Ribeiro RM, Powers KA, Grace M, Cullen C, Hussain M, Markatou M, Perelson AS. Pharmacodynamics of PEG-IFN  $\alpha$  differentiate HIV/HCV coinfecting sustained viral responders from nonresponders. *Hepatology* 2006; 43: 943-953.
59. Ribeiro RM, Layden-Almer JE, Powers KA, Layden TJ, Perelson AS. Dynamics of alanine aminotransferase during hepatitis C virus treatment. *Hepatology* 2003; 38: 509-517.

**Refereed technical reports, oral presentations, and abstracts (selected)**

(\*Student work for which K Powers was primary mentor; †K Powers was senior author)

1. \*†Billock R, Mucha P, Samoff E, Dennis A, Powers K. Network structure and the HIV/syphilis syndemic: evaluation of HIV & syphilis network connectivity through community detection. *Epidemics 7 – International Conference on Infectious Disease Dynamics*, Charleston, SC, December 3-6, 2019 (Poster).
2. Powers K, Mathews W, Mayer K, Eaton E, Geng E, Moore R, Mugavero M, Eron J. Longitudinal HIV care trajectories in the CNICS cohort: a retrospective cohort study. *Conference on Retroviruses and Opportunistic Infections*, Seattle, WA, March 4-7, 2019 (Poster Presentation).
3. Powers K, Orroth K, Rosenberg N, Graybill L, Kumwenda A, Mtande T, Mollan K, Mweemba O, Mutale W, Chi B. A mathematical modeling analysis of combination HIV prevention in antenatal clinics. *Conference on Retroviruses and Opportunistic Infections*, Seattle, WA, March 4-7, 2019 (Poster Discussion).
4. \*Billock R, Powers K, Samoff E, Mobley V, Miller W, Eron J, Dennis A. Predictive model for HIV transmission cluster growth in North Carolina. *Conference on Retroviruses and Opportunistic Infections*, Boston, MA, March 4-8, 2018 (Poster Discussion).
5. \*Bullo M, Samoff E, Dzialowy Adams N, Wheeler B, Powers K, Cope A. HIV viral suppression assessed by two metrics in North Carolina during 2016. *Conference on Retroviruses and Opportunistic Infections*, Boston, MA, March 4-8, 2018 (Poster).



6. Powers KA, Weaver MA, Napravnik S, Miller WC, Eron JJ Jr. Behind the HIV care continuum: longitudinal HIV care trajectories in North Carolina. International Association of Providers of AIDS Care (IAPAC) Adherence Meeting, Miami, FL, June 5-7, 2017 (Oral).
7. Powers KA, Samoff E, Weaver MA, Sampson LA, Miller WC, Leone PA, Swygard H. Understanding longitudinal HIV care trajectories to improve health and reduce HIV transmission in North Carolina. HIV Research for Prevention Conference, Chicago, IL, October 17-20, 2016 (Late-breaker Poster)
8. <sup>†</sup>Sanders E, Powers K, Karita E, Kamali A, Kilembe W, Allen S, Hunger E, Anzala O, Fast P, Price M. Differences in acute retroviral syndrome by HIV-1 subtype in a multicentre cohort study in Africa. Conference on Retroviruses and Opportunistic Infections, Seattle, WA, February 23-26, 2015 (Poster).
9. Powers KA, Price MA, Karita E, Kamali A, Kilembe W, Allen S, Hunter E, Anzala O, Fast P, Sanders E. Association between number of acute retroviral symptoms and extended high viremia by HIV-1 subtype. Conference on Retroviruses and Opportunistic Infections, Boston, MA, March 3-6, 2014. (Poster)
10. Powers K, Ghani A, Miller W, Hoffman I, Pettifor A, Kamanga G, Martinson F, Cohen M. Modeling the effect of ‘risk interruption’ interventions on HIV prevalence in Lilongwe, Malawi. XIX International AIDS Conference, Washington, DC, July 22-27, 2012. (Poster)
11. Powers K, Ghani A, Miller W, Hoffman I, Pettifor A, Hosseinipour M, Kamanga G, Martinson F, Cohen M. The contribution of HIV-discordant couples to HIV transmission in Lilongwe, Malawi. XIX International AIDS Conference, Washington, DC, July 22-27, 2012. (Oral)
12. Powers K, Kamanga G, Mapanje C, Malava J, Chindebvu M, Kamzati H, Martinson F, Miller W, Cohen M, Hoffman I. Longitudinal trends in HIV testing and prevalence among STI clinic patients in Lilongwe, Malawi: 2006-2010. 19<sup>th</sup> Biennial Meeting of the International Society for Sexually Transmitted Diseases Research, Quebec City, July 10-13, 2011. (Poster)
13. Powers K, Ghani A, Miller W, Hoffman I, Pettifor A, Kamanga G, Martinson F, Cohen M. The contribution of early HIV infection to HIV spread in Lilongwe, Malawi: Implications for transmission prevention strategies. XVIII International AIDS Conference, Vienna, July 18-23, 2010. (Oral late-breaker)
14. Powers K, Kamanga G, Mapanje C, Jafali R, Kanyamula H, Massa C, Miller W, Hosseinipour M, Martinson F, Cohen M, Hoffman I. Efficient detection of acute HIV infection through targeted HIV RNA screening in a Malawian STI Clinic. XVIII International AIDS Conference, Vienna, July 18-23, 2010. (Poster)
15. Powers K, Miller W, Hoffman I, Hosseinipour M, Ghani A, Chilongozi D, Martinson F, Cohen M. Partnership lengths, concurrency, and gaps between consecutive partnerships in a Malawian STI clinic. 18<sup>th</sup> Biennial Meeting of the International Society for Sexually Transmitted Diseases Research, London, June 28-July 1, 2009. (Oral)
16. Powers K, Poole C, Pettifor A, Cohen M. Rethinking the heterosexual infectivity of HIV-1. 3<sup>rd</sup> International Workshop on HIV Transmission, Mexico City, August 1, 2008. (Oral)

17. Powers K, Kamanga G, Miller W, Mapanje C, Kanyamula H, Jere E, Martinson F, Reynolds K, Hosseinipour M, Hoffman I, Cohen M. Detecting acute HIV infection in Malawi: validation of a risk score algorithm. XVII International AIDS Conference, Mexico City, August 3-8, 2008. (Poster)
18. Powers K, Kamanga G, Mapanje C, Phiri S, Kanyamula H, Ndalama B, Jere E, Mwaipape A, Mkandawire N, Mwanyimbo A, Reynolds K, Martinson F, Hoffman I. Predictors of HIV counseling and testing uptake and HIV infection in a Malawian STI clinic. XVII International AIDS Conference, Mexico City, August 3-8, 2008. (Poster)
19. Powers K, Miller W, Pilcher C, Mapanje C, Martinson F, Fiscus S, Chilongozi D, Namakhwa D, Gama S, Price M, Galvin S, Hoffman I, Cohen M. Targeted screening criteria for detecting acute HIV infection in Malawi. XVI International AIDS Conference, Toronto, August 13-18, 2006. (Oral)
20. Hoffman I, Chanza H, Martinson F, Chilongozi D, Powers K, Hosseinipour M, Dziza E, Kachipa E, Mphande C, Nkhalamba T, Stephenson R, Tsui A. Knowledge of HIV positive status decreases pregnancy intention and increases contraceptive use among women in Lilongwe, Malawi. XVI International AIDS Conference, Toronto, August 13-18, 2006. (Oral)
21. Pilcher C, Chilongozi D, Martinson F, Fiscus S, Stewart P, Mapanje C, Powers K, Namakhwa D, Gama S, Joaki G, Tien H-C, Hoffman I, Cohen M. Comparison of the concentration of HIV in semen during acute, early and late HIV infection: evaluation of the risk of the sexual transmission of HIV. XVI International AIDS Conference, Toronto, August 13-18, 2006. (Poster)
22. Ribeiro R, Germanidis G, Powers KA, Pellegrin B, Perelson AS, Pawlotsky J-M . Hepatitis B viral kinetics under antiviral therapy help understand the anti-HBV immune response in HBeAg-negative patients with chronic hepatitis B. 56<sup>th</sup> Annual Meeting of the American Association for the Study of Liver Diseases, San Francisco, November 11-15, 2005. (Poster)
23. Ribeiro RM, Talal AH, Powers KA, Grace M, Cullen C, Hussain M, Perelson AS. Pharmacodynamic effects of pegylated interferon-alpha2b differentiate sustained virologic responders from nonresponders in hepatitis C virus/human immunodeficiency virus coinfecting patients. 56<sup>th</sup> Annual Meeting of the American Association for the Study of Liver Diseases, San Francisco, November 11-15, 2005. (Poster)
24. Powers KA, Dixit NM, Ribeiro RM, Golia P, Talal AH, Perelson AS. Modeling viral and drug kinetics: hepatitis C virus treatment with pegylated interferon alfa-2b. *Seminars in Liver Disease* 2003; 23(Suppl 1): 13-18.

### **Invited Editorials**

1. Dowdy D, Powers KA, Hallett TB. Integrating HIV services and broader health systems: insights from quantitative analysis. *Journal of the International AIDS Society* 2020 (in press).
2. Cohen MS, Powers KA. Let's treat everyone with HIV now: what happens next? *Lancet HIV* 2016; 3: e109-10.
3. Powers KA, Kretzschmar ME, Miller WC, Cohen MS. Impact of early-stage HIV transmission on treatment as prevention. *Proc Natl Acad Sci USA* 2014; 10.1073/pnas.1418496111.
4. Powers KA, Cohen MS. Acute HIV-1 infection in sub-Saharan Africa: a common occurrence overlooked. *AIDS* 2014; 28: 1365-1367.

5. Hurt CB, Powers KA. Self-testing for HIV and its impact on public health. *Sexually Transmitted Diseases* 2014; 41: 10-12.
6. Miller WC, Lesko CR, Powers KA. The HIV care cascade: simple concept, complex realization. *Sexually Transmitted Diseases* 2014; 41: 41-42.

**Letters to the Editor** (\*student work for which K Powers was primary mentor, †K Powers was senior author)

1. Powers KA, Klein PW, Cholera R, Miller WC. Understanding HIV epidemics: aggregate viral load metrics and ‘smoking guns’. *AIDS* 2013; 27: 2825-2826.
2. \*†Lancaster KE, Nguyen N, Lesko CR, Powers KA. Generalizability and scalability of HIV ‘treatment as prevention’. *AIDS* 2013; 27: 2493-2494.
3. Powers KA, Ghani AC, Miller WC, Pettifor AE, Cohen MS. Role of acute infection in HIV transmission – Authors’ reply (letter). *Lancet* 2011; 378:1914-1915.

**Invited Presentations – External to UNC Chapel Hill**

1. “A mathematical modeling analysis of combination HIV prevention in antenatal clinics.” Institute for Disease Modeling, Seattle, WA, April 20, 2020 (cancelled due to SARS-CoV-2 pandemic).
2. “Modeling the HIV care cascade, HIV care trajectories, and HIV transmission in North Carolina.” Infectious Disease Grand Rounds, University of Alabama, Birmingham, AL. September 27, 2018.
3. “Deriving annual STI incidence rates from case report data.” Centers for Disease Control and Prevention, Atlanta, GA. February 28, 2018.
4. “The use of modeling to optimize HIV prevention strategies.” Combination Prevention Strategies for HIV Meeting, Emory University, Atlanta, GA. February 27, 2018.
5. “Modeling the HIV care cascade and HIV care trajectories in North Carolina.” ViiV Healthcare, Research Triangle Park, NC. August 30, 2017.
6. “The HIV care cascade and HIV care trajectories in North Carolina.” HIV care meeting sponsored by NC Area Health Education Center, Chapel Hill, NC. May 1, 2017.
7. “The HIV care cascade and HIV transmission in North Carolina.” North Carolina Division of Public Health Grand Rounds, Raleigh, NC. November 10, 2015.
8. “No time to lose – the importance of early HIV infection.” HIV Research for Prevention Conference, Cape Town, South Africa. October 28, 2014.
9. “The HIV care cascade and aggregate viral load metrics in North Carolina.” HIV Treatment Cascade Meeting, HIV Modelling Consortium, London, UK. September 22, 2014.
10. “The evolution of the HIV cascade.” HIV Treatment Cascade Meeting, Bill and Melinda Gates Foundation, Paris, France. June 18, 2014.

11. “The HIV treatment cascade: improving measurement to target interventions.” Second National CFAR/APC/DOH Working Group Meeting: Implementation Science to Address the Challenges of the HIV Care Continuum, Washington, DC. February 4, 2014.
12. “UNC MP3 Study: Acute HIV in Lilongwe.” MP3 Meeting, National Institutes of Health, Bethesda, MD. November 13, 2013.
13. “Biases in HIV prevalence estimates from antenatal clinic surveys due to changing age patterns in the ART era.” HIV Incidence Declines Work Package Meeting, HIV Modelling Consortium, London, UK. September 18, 2013.
14. “Modeling HIV seek, test, treat, and retain interventions in US prison populations.” Meeting of the STTR Criminal Justice and Vulnerable Populations Harmonization Initiative, National Institutes of Health, Bethesda, MD. May 10, 2013.
15. “Understanding HIV transmission and predicting intervention impact: the complementary roles of epidemiological and mathematical methods.” Division of Epidemiology, College of Public Health, The Ohio State University, Columbus, OH. January 5, 2013.
16. “Preventing HIV transmission during early HIV infection: opportunities and challenges.” Department of Infectious Disease Epidemiology, Imperial College London, London, UK. December 17, 2012.
17. “Understanding HIV transmission and predicting intervention impact: the complementary roles of epidemiological and mathematical methods.” Division of Epidemiology and Community Health, The University of Minnesota, Minneapolis, MN. November 30, 2012.
18. “Acute HIV infection – a key link for transmission prevention.” MP3 Meeting, National Institutes of Health, Bethesda, MD. September 8, 2011.

#### **Invited Presentations – UNC Chapel Hill**

1. “Changing your shoes while riding a bicycle during a hurricane: developing COVID-19 models on a policy timeline.” UNC Gillings Research, Innovations, and Global Solutions webinar, April 23, 2020.
2. “SARS-CoV-2: What does the math say?” UNC Gillings Department of Epidemiology and North Carolina Partnership for Excellence in Applied Epidemiology Seminar on the Coronavirus Outbreak, March 3, 2020.
3. “Longitudinal HIV care trajectories and HIV transmission risk from the time of HIV care entry in the CNICS,” UNC CFAR Work-in-Progress Meeting, April 3, 2019.
4. “Modeling the HIV care cascade, HIV care trajectories, and HIV transmission in North Carolina,” UNC Friday Morning Infectious Disease Conference, February 3, 2017.
5. “Modeling HIV transmission and predicting the impact of HIV prevention interventions,” UNC Mathematics Department Applied Mathematics Colloquium, December 2, 2016.
6. “Leveraging the HIV cascade to improve public health: conceptual and measurement challenges.” UNC Center for AIDS Research Biostatistics Core Research Group Seminar, March 4, 2015.

7. “Ebola: What does the math say?” UNC Virology in Progress Ebola Symposium, October 10, 2014.
8. “The HIV epidemic in the ART era: monitoring, metrics, and mathematical models.” UNC World AIDS Day Symposium, December 2, 2013.
9. “Will acute and early HIV infection limit the impact of HIV treatment as prevention?” UNC Friday Morning Infectious Disease Conference, June 1, 2012.
10. “What proportion of secondary HIV transmissions occur during acute HIV?” UNC Center for AIDS Research Symposium on Acute HIV Infection, September 25, 2008.

### **Article in Popular Press**

Powers KA. “How do we predict the future of COVID-19?” WRAL; April 13, 2020.

### **Doctoral Dissertation**

Powers KA. HIV transmission dynamics: infectivity, sexual partnership patterns, and the role of early infection. Dissertation, the University of North Carolina at Chapel Hill. Ann Arbor: ProQuest/UMI, 2010 (ProQuest document ID 751250064).

## **TEACHING RECORD**

### **Course Instruction**

#### ***Lead Instructor, UNC Chapel Hill***

Introduction to Infectious Disease Epidemiology, EPID 755 (14-25 students)	2019-
Advanced Methods in Infectious Disease Epidemiology, EPID 799/754 (6-16 students)	2014-2017
Infectious Disease Epidemiology Seminar, EPID 894 (6-9 students)	2016-2017

#### ***Teaching Assistantships in Department of Epidemiology, UNC Chapel Hill***

Theory and Quantitative Methods in Epidemiology, EPID 715	2007
Fundamentals in Epidemiology, EPID 168	2005

#### ***Guest Lectures***

University of Nicaragua, Leon: UNC D43 Short Course in Epidemiology	2019
UNC Chapel Hill: Fundamentals of Epidemiology, EPID 710	2014-2017
UNC Chapel Hill: Introduction to Infectious Disease Epidemiology, EPID 755	2014-2017
Duke University: Ecology, Evolution, and Physiology of Infectious Disease, BIOL 365	2015
UNC Chapel Hill: Mathematical Modeling of Infectious Diseases, EPID 754	2011, 2012

**Advising*****Doctoral Dissertation Committee Chair***

Rachael Billock, UNC EPID (Graduates August 2020). “Harnessing HIV & syphilis networks to reduce HIV transmission in North Carolina.” Dissertation defense: May 4, 2020.

Maga Chagomerana, UNC EPID (Graduated August 2016). “Option B+ in Malawi: Antiretroviral therapy for prevention of mother-to-child HIV transmission and its effects on preterm birth and female-to-male HIV transmission.” Dissertation defense: July 7, 2016.

***Masters Advisor and Committee Chair***

Manuela Bullo, UNC EPID (Graduated with MPH, May 2018): “HIV viral suppression assessment in North Carolina with two different methods.” Presentation: April 6, 2018.

Elizabeth Kelly, UNC EPID (Graduated with MSPH, August 2017): “Prediction of pregnancies among women at risk of HIV in Mozambique: developing a risk score algorithm.” Presentation: July 6, 2017.

Rachael Billock, UNC EPID (Graduated with MSPH, May 2017): “Effect of rurality on repeat HIV testing among high-risk HIV testing populations in North Carolina.” Presentation: March 22, 2017.

Christopher Sellers, UNC EPID (Graduated with MPH, May 2016). “Transportation problems predict poor retention in HIV care in the Southeastern United States.” Presentation: April 5, 2016.

***Doctoral Dissertation Committee Membership (Department, Graduation Year)***

Jane Chen (EPID, Current)	Dana Pasquale (EPID, 2018)
Bethany DiPrete (EPID, Current)	Kate Rucinski (EPID, 2018)
Danielle Giovenco (EPID, Current)	Emily Learner (EPID, 2017)
Monica Jimenez (EPID, Current)	Nadia Nguyen (EPID, 2017)
Kayla Kilpatrick (BIOS, Current)	Damon Ogburn (EPID, 2017)
Sequoia Leuba (EPID, Current)	Nalyn Siripong (EPID, 2017)
Sara Levintow (EPID, 2020)	Anna Barry Cope (EPID, 2015)
Kristen Hampton (EPID, 2019)	Kathy Lancaster (EPID, 2015)
Stephanie DeLong (EPID, 2018)	

***Academic Advisor (Department, Graduation Year)***

Griffin Bell (EPID, Current)

Courtney Maierhofer (EPID, Current)

***Masters Thesis Committee Membership (Department, Graduation Year)***

Eunyoung Angela Lee (BIOS, 2016)

Nadia Nguyen (EPID, 2013)

***Undergraduate Student Research Mentorship (Department, Graduation Year)***

Harish Pudukodu (Biology, 2017)

**GRANTS**

**Current**

Principal Investigator (UNC Subcontract)  
*Modeling SARS-CoV-2 transmission in North Carolina*  
Centers for Disease Control and Prevention / NC DHHS (prime)  
April 1, 2020 – March 30, 2021  
Total subcontract funding: \$184,000  
5.4 calendar months (45%)

Principal Investigator  
R21 NR018805  
*Developing a cohort of newly HIV-diagnosed persons to improve understanding of care patterns*  
National Institute of Nursing Research  
July 1, 2019 – June 30, 2021  
Total funding: \$427,625  
1.8 calendar months (15%)

Principal Investigator (UNC Subcontract)  
R01 AI143875  
*Integrating a combination HIV prevention intervention into a widely used app for Chinese MSM*  
National Institute of Allergy and Infectious Diseases / Emory University (PI: Aaron Siegler)  
March 1, 2019 – November 30, 2022  
Total subcontract funding: \$207,646  
2.04 calendar months (17%)

Co-Investigator (co-PIs: Ben Chi, Wilbroad Mutale)  
R01 AI131060  
*A dyad approach to HIV prevention in Malawi & Zambia*  
National Institute of Allergy & Infectious Diseases  
December 1, 2016 – November 30, 2020  
Total funding: \$2,467,365  
0.6 calendar months (5%)

Co-Investigator (co-PIs: Lisa Hightow-Weidman, Patrick Sullivan)  
U19 HD089881  
*The UNC/Emory Center for Innovative Technology (iTech) across the prevention and care continuum*  
Eunice Kennedy Shriver National Institute of Child Health and Human Development  
June 30, 2016 – May 31, 2021  
Total funding: \$17,411,822

1.2 calendar months (10%)

Co-Investigator (PI: David Rosen)

R01 MD012469

*Assessing jails' use of community-based emergency care in the US South*

National Institute on Minority Health and Health Disparities

September 26, 2017 – June 30, 2021

Total funding: \$2,737,894

1.2 calendar months (10%)

Co-Investigator (PI: Lisa Hightow-Weidman)

R44 MH104102

*Tough Talks: A disclosure intervention for HIV+ young men who have sex with men*

National Institute of Mental Health

June 1, 2017 – May 31, 2020

Total funding: \$1,681,307

0.6 calendar months (5%)

Co-Investigator (PI: Radolf)

U19 AI144177

*Syphilis CRC: A global syphilis vaccine targeting outer membrane proteins of *Treponema pallidum**

National Institute of Allergy and Infectious Diseases

March 1, 2019 – February 29, 2024

3.0 calendar months (25%) beginning April 1, 2021

### **Pending**

Co-Investigator (co-PIs: David Wohl, Lisa Hightow-Weidman)

NIMH R01 (submitted January 7, 2020; impact score in 17<sup>th</sup> percentile received March 2020)

*Alignment of PrEP use and sexual risk in MSM and TGW in the South*

July 1, 2020 – June 30, 2025

1.8 calendar months (15%)

Co-Investigator (co-PIs: Lisa Hightow-Weidman, Keith Horvath)

NIMH R21 (submitted January 7, 2020; impact score in 11<sup>th</sup> percentile received March 2020)

*Risk prediction and on-demand PrEP among young MSM in the US*

July 1, 2020 – June 30, 2022

1.2 calendar months (10%)

Co-PI (with Allison Aiello)

*Studying SARS-CoV-2 prevention strategies in North Carolina schools*

NC Collaboratory COVID-19 Funding Proposal

July 1, 2020 – December 31, 2021

0.6 calendar months (5%)

Co-PI (with Jessica Lin)

*Household transmission of SARS-CoV-2 in North Carolina*

NC Collaboratory COVID-19 Funding Proposal

July 1, 2020 – December 31, 2021

1.8 calendar months (15%)



Co-Investigator (co-PIs: Whitney Robinson & Heather Root)  
*Establishing a sentinel surveillance system for COVID-19 disparities in NC*  
NC Collaboratory COVID-19 Funding Proposal  
July 1, 2020 – December 31, 2021  
0.6 calendar months (5%)

Co-Investigator (co-PIs: Allison Aiello & Ross Boyce)  
*NC COVID Sero-surveillance Network (CoSNet)*  
NC DHHS funding  
July 1, 2020 – December 31, 2021  
0.6 calendar months (5%)

Principal Investigator  
*Improving HIV care engagement to end the HIV epidemic*  
Gillings Innovation Labs  
Funding round suspended due to COVID-19; Review anticipated in Fall 2020  
3.0 calendar months (25%)

Co-Investigator (PI: Nora Rosenberg)  
*Developing a clinical risk assessment tool to identify AGYW at highest risk for HIV infection*  
Gillings Innovation Labs  
Funding round suspended due to COVID-19; Review anticipated in Fall 2020  
2.0 calendar months (17%)

### **Completed**

Co-Principal Investigator (with William Miller)  
R01 AI114320  
*Reaching unaware sexual and social contacts to interrupt ongoing HIV transmission*  
National Institute of Allergy and Infectious Diseases  
August 15, 2014 – July 31, 2019  
Total funding: \$3,133,866  
2.4 calendar months (20%)

Principal Investigator  
Developmental Award from the UNC Center for AIDS Research  
*Formative research to develop a prospective, population-based cohort of newly HIV-diagnosed persons*  
October 1, 2017 – July 31, 2019  
Total funding: \$30,000 (no salary support)

Co-Investigator (PI: Daniel Westreich)  
DP2 HD084070  
*From patients to policy: Innovative epidemiology for implementation science*  
Eunice Kennedy Shriver National Institute of Child Health and Human Development  
September 15, 2014 – June 30, 2019  
Total funding: \$2,280,000  
2.4 calendar months (20%)

Principal Investigator

Sub-contract with International AIDS Vaccine Initiative  
*Acute retroviral symptoms and extended high viremia in HIV*  
December 1, 2014 – June 30, 2017  
Total funding: \$27,717  
1.8 calendar months (15%)

Project Leader

P30 AI030410 (administrative supplement through UNC Center for AIDS Research)  
*The HIV treatment cascade: improving measurement to target interventions*  
National Institute of Allergy and Infectious Diseases  
Total funding: \$151,983  
September 1, 2013 – July 31, 2017  
3.0 calendar months (25%)

Principal Investigator

R03 MH100987  
*Evaluating community viral load and other metrics for HIV treatment as prevention* National Institute of Mental Health  
Total funding: \$152,000  
April 1, 2013 – August 31, 2016  
3.0 calendar months (25%)

Principal Investigator

UNC Center for AIDS Research Developmental Core  
*The HIV care continuum: CD4 and viral load measures as proxies for HIV care visits* Total funding: \$5,000 (No salary support)  
January 1, 2015 – July 31, 2016

Scholar

KL2 TR001109  
*North Carolina Translational & Clinical Sciences Institute*  
November 1, 2013 – April 30, 2016  
9 calendar months (75%) + \$10,000 research funds/year

Sub-contract Principal Investigator (Imperial College London, primary grantee)

*HIV Modelling Consortium work package on HIV declines*  
Bill and Melinda Gates Foundation  
Total funding: \$34,104  
June 1, 2013 – September 30, 2013  
3.0 calendar months (25%)

Co-Investigator (Co-PIs: William Miller and Audrey Pettifor)

R01 AI083059  
*Acute HIV Infection: A key link for transmission prevention*  
National Institute of Allergy and Infectious Diseases  
Total funding: \$3,666,840  
August 1, 2009 – July 31, 2014  
3.0 calendar months (25%)

Co-Investigator (PIs: Wayne Lehman at TCU, David Wohl at UNC)  
 R01 DA025885  
*Sustainable HIV risk reduction strategies for criminal justice systems*  
 National Institute on Drug Abuse  
 Total funding: \$2,830,371  
 September 15, 2008 – May 31, 2013  
 3.0 calendar months (25%)

Fellow/Trainee (PI: Steven Meshnick)  
 T32 AI070114  
*Training in Infectious Disease Epidemiology*  
 National Institute of Allergy and Infectious Diseases  
 Total funding to UNC during 2 years of fellowship (2007-2009): \$234,588  
 6.0 calendar months (50%)

Co-Investigator (PIs: Taha Taha at Johns Hopkins, Myron Cohen at UNC)  
 U01 AI069518  
*Malawi Clinical Trials Unit*  
 National Institute of Allergy and Infectious Diseases  
 Total funding: \$59,341,263  
 February 15, 2007 – November 30, 2013  
 3.0 calendar months (25%)

## SERVICE

### Service to Department

Steering Committee Member, Training in Infectious Disease Epidemiology T32	2020-present
Faculty Advisor, UNC Student Interest Group in Modeling Infectious Diseases	2018-2019
Admissions Committee Member, UNC Department of Epidemiology	2014-present
Faculty Advisor, UNC Infectious Disease Epidemiology Journal Club	2015-2017
Committee Member, UNC Epidemiology Graduate Program Review (Students Section)	2017
Panel Member, UNC Epidemiology Student Organization Work-Life Balance Session	2013

### Service to School

Gillings Study Section	2020
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### Service to University

Internal Advisory Board Member, UNC CFAR Social and Behavioral Sciences Core	2017-present
Session Lead, UNC Symposium on Combatting Opioid Addiction and Overdose	2017

**Service to State**

Advisor on COVID-19 Epidemiology, NC Governor and NC DHHS	2020
Member, NC DPH / UNC EPID COVID-19 Epi Studies Working Group	2020

**National and International Service to Field**

Moderator, Modeling to Guide Practice Satellite Session, <i>AIDS</i> 2020	2020
Committee Member, Epidemiology & Monitoring Track, STI & HIV World Conference	2019-present
Guest Editor, <i>Journal of International AIDS Society</i> Supplement on Modeling	2019-present
Book Reviewer, Cambridge University Press (Title: <i>Infectious Disease Epidemiology</i> )	2018
Expert Consultant, CDC Summary on HIV Transmission Probabilities	2012
Editorial Board Member, <i>Sexually Transmitted Diseases</i>	2011-present
Peer-Reviewer: <i>AIDS, American Journal of Epidemiology, American Journal of Public Health, British Medical Journal, Canadian Medical Association Journal, Clinical Infectious Diseases, Epidemics, Epidemiology, International Journal of Epidemiology, International Journal of STD &amp; AIDS, Journal of Acquired Immune Deficiency Syndromes, Journal of Infectious Diseases, Lancet HIV, Nature Scientific Data, PLoS Computational Biology, PLoS One, Sexually Transmitted Diseases, Statistical Communications in Infectious Diseases, Science Advances</i>	2007-present