

**Postdoctoral Scholar in Network Influences on HIV**  
Northwestern University Feinberg School of Medicine, Chicago, IL  
Department of Medical Social Sciences

We are looking for a Postdoctoral Scholar to join our team beginning in Fall 2022.

The broad focus of the position will be Network Influences on HIV.

The Postdoctoral Scholar will be mentored by both Dr. Michelle Birkett and Dr. Patrick Janulis. Both Drs. Birkett and Janulis are Assistant Professors within the Department of Medical Social Sciences at Northwestern University. Dr. Janulis is also the Quantitative Methodologist for the Third Coast Center for AIDS Research. They both serve as the leadership of the [Complex Systems and Health Disparities Research Program \(CONNECT\)](#) which is focused around elucidating the complex mechanisms driving the health disparities of stigmatized populations, in particular racial/ethnic, gender, and sexual minorities. Drs. Birkett and Janulis hold highly active NIH-supported research portfolios, focused around: 1) the design of network data capture tools ([Network Canvas](#)); 2) network impacts on infectious disease disparities; 3) analyzing sexual network data to improve mathematical models and understand the impact of substance use on HIV transmission.

We anticipate that the Postdoctoral Scholar's time will be split across three projects.

Substance use and sexual networks: This NIH/NIDA-funded study (R01DA055502; PI: Janulis) utilizes several rich observational datasets of MSM to estimate the impact of alcohol and methamphetamine use on sexual networks. Using these estimates, the project seeks to develop and validate network epidemic models and leverage these models as an experimental laboratory to examine the contribution of alcohol and methamphetamine use to HIV risk and identify optimal and robust strategies for HIV elimination among MSM who use these substances.

EpiModel 2.0: This NIH/NIAID-funded study (R01AI138783; Site PI: Janulis, PI: Jenness) is a multidisciplinary project to develop statistical methods and software tools for network-based mathematical models of HIV. On this project, the Northwestern site focuses on leveraging data on sexual network and sexual behavior to improve these models and software. The Postdoctoral Scholar will: a) analyze behavioral and sexual network data from a cohort of young MSM, b) explore the impact of findings on mathematical models of HIV and other STIs, and c) participate in the dissemination of findings through publications and conference presentations.

ChiSTIG: This NIH/NIMHD-funded study (R01MD014703; PI: Birkett) utilizes existing rich empirical datasets to build a simulation model to serve as a counterfactual laboratory to test competing hypotheses regarding the etiology of infectious disease inequities in HIV for sexual minorities, specifically Black and Hispanic MSM and Transwomen, and potential routes for intervention. The Postdoctoral Scholar will: 1) assist in analyses which demonstrate the how the social networks, sexual networks, and venue networks of marginalized populations differ from majority populations and how they differ in ways which contribute to infectious disease disparities, and b) assist in the dissemination of findings through publications and conference presentations.

The Postdoctoral Scholar will be based in the Department of Medical Social Sciences. The [Department of Medical Social Sciences](#) provides a unique home for applied researchers who integrate biomedical and social science approaches to the improvement of health. Its defining features are an emphasis on interdisciplinary research and a strongly collaborative orientation. The department provides rich resources for conducting research, including a broad scientific portfolio with multiple, well-characterized cohorts across the lifespan, psychometric/biostatistical and health informatics cores, expertise in multi-level assessment methods and collaborative relationships across Northwestern's biomedical and social sciences campuses. The Postdoctoral Scholar will also be able to hold affiliation with the [Institute for Sexual and Gender Minority Health and Wellbeing](#) (ISGMH).

**Eligibility:** Completion of the doctorate prior to the start of the position is required for Postdoctoral Scholars. It is preferred that the candidate has a doctorate in the social/behavioral/health sciences or a related field. The candidate must have experience in social network science and quantitative methods as well as an interest in

applications to health domains. Additional academic interests in HIV prevention/transmission, LGBTQ Health, Stigma, Sexual Networks, Bipartite Networks, and Epidemic Modeling are preferred. Additionally, experience with data science or computational social science is welcome.

**To apply:** Postdoctoral Scholar applicants should email application materials to Dr. Birkett ([birkett@northwestern.edu](mailto:birkett@northwestern.edu)) and Dr. Janulis ([Patrick.janulis@northwestern.edu](mailto:Patrick.janulis@northwestern.edu)). Applications should include: 1) a CV, 2) a cover letter explaining fit with this position, research experience, and career goals, and 3) the contact information for two references. Consideration of applications will begin immediately and continue until the position is filled.

*Northwestern University is an Affirmative Action/Equal Opportunity Employer. Applications from women and minorities are encouraged.*