

Contact tracing for COVID-19: acceptability and barriers in African American communities

Specific Aims

Contact tracing is an essential component of public health response to infectious disease outbreaks of any size ranging from incidental food poisoning events, ongoing epidemics, and certainly to the novel coronavirus (COVID-19) pandemic. Contact tracing entails eliciting information from index COVID-19 patients about the people who have been directly exposed or in close proximity to them and tracing these persons for further testing, treatment, and possible isolation. It is critical to blunting further transmission of the virus. Contact tracing dates back to the 1930s as a disease control measure for the syphilis epidemic. It remains mandatory today in North Carolina for all patients newly diagnosed with syphilis and HIV. Disease Intervention Specialists (DIS) (i.e., contact tracers) are highly skilled to deal with these often stigmatized diseases that disproportionately occur among African Americans in underserved communities. Regardless of race concordance, DIS have gained the knowledge and skills to work within communities for these infections typically acquired from high risk proscribed behaviors. From this work, a model of best practices and standards exists for contact tracing.

When SARS-CoV-2 was first detected and for the ensuing 6-8 weeks, the United States was slow to recognize the gravity of the pandemic, slow to respond, and woefully unprepared to perform this key ingredient of public health practice and disease control. Policy makers and legislators nationwide now recognize the need for tremendous funding in public health to increase testing, contact tracing, and surveillance. Governor Cooper and the NC Department of Health and Human Services is poised to implement disease control efforts through its "Testing, Tracing, and Trends" initiative which is part of an overall strategy to lift restrictions and resurrect the economy. One of the first steps is to supplement its workforce of 250 DIS and hire at least 250 new contact tracers.

Mounting evidence for COVID-19 clearly demonstrates that disproportionately more African Americans acquire the infection, have more severe symptoms, and die at alarmingly high rates. African Americans in underserved communities may experience COVID-19 as stigmatizing, as it may mirror the many health disparities suffered by vulnerable disenfranchised populations. As testing and surveillance efforts increase across the state, there is a critical need to identify potential barriers that may jeopardize contact tracing activities. For historically valid reasons, African Americans living in poverty may not trust unknown public health contact tracers working in their neighborhoods or contacting them in person or by phone, texts, or email. People may not get tested, seek care if symptomatic, or respond to contact tracers.

Newly trained contact tracers without the sensitivity to navigate these underlying social issues may disrupt these proven disease control measures to stem further transmission. This proposal aims to investigate the current COVID-19 experience of African Americans in underserved urban and rural communities and to compile data to inform best practices for optimal contact tracing and training newly hired contact tracers.

Specific Aim 1: Describe the coronavirus pandemic experience among African Americans in poor urban and rural communities including: knowledge, attitudes, resources, stigma, perceived risks of infection, personal protective behaviors associated with COVID-19, changes that took place since the shelter-in-place orders (e.g., job loss) and other possible needs that contact tracers may encounter.

Specific Aim 2: Investigate the acceptability and identify potential barriers and facilitators for COVID-19 testing and contact tracing success in low income African American communities.

Specific Aim 3: Assess the concerns, opinions, and recommendations from current Disease Intervention Specialists and other community outreach workers for training and deployment of 250-500 new contact tracers.

Impact: Surveillance through widespread testing coupled with contact tracing will allow epidemiologists to better estimate COVID-19 incidence – a highly infectious disease that varies in severity from no symptoms to death. Participants will provide invaluable information to prevent newly hired contact tracers from perpetuating distrust, and jeopardizing this essential public health activity that will curb ongoing transmission of this devastating pandemic.

Research strategy

This project will draw on the resources of the RCMI Community Engagement Core (CEC) for moderating focus groups, data collection in Halifax County, and assistance with qualitative analysis.

This cross-sectional study comprises focus groups, semi-structured interviews, and a brief pilot survey to gain insight from multiple lenses about the impact of and response to the COVID-19 pandemic among underserved African Americans living in rural and urban communities. The focus groups will assess community-level knowledge, health literacy, perceived risk, barriers to protection, barriers in obtaining credible information, personal behaviors to prevent transmission, facilitators to disease prevention, and potential motivators for general health promotion. The survey will collect data among residents in low-income neighborhoods to characterize other contextual features of African Americans' lives in the wake of COVID-19. The survey will assess basic demographics, quantify perceived risks, coping, isolation, food insecurity before and during the outbreak, job loss, and other issues that may emerge from focus groups. (For example, preliminary conversations between the Principal Investigator [Dr. Irene Doherty] and colleagues suggest that tele-medicine in general, unrelated to COVID-19 may surface.) Semi-structured interviews with experienced DIS and community outreach workers will complement focus group data to identify potential obstacles for interviewing index COVID-19 patients, contact tracing, and referrals for testing, and follow-up to ensure that contacts did indeed get tested for the virus.

Community focus groups: With the assistance of the CEC and Durham partners, we will recruit African Americans who are at least 18 years of age residing in Halifax or Durham County for focus groups. The focus groups will be conducted either in person within social distancing constraints, over Zoom, or a combination of the two. The settings may evolve as state and county level social distancing orders ease to allow more movement.

The first focus group will occur at a weekly food bank located at a community center in Halifax County. Food bank clients typically stay after picking up their food to drink coffee and socialize. The practice stopped because of the pandemic. However, staff recognized the need for clients to emotionally connect with each other. The meeting area now conforms to social distancing directives. We will leverage this setting to conduct the rural focus group. In addition, those who wish to join by Zoom may do so. The Durham focus group will take place in collaboration with CAARE The Healing Center in downtown Durham. It will also be conducted either in-person (practicing social distancing) or through Zoom or a combination of the two. CAARE has over 22,000 square feet, easily accommodating a socially distanced focus group. This venue is especially appropriate as the CAARE leadership is considering becoming a testing site (personal communication with executive director).

An experienced African American moderator associated with the RCMI CEC will facilitate the focus groups; she has previously conducted a Zoom a focus group with Halifax residents. The Principal Investigator (I Doherty) will observe the focus groups via Zoom for both groups. The moderator will introduce Dr. Doherty as the note taker, without showing her face as she is not African American, thereby preventing making participants uncomfortable. We will record the groups using Zoom functions. The informed consent form will explain these details. The moderator will administer consent as a group. The consent form will be emailed to Zoom participants. All participants will receive a \$25 gift card to a local grocery store or Walmart.

Semi-structured interviews with experienced health workers: Dr. Doherty will conduct recorded semi-structured interviews with 5-6 Disease Intervention Specialists (DIS) who have at least five years of experience with syphilis and HIV contact tracing and partner notification. They may be employed by either local health departments or the NC DHHS and with a mix of rural and urban experience. The DIS will likely continue with their current duties for HIV and syphilis and not supplement the COVID-19 contact tracing efforts (*personal communication between I Doherty and NC DHHS medical director and a senior DIS supervisor*). Other interviews will occur with outreach or other knowledgeable staff at non-profit community service agencies in both counties. While state-employed DIS are prohibited from accepting incentives, other interviewees will receive a \$50 gift incentive if permitted.

Qualitative analysis: This phase involves informal review and rigorous analysis.

Both the focus groups and interviews will be professionally transcribed verbatim, checked for accuracy, and imported into QSR NVivo for formal qualitative analysis. We will conduct a preliminary review of the transcripts, Zoom recordings, and interview recordings as needed to extract relevant information that will inform development of the pilot quantitative survey. This review will aid in identifying common experiences voiced by focus group participants to create close-ended questions.

With support from the CEC, graduate or undergraduate students or both enrolled in social science programs will perform in-depth textual analysis of transcripts. Students who have taken courses that cover qualitative research methods may apply. The QSR NVivo software will aid in the identification of major elements and themes. The students will review the transcripts and develop a preliminary list of topical codes. They will record these topical codes in a code book that includes definitions, exclusion and inclusion criteria, and exemplar quotes for each code. Topical codes will be assigned to participant statements. Interpretive codes elucidate the connections among topical codes; they will be identified and added to the code book. This process will be repeated for each focus group transcript and findings from ongoing data analysis will be used to iteratively refine and expand the codebook. We will apply this approach to the semi-structured interviews with DIS and community health and service providers. Two manuscripts will be prepared from the extensive qualitative analysis.

Quantitative survey: The findings from the qualitative studies will inform the development a short quantitative survey. Because this study is a pilot and the goal is to obtain results quickly, we will not expend resources to conduct the survey electronically to a wide study population. Our collaborators in Durham and Halifax Counties who provide social and medical services will distribute paper surveys to their African American clients, at least age 18 that will be entered into a Qualtrics database. We will hire students to perform these tasks. Each survey will use a randomly generated identification number that will never be linked to clients' identity or records. The survey will include a self-addressed envelope to BBRI and a \$10 gift card. The agencies will retain the signed consent form to de-link it from the survey and then retrieved from the site by a designated BBRI staff member.

The analysis will produce descriptive statistics for generating hypotheses for a larger study. Thus, the analysis plan does include specific comparisons that require sample size calculations. That said, most bivariate statistical comparisons typically require a minimum of 30 observations. This study will aim to collect at least 60-100 surveys from each county, equally distributed between men and women. The survey will assess socioeconomic status, COVID-19 protective behaviors, knowledge, attitudes and trust related to contact tracing, and other experiences related to life changes since COVID-19 forced society to shut down such as employment, food insecurity, difficulties obtaining financial assistance, and emotional impact of shelter-in-place such as loss of attending religious services. We will seek feedback from our community collaborators to refine.

The survey study has limitations. The study sample is not representative and biased to persons who have sought services. The survey will not undergo extensive rigorous pilot testing with cognitive interviews. Nevertheless, we expect to cull useful preliminary data for a larger grant proposal.

Dissemination of findings: As quickly as possible (i.e. before completing the work-intensive qualitative analysis), we will produce a report summarizing our findings to disseminate widely to state and local health departments, other governmental authorities, and social service providers.

Future directions: In addition to the short term impact on contact tracing, this study serves as the springboard for future proposals to address health disparities directly and indirectly related to the pandemic. First, although the incidence rate of COVID-19 in NC is projected to plateau and decrease in the ensuing weeks, it is expected to increase during the usual influenza season that begins in October, peaks during December - February and diminishes by May. In NC, influenza causes approximately 200 deaths annually. In contrast, in the three months since active COVID-19 surveillance began (March 1), 700 North Carolinians have died. The incidence of COVID-19 will remain endemic for years until an efficacious vaccine is discovered, tested with randomized trials, manufactured, and distributed widely. Thus, the intersection between health disparities that permeate underserved communities and the virus will continue to merit epidemiologic research.

Budget justification:

The budget is as follows. In addition, NCCU and the RCMI Community Engagement Core will provide software and will conduct qualitative analysis. Costs included are listed below.

Incentives: \$800 focus groups \$1000 for surveys	\$1800 – <u>NCCU will cover</u>
Focus group coordinator/Moderator:	\$1000
Rent: at Halifax and Durham locations:	\$1500 NCCU will cover the rent
Student hours: \$12/hour Qualtrics programming of survey 20hr; and data entry 100 hrs; total	\$2000
Transcription:	\$ 500
Postage:	\$150
Office supplies (pamphlets, paper, envelopes, etc)	\$ 500
Personal Protective Equipment for focus groups:	\$200
Travel between Halifax and Durham	\$ 400
Salary support, PI, Irene Doherty: 15% (6 months):	\$ 7290

Total budgeted = \$12,040 from CARES plus \$3300 from NCCU funds.

BIOGRAPHICAL SKETCH

Provide the following information for the key personnel and other significant contributors in the order listed
Follow this format for each person. **DO NOT EXCEED FOUR PAGES.**

NAME Doherty, Irene A.		POSITION TITLE Research Scientist (Epidemiologist / Biostatistician)	
eRA COMMONS USER NAME idoherthy			
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing,</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	MM/YY	FIELD OF STUDY
Simmons College, Boston MA (now University)	BS	1988	Mathematics/Sociology
University of California Berkeley, Berkeley, CA	MPH	1998	Epidemiology/Biostatistics
University of California Berkeley, Berkeley, CA	PhD	2004	Epidemiology
University of North Carolina at Chapel Hill, School of Medicine, Chapel Hill, NC	Postdoctoral fellow	2007	Infectious diseases

A. Personal Statement

I am an Epidemiologist and Biostatistician with more than 20 years of experience in academia, private industry and as a freelancer for a diversity of diseases in collaboration with multidisciplinary investigators. My first experience conducting health disparities research dates back to before pursuing graduate degrees as a Project Manager in the Coordinating Center to launch two longitudinal multi-center studies of the natural history of HIV disease progression among women. The sites were in the poorest inner cities nationwide. In addition to AIDS, impoverished women suffered numerous injustices and health disparities. Since then, most my research has focused on the structural, social, contextual, and sexual network determinants that give rise to the disproportionate burden of sexually transmitted infections (STIs), HIV, and unintended pregnancy in rural and urban settings among underserved racial/ethnic minorities. Populations include African American women and adolescents, young African American men who have sex with men (MSM), Latinx adolescents in San Francisco and HIV-infected women in South Africa with substance abuse.

The inspiration for the proposed pilot study is a result of conducting socio-sexual network research using data collected by Disease Intervention Specialists (DIS) working for the NC state health department. DIS meet with each index case newly diagnosed with syphilis, HIV, or both to elicit contacts and then conduct contact tracing, partner notification, and testing. To construct networks, we reviewed and abstracted data from DIS records for a heterosexual syphilis outbreak and the ongoing co-epidemics of syphilis and HIV among MSM. DIS responsibilities are labor-intensive requiring unique skills to coax information from people about their partners and subsequent tracing for notification and testing. They also facilitate linking newly diagnosed HIV patients into clinical care. Each narrative written by DIS documenting their progress tells a story about the challenges of finding partners and the context in which transmission took place. DIS are often confronted with people who suffer from an array of other social and health disparities such as alcohol or substance abuse, incarceration history, transactional sex, unemployment, or homelessness. Although contact tracers for COVID-19, working in underserved African American communities are not likely to encounter risk behaviors associated with STIs, COVID-19 transmission does not take place in a vacuum. They will face patients and contacts with other unmet needs that preceded the pandemic as well as direct consequences of it (e.g., unemployment from hourly jobs). In light of the prevailing social and health inequalities coupled with the upending of society from COVID-19, it is critical that newly hired contact tracers understand the challenges and have sensitivity while working in low income communities to succeed at their job and curb COVID-19 transmission.

Positions and Employment

1989–1991 Research Associate, Epidemiology Resources Inc., Newton, MA

1992–1996	Senior Research Associate, New England Research Institutes, Watertown, MA
1996–1998	Project Coordinator/Graduate Student Researcher, School of Public Health, University of California, Berkeley, Berkeley, CA
1998	Graduate Student Instructor (Biostatistics), School of Public Health, University of California, Berkeley
1998–2000	Graduate Student Researcher, California Department of Public Health, Office of AIDS, Sacramento and Berkeley CA
1999–2004	Co-Investigator/Project Director, University of California San Francisco, San Francisco, CA
2004–2007	Postdoctoral Fellow, School of Medicine, University of North Carolina at Chapel Hill
2007–2013	Assistant Professor, School of Medicine, University of North Carolina at Chapel Hill
2013–2016	Senior Epidemiologist, RTI International, Research Triangle Park, NC
2016-2017	Epidemiologist contractor, UCB Biosciences, Research Triangle Park, NC
2017-2018	Freelancer: literature reviews, statistical analysis, manuscripts, grant proposals
2018	Senior Consultant, Complete HEOR Solutions, New Wales PA, and New Delhi India
2019 – present	Research Scientist, North Carolina Central University, Durham NC

Honors

1987–1988	Simmons College Honors Academy
2015	RTI International Authorship Awards: Career Author; Highly Cited Author; Highly Published Author

Other Experience and Professional Memberships

2010 - 2015	Society for Epidemiologic Research
2008 - 2016	International Network for Social Network Analysis
2008 - 2016	American Sexually Transmitted Diseases Association
2014 - 2015	American Public Health Association

2013 - 2018 Member, Editorial Board for *Sexually Transmitted Diseases*

2013 - 2017 Member, Editorial Board for *AIDS and Behavior*

C. Contributions to Science

Social determinants and sexual networks

As part of my doctoral training, I led the publication of an invited review for a supplemental issue of the *Journal of Infectious Diseases*. This targeted review presented basic principles of social network analysis and how they translate to sexual networks and subsequent STI transmission. The publication also describes how societal determinants such as the growth of the internet facilitated finding partners and proliferates rapid growth of sexual networks. This paper has been cited in ~ 300 publications.

Doherty, I. A., Padian, N. S., Marlow, C., & Aral, S. O. (Invited Review). (2005). Determinants and consequences of sexual networks as they affect the spread of sexually transmitted infections. *Journal of Infectious Diseases*, 191(Suppl. 1), S42–S54. doi:10.1086/425277 PMID15627230

HIV and syphilis outbreaks and public health contact tracing

Outbreaks and sustained co-epidemics of HIV and syphilis have plagued predominately minority populations in the southeast for decades. UNC has collaborated with the NC state and local health departments to abstract data routinely collected by Disease Intervention Specialists who perform contact tracing, partner notification, among newly diagnosed cases. These data permit compilation of sexual networks to investigate infectious disease transmission dynamics, how they relate to spatial epidemiology, and distinguishing between simultaneous, isolated, and hidden outbreaks.

Doherty IA, Serre ML, Gesink-Law D, Adimora AA, Muth SQ, Leone PA, Miller WB Sexual networks, surveillance, and geographical space during syphilis outbreaks in rural North Carolina, *Epidemiol* 2012 Nov;(6)845–51. PMID 20037041

Doherty, I. A., Leone, P. A., Sena, A. C., Torrone, E. A., & Hightow, L. B. (2007, July). *Does HIV-syphilis co-infection fuel transmission of HIV? Evidence from a sexual network in rural North Carolina, USA.* Poster presented at International Society of Sexually Transmitted Diseases Research Conference, Seattle, WA.

Phylogenetic HIV, sexual transmission, and networks,

An emerging advancement combines public health network data with HIV phylogenetic data. With pilot funds at UNC and RTI, we compiled a dataset from health department records and HIV genotyping (which is now routinely collected) to identify potential missing network partnerships on the basis genetically similar strains.

Pasquale, D.K., **Doherty I.A**, Sampson, L.A., Hué S, Leone PA, Sebastian J, Ledford, S.L., Eron, J.J., Miller, W. C. Dennis. Leveraging Phylogenetics to Understand HIV Transmission and Partner Notification Networks. *JAIDS Journal of Acquired Immune Deficiency Syndromes* 2018 78(4): 367-375

Pasquale, D.K., **Doherty I.A**, Miller, W. C., Powers, K.A., Leone P.A. ,Sampson, L.A., Ledford, S.L., Sebastian J., Eron, J., Dennis, A.M. (2020) Factors Associated with HIV Infections Linked in Genetic Clusters But Disconnected in Partner Tracing. *Sexually Transmitted Diseases* Vol 47(2): 80-87

Sexual network structure, dynamics, and STI transmission

Having concurrent sexual partnerships increases risk of both acquisition and onward transmission of STIs. Sexual mixing within and between “high” and “low” risk individuals also impacts STI spread. I developed a mathematical microsimulation that modeled the *joint* effects of sexual mixing patterns and concurrency on the risk of STI. It demonstrated that sexual mixing facilitates dissemination of STIs, whereas concurrency expedites transmission by shortening the time between sexual contacts. The manuscript continues to be relevant as it has been cited ~100 times including ~20 times ten years after publication.

Doherty, I. A., Shiboski, S., Ellen, J. M., Adimora, A. A., & Padian, N. S. (2006). Sexual bridging socially and over time: A simulation model exploring the relative effects of mixing and concurrency on viral sexually transmitted infection transmission. *Sexually Transmitted Diseases*, 33(6), 368–373. PMID 16721330. doi:10.1097/01.olq.0000194586.66409.7a

Other publications related to partnership dynamics stemming from several studies data including a case-control study, longitudinal study, public health department surveillance records, and cross-sectional surveys.

Doherty IA, Schoenbach VJ, Adimora AA. Sexual mixing patterns and heterosexual HIV transmission among African Americans in the southeastern United States. *J Acquir Immune Defic Syndr* 2009; 52:114-20. PMCID: PMC2741169

Doherty IA, Adimora AA, Muth SQ, Serre ML, Leone PA, Miller WB. Comparison of sexual mixing patterns for syphilis in endemic and outbreak settings. *Sex Transm Dis* 2011 38(5): 378-384. PMID 21217418

Doherty IA, Minnis A, Auerswald CL, Adimora AA, Padian NS. Concurrent partnerships among adolescents in a Latino community: the Mission District of San Francisco, California. *Sex Transm Dis* 2007; 34:437-43. PMID 17195772

Doherty IA, Schoenbach VJ, Adimora AA. Condom use and duration of concurrent partnerships among men in the United States. *Sex Transm Dis* 2009; 36:265-72. PMCID: PMC2741169

Substance abuse, violence, and women and adolescents

Other health disparities from my past research address drug and alcohol use, gang violence, and reproductive health among adolescents and women.

Doherty, Irene A., F. A. Browne, and W. M. Wechsberg. “Think Inside the Box: The Heterogeneity of ‘in Risk’ Among ‘at Risk’ Female African American Adolescents in North Carolina.” *Journal of Racial and Ethnic Health Disparities*, April 15, 2020. <https://doi.org/10.1007/s40615-020-00739-1>.

Wechsberg, W. M., **Doherty, I. A.**, Browne, F. E., Kline, T. L., Carry, M. PhD, Raiford, J. L., Herbst, J. H. (2015) Gang membership and marijuana use among African American female adolescents in North Carolina. *Journal of Substance Use and Rehabilitation*, 6, 141

Wechsberg WM, **Doherty IA**, Myers B, Morgan-Lopez AA, Emanuel A, Carney T, Kline TL, Zule WA. Contextualizing gender differences and methamphetamine use with HIV prevalence within a South African community. *Int J Drug Policy* 2014; 25(3): 583-90 doi 10.1016/j.drugpo.2013.10.016

McCoy SI, Jewell NP, Hubbard A, Gerdts CE, **Doherty IA**, Padian NS, Minnis AM. A trajectory analysis of alcohol and marijuana use among Latino adolescents in San Francisco, California. *J Adolesc Health*. 2010 Dec;47(6):564-74. PMID 21094433

Minnis A. M., **Doherty, I. A.**, Kline T. L, Zule WA, Myers B, Carney T, Wechsberg WM. (2014) Relationship power, communication, and violence among couples: Results of a cluster-randomized HIV prevention study in a South African township. *International Journal of Women's Health*, 7, 517–525

Minnis AM, Moore JG, **Doherty IA**, Rodas C, Auerswald C, Shibowski S, Padian NS. Gang exposure and pregnancy incidence among female adolescents in San Francisco: evidence for the need to integrate reproductive health with violence prevention efforts. *Am J Epidemiol* 2008; 167:1102-9. PMCID: PMC3402096

D. Research Support

5U54MD012392 (P.I. Deepak Kumar) 01/03/2019-present

National Institute on Minority Health and Health Disparities

RCMI Center for Health Disparities Research

The North Carolina Central University (NCCU) established a RCMI - Center for Health Disparities (RCHDR) to conduct cutting edge research for addressing health disparities. The Center is a collaborative effort within multiple NCCU units and is housed at the Julius L. Chambers Biomedical/Biotechnology Research Institute (BBRI). Focusing on basic and behavioral biomedical research, the Center will leverage resources and partnerships at the neighboring institutions in the Research Triangle area, community based organizations and the nationwide RCMI Translational Research Network (RTRN).

Selected Completed Research Support

1UL1TR001111 CTSA, University of North Carolina at Chapel Hill 07/01/14–07/31/16
and RTI International pilot study funds (UNC-RTI partnership)

Integrating HIV Phylogenetics and Sexual Networks to Inform HIV Prevention (I.A. Doherty and A.Dennis)

This study assessed the feasibility of integrating HIV phylogenetic analyses into HIV disease control practices to inform development of targeted interventions that interrupt ongoing transmission. This pilot study will investigate the overlap of sexual networks linkages and phylogenetic transmission clusters among patients newly diagnosed with HIV in Wake County, NC.

Role: Co-Principal Investigator

5 R01 AI067913-03 (Miller) 6/2006–5/2012
NIH/NIAID

Spatial Epidemiology of Syphilis and Gonorrhea in North Carolina

University of North Carolina Chapel Hill, School of Medicine

We used modern geostatistical methods to develop improved methods of STI surveillance and investigate core areas of transmission and investigated how the development of an outbreak of syphilis in North Carolina over space and time relates to the formation and growth of the sexual network.

Role: Investigator

R03 DA026737-02 (**Doherty**) 5/2009–4/2011
NIDA

University of North Carolina Chapel Hill, School of Medicine

The Nexus of Drugs, Sex Networks, HIV and Syphilis in Young African American MSM

Young adult African American men who have sex with men in North Carolina are experiencing rapidly expanding contemporaneous epidemics of HIV infection, syphilis, and drug use. The sexual networks are complex and span across metropolitan, suburban, and rural areas. We abstracted data from public health records to characterize these networks, which informed the development of new interventions and the improvement of existing ones to reduce morbidity and mortality among these young people.

Role: Principal Investigator