

Creative Approaches to Enhancing HCV and HIV Rapid Diagnostic Antibody Testing in Underserved Populations

Amy Nunn, ScD

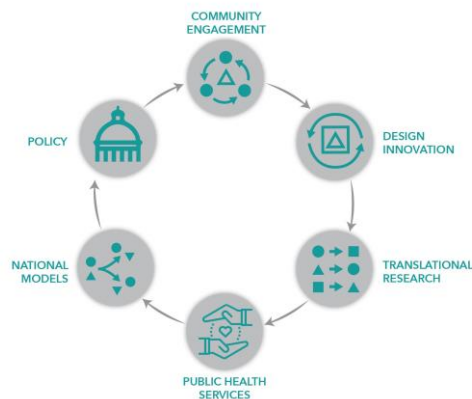
Executive Director, Rhode Island Public Health Institute
Associate Professor, Behavioral and Social Health Sciences, Brown SPH

20 September, 2019
Cascais, Portugal



Rhode Island Public Health Institute

We promote community health and reduce health disparities in Rhode Island and beyond. We oversee the development of innovative public health programs, translational and policy research, and training of public health students and practitioners.





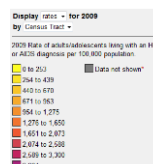
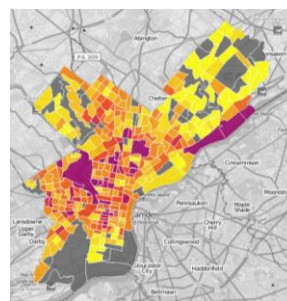
Screening & Treatment Initiatives

Enhancing screening and linkage to care among underserved communities through community outreach and mobilization, community clinics, and large-scale social marketing and media campaigns.

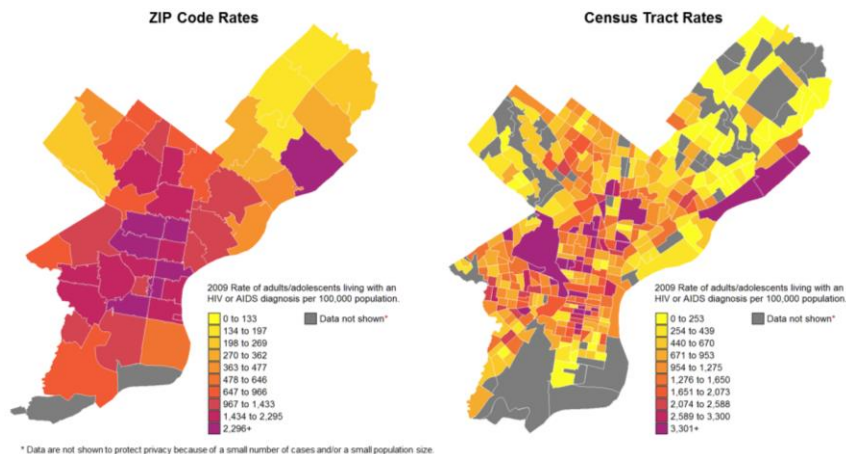


Geographically Focused Interventions

- In many urban areas, a few neighborhoods count for a large share of HIV infections
- HIV infections cluster
- Some neighborhoods have infection HIV infection rates similar to sub-Saharan Africa
- Maps tell us where to focus intensive prevention and treatment efforts



Rates of Persons Living with HIV/AIDS by Zip Code and Census Tract, 2009



Source: AIDSvu

Geography Should Not Be Destiny: Focusing HIV/AIDS Implementation Research and Programs on Microepidemics in US Neighborhoods

African Americans and Hispanics are disproportionately affected by the HIV/AIDS epidemic. Within the most heavily affected cities, a few neighborhoods account for a large share of new HIV infections.

Addressing racial and economic disparities in HIV infection requires an implementation program and research agenda that assess the impact of HIV prevention interventions focused on increasing HIV testing, treatment, and retention in care in the most heavily affected neighborhoods in urban areas of the United States.

Neighborhood-based implementation research should evaluate programs that focus on community mobilization, media campaigns, routine testing, linkage to and retention in care, and block-by-block outreach strategies. (*Am J Public Health*. 2014; 104:775–780. doi:10.2105/

Amy Nunn, MS, ScD, Annajane Yolken, Blayne Cutler, MD, PhD, Stacey Trooskin, MD, PhD, Phill Wilson, Susan Little, MD, and Kenneth Mayer, MD

ALTHOUGH HIV INCIDENCE IN the United States has remained relatively stable since the mid-1990s, rates among African Americans and Hispanics are 8 and 3 times those among Whites, respectively.¹ Approximately 65% of new HIV infections in the United States occur in non-White populations. Individual behavioral risk factors, including unprotected sex and substance use, do not fully explain racial disparities in HIV infection; minority populations do not engage in higher rates of HIV risk behaviors than individuals of other races.²

GEOGRAPHIC AND RACIAL DISPARITIES IN HIV INFECTION

New research underscores the pivotal role that sexual networks, structural factors, and geography

with high poverty rates.⁴ Similarly, new mapping tools (for examples, see www.aidsvu.org) help visualize associations between low SES, race, and geographic clustering of HIV infections in these same heavily affected communities. HIV prevalence rates in certain urban neighborhoods rival those of some sub-Saharan African countries. Within the most highly affected US cities, a discrete number of specific neighborhoods account for a large share of HIV infections and AIDS-related mortality.

For example, in Washington, DC, 2.7% of the general population is infected with HIV, but the epidemic is most heavily concentrated in wards 5, 6, 7, and 8, where residents are predominantly African American and of low SES, and where the HIV prevalence rate is as high as 3.1%.

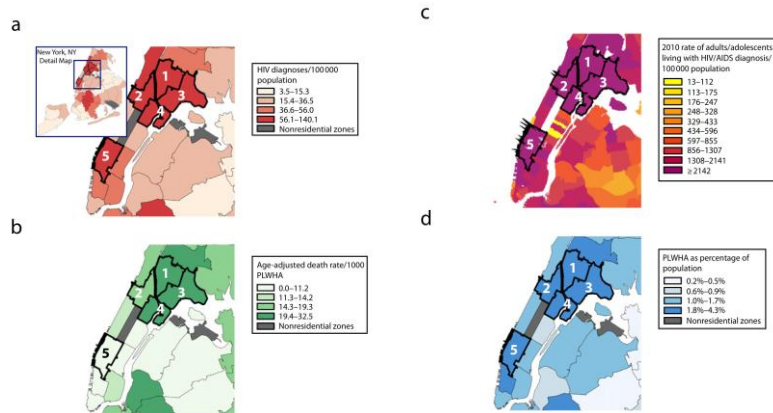
Point-Mott Haven, as well as predominantly White Chelsea, have rates ranging from 2.4% to 4.5% (Figure 1). However, AIDS-related mortality rates in the predominantly White neighborhood of Chelsea, which has a large gay population, are far lower than those in other predominantly African American and Hispanic neighborhoods with high infection rates.

Finally, Philadelphia's HIV infection rate of 114 per 100 000 is five times the national average. Although HIV prevalence in Philadelphia is high among residents of Center City, an affluent, predominantly White neighborhood with a large gay community, AIDS-related mortality in Center City is far lower than that in predominantly African American neighborhoods with high rates of infection (Figure 2).⁶ These higher



Am. Journal Public Health, 2014

Geography Should Not Be Destiny

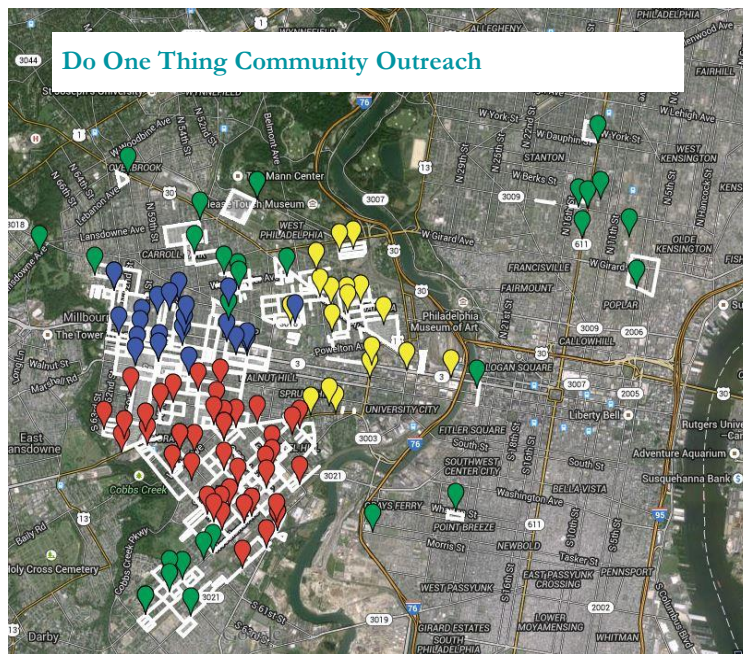
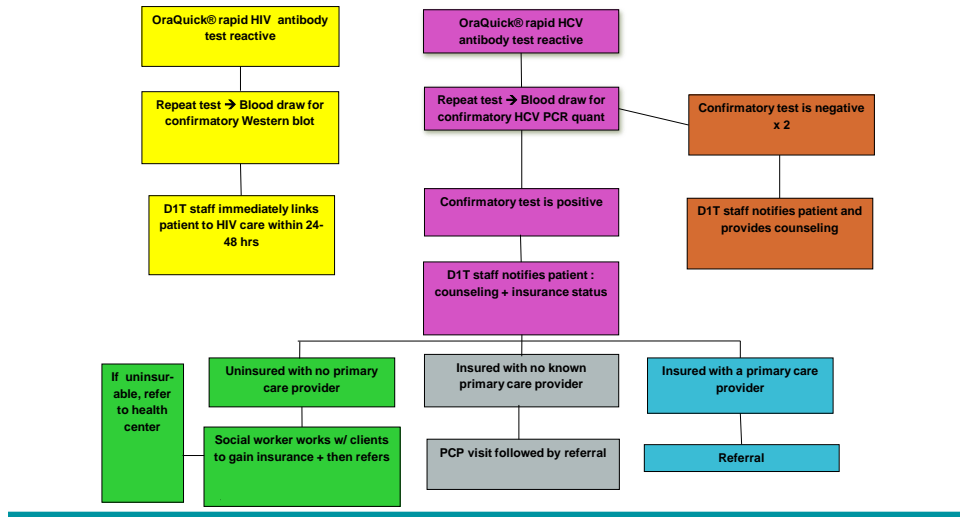


Note. PLWHA = people living with HIV/AIDS. Marked neighborhoods are (1) High-Bridge Morrisania, (2) Central Harlem-Morningside Heights, (3) Hunts Point-Mott Haven, (4) East Harlem, and (5) Chelsea-Clinton.

FIGURE 1—Racial and geographic disparities in HIV/AIDS outcomes in New York City neighborhoods for (a) HIV diagnoses (b) age-adjusted death rate (c) 2010 rate of adults/adolescents living with HIV/AIDS diagnosis and (d) PLWHA as percentage of population: 2012.

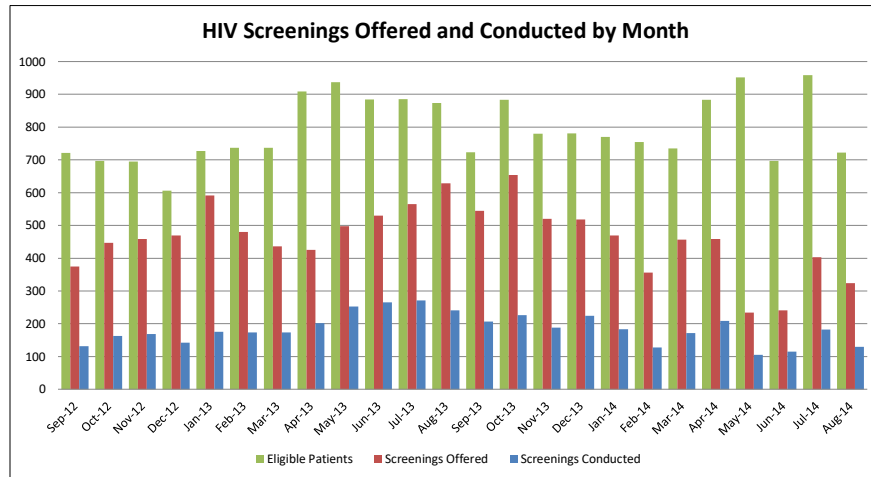


HIV/HCV Linkage to Care Protocol



Routine HIV Screening in an Urban Community Health Center: Results from a Geographically Focused Implementation Science Program

Public Health Reports, 2016 | Nunn A, et. al.



Why Churches?

- Community Reach and Impact
 - 85% of African Americans are Christian
- Rich religious history in Philadelphia and Mississippi
- Churches can do things we can't!
- Geography: Reach of faith based organizations in medically underserved communities



Choir of Anderson United Methodist Church, World AIDS Day 2013 in Jackson, MS

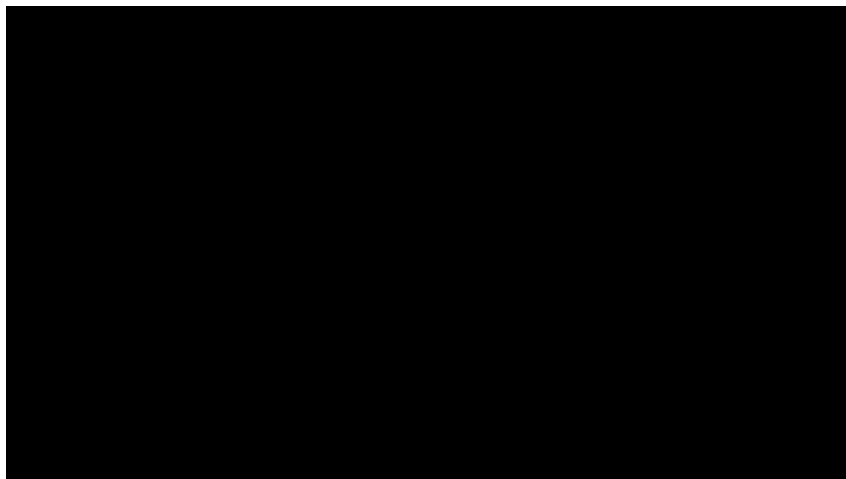




Greater Than AIDS



Pastor Waller, Greater Than AIDS

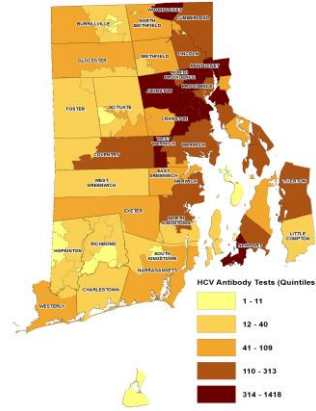


https://www.youtube.com/watch?v=xUpJfxkT_5A



HCV in Rhode Island, 2016

- The HCV prevalence rate (based on antibody testing from health systems and laboratories represented in the profile) ranged from **3.7 to 6%**.
- The percentage of individuals with chronic HCV who underwent screening is likely between 3.1% and 5.1%.
- In 2014, there were 102 HCV-related deaths in Rhode Island; this is a **five fold increase in the last decade**



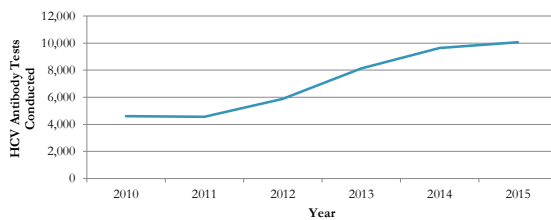
Medicaid Claims for HCV Antibody Tests by Rhode Island Zip Codes, 2014-2015



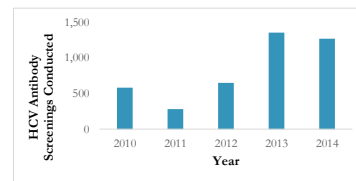
RI Hepatitis Action Coalition, 2016

Clinical and Non-Clinical HCV Screenings

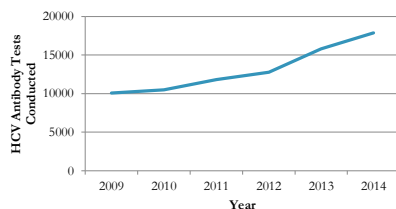
East Side Clinical Labs



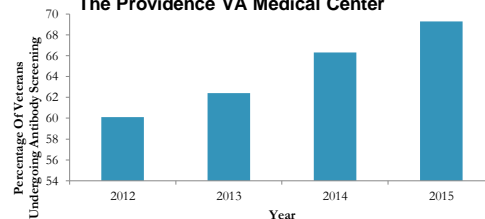
Community-Based Agencies



Lifespan



The Providence VA Medical Center



CASE STUDIES AND PRACTICE

Online Hookup Sites for Meeting Sexual Partners Among Men Who Have Sex with Men in Rhode Island, 2013: A Call for Public Health Action

Philip A. Chan, MD, MPH
Christina Crowley, MPH
Jennifer S. Rose, PhD
Trace Kershane, PhD
Alice Tributino, BS
Madeline C. Montgomery, MPH
Alexi Almonte, BA
Julia Rajfman, ScD
Rupa Patel, MD, MPH
Amy Nunn, ScD, MPH

ABSTRACT
Frequent use of online hookup sites among men who have sex with men (MSM) is associated with increased risk for sexually transmitted diseases (STDs). We performed a demographic and behavioral assessment of 415 MSM presenting to the Rhode Island STD clinic. Theoretical and multivariate analyses assessed associations between using hookup sites and testing positive for syphilis, gonorrhea, or chlamydia. Same-sexual affiliation networks were created to evaluate hookup sites and their association with STD diagnoses.

A Network Analysis of Sexually Transmitted Diseases and Online Hookup Sites Among Men Who Have Sex With Men

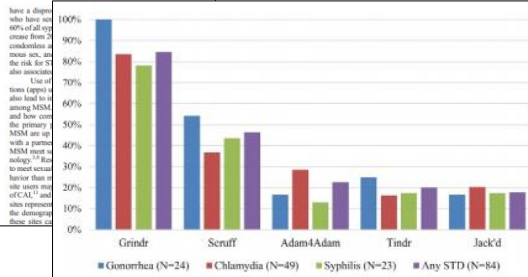
Philip A. Chan, MD, MPH* Christina Crowley, MPH, Jennifer S. Rose, PhD, Trace Kershane, PhD, Alice Tributino, BS, Madeline C. Montgomery, MPH, Alexi Almonte, BA, Julia Rajfman, ScD, Rupa Patel, MD, MPH, and Amy Nunn, ScD, MPH

Background: Sexually transmitted diseases (STDs) are increasing among gay, bisexual, and other men who have sex with men (MSM). Little is known about the use of websites and mobile phone applications to meet sexual partners ("hookup sites") and association with STD diagnoses.

Methods: We performed a demographic and behavioral assessment of 415 MSM presenting to the Rhode Island STD clinic. Theoretical and multivariate analyses assessed associations between using hookup sites and testing positive for syphilis, gonorrhea, or chlamydia. Same-sexual affiliation networks were created to evaluate hookup sites and their association with STD diagnoses.

Results: Among 415 MSM, 78% reported meeting a partner online in the last 12 months, and 27% tested positive for at least one STD. Men who met partners online were more likely to be white (87% vs. 56%, $P < 0.01$) and have more than 10 lifetime partners (87% vs. 58%, $P < 0.01$). The most commonly used hookup sites included Grindr (79%), Scruff (27%), and Tinder (22%). In the multivariate analysis, only Scruff use was associated with testing positive for an STD (odds ratio, 1.28, 95% confidence interval, 1.01–4.94). However, among men who met partners online, 75% of men diagnosed as having an STD had not met a sexual partner on Grindr, including 100% of those who were diagnosed as having gonorrhea.

Conclusions: Use of hookup sites was nearly ubiquitous among MSM undergoing STD screening. Specific hookup sites were significantly associated with STD diagnoses among MSM. Greater efforts are needed to promote STD screening and prevention among MSM who meet partners online.



New Frontiers: Online-to-Offline Linkage to Care



Public Health Reports, 2016
Sexually Transmitted Diseases, 2018

Do It Right





Diagnose individuals who are unaware of their HIV & HCV infections and immediately link them to care, with the ultimate goal of achieving HIV virological suppression and HCV cure.



Contact Me

Amy_Nunn@Brown.edu

401-863-6568

