Innovative Approaches to Promoting Health Equity through HIV Prevention in Rhode Island

LILA BHATTARAI, MPH; MEGHAN MACASKILL, MS, MPH; THOMAS BERTRAND, MPH; KATHARINE HOWE, MPH; PHILIP A. CHAN, MD, MS; UTPALA BANDY, MD, MPH

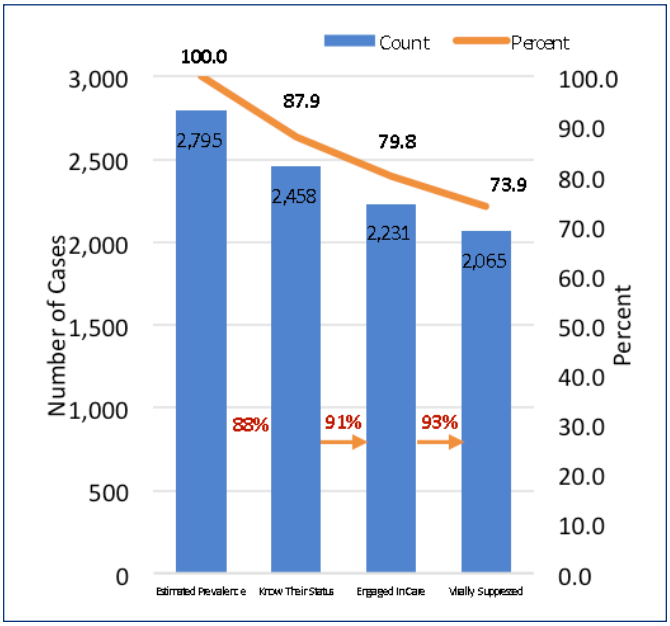
BACKGROUND

The HIV epidemic is an ongoing public health burden in the United States (US) with more than 1.2 million people living with HIV and more than 35,000 new infections each year.[1] The impact of the epidemic is not uniformly distributed with certain populations, particularly racial and ethnic minorities and gay and bisexual men and other men who have sex with men (GBMSM), who are at an increased risk for HIV acquisition and suboptimal care and treatment outcomes. Studies have indicated that the most significant predictors for HIV include education, employment, housing, income, and insurance status, with its greatest impacts among the poor, disenfranchised and stigmatized.[2] Reducing these inequities presents not only a societal imperative, but a centrally important scientific challenge.

In line with the National HIV/AIDS Strategy for the United States, which provides a roadmap across the nation to accelerate efforts to end the HIV epidemic by 2030, Rhode Island officially adopted the Fast Track Cities "90-90-90" initiative on World AIDS Day in December 2015, as a framework for reducing disparities in HIV testing, treatment and care outcomes.[3] The goals of this global initiative are: 1) 90% of people living with HIV know their HIV status; 2) 90% of people who know their HIV-positive status access treatment; and 3) 90% of people in treatment have suppressed viral loads.

In this paper we highlight some of the innovative approaches implemented in Rhode Island that have continued to improve our progress towards the targets set forth by the 90-90-90 initiative (**Figure 1**).

Figure 1. Rhode Island HIV Care Continuum, 2019



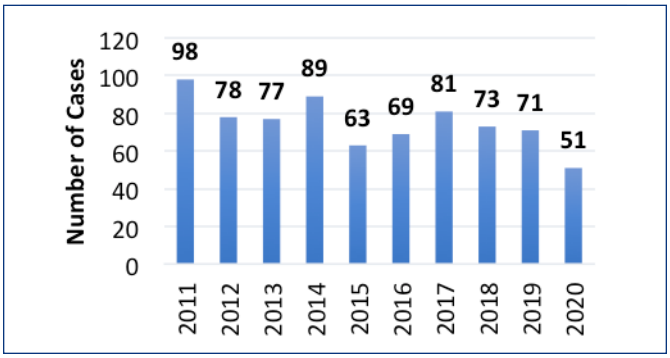
METHODS

The data presented in this report were obtained from The Enhanced HIV/AIDS Reporting System (eHARS). eHARS data include demographic, lab data, provider reports and information collected through case investigations on all HIV cases in the state. Data was analyzed to examine HIV by race and ethnic categories, by risk groups, and includes data between 2011–2020. Data for Rhode Island's HIV Care Continuum was derived using Centers for Disease Control (CDC) provided statistical analysis software (SAS) code to calculate the prevalence estimates and care outcomes. All analyses were performed using SAS (version 9.4).

RESULTS

As of 2020, there were an estimated 3,000 people living with HIV/AIDS in the state, including people who have been diagnosed with HIV as well as people living in the community who may be infected, but not yet aware of their HIV status. Over the last 10 years, we identified an average of 73 new cases per year (**Figure 2**).

Figure 2. Number of Newly Diagnosed Cases of HIV, Rhode Island, 2011–2020



The HIV/AIDS epidemic in Rhode Island mirrors national trends, with the population groups most affected being GBMSM, racial and ethnic minorities, and young adults. According to the US Census 2020, 61.6% of Rhode Island populations identified as being White alone, followed by 12.4% Black, and 18.7% Hispanic.[4] When compared to Non-Hispanics Whites, in 2020 the rate of newly diagnosed HIV cases was more than six times higher among Non-Hispanic Black Americans, and more than twice as high among Hispanics/Latinos (**Figure 3**).[5]

Figure 3. Rates of Newly Diagnosed Cases of HIV, Among Racial and Ethnic Groups, Rhode Island, 2016–2020

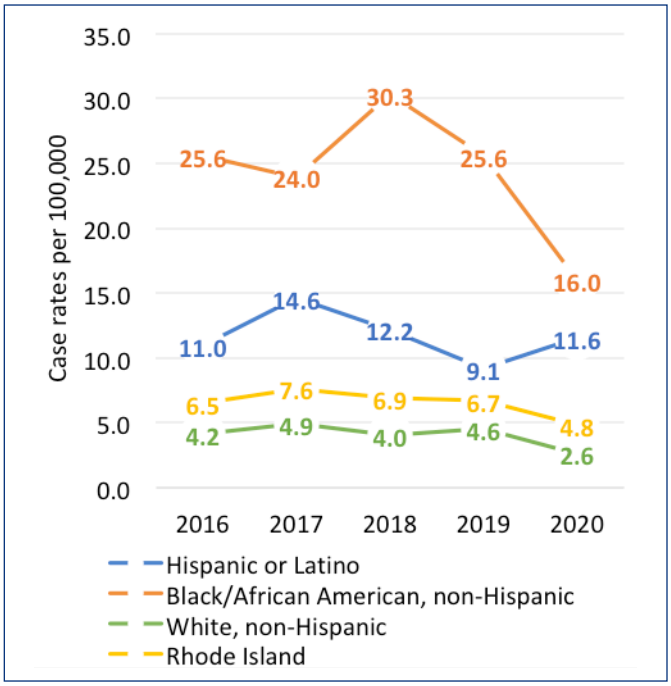
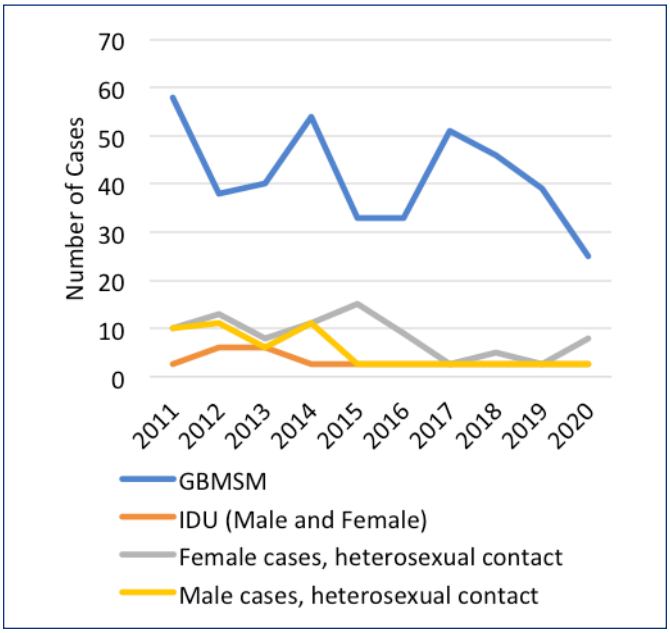


Figure 4. Number of Newly Diagnosed Cases of HIV, by Mode of Exposure, Rhode Island, 2011–2020



Similar to the minority racial and ethnic groups, the GBMSM population also is at an increased risk for HIV transmission. There were almost three times as many newly diagnosed HIV cases among GBMSM when compared to females, male heterosexuals, and people who inject drugs, combined (**Figure 4**). In the GBMSM population, the rate of HIV cases in 2020 in Rhode Island was 485 times higher when compared to the rate of HIV cases in heterosexual men.

DISCUSSION

While many social determinants of health present significant barriers to improving HIV care and prevention outcomes, Rhode Island has continued to implement evidence-based strategies, such as routine HIV testing in clinical settings including among pregnant women, partner notification, linkage and return-to-care HIV programs, syringe exchange programs for persons who use drugs, condoms by mail, HIV test kits by mail, and Testing 1-2-3 for HIV/STI testing. As part of surveillance activities, all new HIV diagnoses are interviewed by RIDOH staff to conduct contract tracing and ensure testing of close contacts. Additionally, to foster stakeholder engagement, different partnerships and planning groups have been formed that include social service agencies, AIDS service organizations, community-based organizations, other state agencies, medical providers, and research/academic institutions.

In 1995 the CDC recommended that all physicians counsel pregnant women to get tested for HIV to reduce the risk of HIV transmission to the child, prompted by a report that early use of the antiviral drug zidovudine (AZT), administered during pregnancy, labor, and childbirth to an HIV-positive pregnant woman reduced the risk of HIV infection to the newborn by two-thirds.[6] HIV opt-out screening as part of prenatal care was enacted into Rhode Island General laws in 2009.[7] There have been fewer than five cases of mother-to-child transmission of HIV in the last 10 years in Rhode Island, which can be attributed to the routine HIV testing of pregnant women and timely AZT when indicated, as part of prenatal care.

Needle exchange programs, often called "syringe services programs (SSPs)", provide a full spectrum of services to individuals who use drugs, including safe injection kits, sharps disposal containers, naloxone, fentanyl test strips, condoms, rapid HIV and hepatitis C testing, and referrals to mental health and social services as appropriate. Since the implementation of the needle exchange program in Rhode Island in 1994, there has been a precipitous drop in new cases of HIV among people who inject drugs, with fewer than six cases reported annually from 2009–2021. AIDS Care Ocean

State (ACOS), Project Weber/RENEW, and Parent Support Network operate SSPs throughout Rhode Island though a multi-faceted approach, including three fixed sites, mobile/street-based outreach in core cities, home-delivered services, and most recently harm reduction vending machines. Vending machines are co-located in places that serve high-risk individuals and contain condoms, sterile syringes and other safe injection supplies, fentanyl test strips, naloxone, wound care kits, hygiene kits, and referral cards with resources on them. Further, sterile syringes can be purchased without a prescription at retail pharmacies in Rhode Island. Rhode Island State regulations authorized the opening of harm reduction centers (HRCs), where individuals can utilize pre-obtained substances in a supervised manner for safer consumption; however, as of the time of publication, these facilities are yet to be implemented in Rhode Island.

During the beginning of the COVID-19 pandemic, many individuals experienced increased barriers to accessing condoms, as many of the community distribution locations were closed or limited to the public. Starting in August 2020, individuals could request RIDOH to mail a small package with approximately 15 condoms to their home. Since the program's inception, RIDOH has provided condoms to over 2,200 individuals representing all 39 cities and towns. RIDOH plans to continue the Condoms by Mail program as there is a consistent demand, and it reaches a population with an otherwise unmet need.

RIDOH-funded community-based organizations, including ACOS, Project Weber/RENEW and AIDS Project Rhode Island (APRI), conduct community-based rapid HIV screening tests. APRI also offers home test kits to further reduce barriers to testing, where individuals can fill out an online form, and receive a rapid HIV test kit in the mail. In 2021, there were 1,202 community-based rapid HIV tests conducted. Approximately 85% of all community-based rapid HIV tests were conducted among individuals who are at high risk of contracting HIV, demonstrating that we are reaching those most in need of testing.

Testing 1-2-3 is a program created by the Rhode Island Department of Health to help asymptomatic Rhode Islanders get tested for HIV and other sexually transmitted infections.[8] The goal is to make the process as easy as possible. Individuals who want to be tested complete a registration form online, go to the lab of their choice to provide urine and blood samples, and then receive their results and follow-up for positive cases. Using this service, individuals can be tested for HIV, chlamydia, gonorrhea, and syphilis. Individuals who use Testing 1-2-3 must have insurance or be able to pay out of pocket; other free clinics are available for uninsured individuals.

The HIV Return-to-Care program, which was implemented by RIDOH in 2013, is a physician-based referral system where dedicated RIDOH staff assist in re-engaging patients in HIV care. Between 2013-2020, RIDOH received 414 provider referrals, of whom 178 individuals were eligible for the program. Among those referred, 53% were determined to be either deceased, incarcerated, already in care, out of state/country or unable to locate and hence, ineligible. More than three-quarters (78%) of all eligible referrals were successfully connected to care through program efforts.

In Rhode Island, every new HIV diagnosis is interviewed to identify partners and refer patients to needed services. In 2020, 504 contacts were identified as needle sharing or sexual contacts from 62 index patients. However, more than 350 of those partners were anonymous and unable to be contacted. While this crucial intervention has prevented numerous high-risk partners from developing HIV through pre-exposure prophylaxis (PrEP) and post-exposure prophylaxis (PEP), there is still progress to be made on identifying partners of HIV-positive diagnoses. Since 2021, RIDOH started routinely collecting information from newly diagnosed cases about their reason for HIV testing, and the location that they were diagnosed. In 2021, most of the cases were diagnosed at a hospital or emergency department setting. The top reasons individuals were tested for HIV included routine testing, recent condomless sexual encounters, and symptoms of HIV. Collecting this information routinely and uniformly will help inform our prevention efforts by identifying gaps and missed opportunities for early identification of HIV cases.

RIDOH is committed to addressing HIV and achieving 90-90-90 goals. Health equity continues to be a priority to ensure equitable access to HIV care/treatment for all affected groups. Fully addressing HIV in Rhode Island requires collaboration and commitment across public health, clinical, academic, and community-based organizations and institutions.

References

1. CDC. Estimated HIV incidence and prevalence in the United States, 2015–2019. HIV Surveillance Supplemental Report 2021. http://www.cdc.gov/ hiv/library/reports/hiv-surveillance.html.
2. Pellowski JA, Kalichman SC, Matthews KA, Adler N. A pandemic of the poor: social disadvantage and the U.S. HIV epidemic. Am Psychol. 2013. https://doi.org/10.1037/a0032694.
3. Office of National AIDS Policy. National HIV/AIDS Strategy for the United States. Updated for 2020. https://www.hiv.gov/sites/default/fles/nhas-2020-action-plan.pdf
4. US Census 2020. https://www.census.gov/library/stories/state-by-state/rhode-island-population-change-between-census-decade.html
5. Rhode Island HIV, Sexually Transmitted Diseases, Viral Hepatitis, and Tuberculosis Surveillance Report. 2020. https://health.ri.gov/publications/surveillance/2020/HIVSTD.pdf
6. All pregnant women advised to get HIV test, consider AZT therapy. AIDS Policy Law. 1995.
7. State of Rhode Island General Laws. Title 23: Health and Safety. Chapter 23-6.3 Prevention and Suppression of Contagious Diseases – HIV/AIDS. § 23-6.3-3 HIV screening and testing of adults, adolescents and pregnant women. P.L. 2009.
8. Testing 1-2-3 can be accessed at: https://www.testing123ri.com/

Authors

Lila Bhattarai, MPH, is Surveillance Manager, Center for HIV, Hepatitis, STD and TB, Rhode Island Department of Health.

Meghan MacAskill, MPH, is HIV Surveillance Epidemiologist, Center for HIV, Hepatitis, STD and TB, Rhode Island Department of Health.

Thomas Bertrand, MPH, is Chief, Center for HIV, Hepatitis, STD and TB, Rhode Island Department of Health.

Katharine Howe, MPH, is Prevention Program Manager, Center for HIV, Hepatitis, STD and TB, Rhode Island Department of Health.

Philip A. Chan, MD, MS, is Consultant Medical Director, Center for HIV, Hepatitis, STD and TB, Rhode Island Department of Health.

Utpala Bandy, MD, MPH, is Interim Director of Health, Rhode Island Department of Health.

Correspondence

Lila Bhattarai, MPH
HIV Surveillance Manager
Center for HIV, Hepatitis, STD and TB
Rhode Island Department of Health
401-222-7539
Lila.bhattarai@health.ri.gov