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ORIGINAL PAPER

U.S. Centers for Disease Control and Prevention and Health Resources and Services Administration Initiatives to Address Disparate Rates of HIV Infection in the South

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Abstract
The US South accounted for 51% of annual new HIV infections, 50% of undiagnosed infections and 45% of persons with HIV infection in 2016 while comprising 38% of the population. Myriad structural and contextual factors are associated with HIV-related disparities. This paper describes initiatives and strategies conducted by the Centers for Disease Control and Prevention and Health Resources and Services Administration to identify opportunities and activities addressing the disparity of HIV diagnoses in the South. Targeted HIV prevention and care efforts can change the trajectory of outcomes along the HIV care continuum and reduce HIV-related disparities in the South.

Keywords HIV infection · Disparities · Southern US · CDC · HRSA

Resumen
El Sur de los EE. UU. representó el 51% de las nuevas infecciones anuales por el VIH, el 50% de las infecciones no diagnosticadas y el 45% de las personas con infecciones por VIH en 2016, mientras que representa el 38% de la población. Innumerables factores estructurales y contextuales están asociados con las disparidades relacionadas con el VIH. Este artículo describe las iniciativas y estrategias llevadas a cabo por los Centros para el Control y Prevención de Enfermedades y la Administración de Recursos y Servicios de Salud, para identificar oportunidades y actividades que dirijan sus esfuerzos a la disparidad de los diagnósticos de VIH en el Sur. La prevención y el tratamiento dirigidos contra el VIH pueden cambiar la trayectoria de los resultados a lo largo del continuo de la atención del VIH, y pueden así, reducir las disparidades relacionadas con el VIH en el Sur.

Palabras clave Infección por VIH · disparidades · sur de los Estados Unidos · CDC · HRSA

Introduction

In 2016, an estimated 38,700 new HIV infections occurred in the US [1]. By geographical region, the South[1], that comprises 38% of the national population, accounted for 51% of annual new infections, 45% of persons with HIV, and 50% of undiagnosed infections [1]. Regarding diagnoses, the rate (per 100,000 people) of HIV diagnosis in 2017 was highest in the South, i.e., 16.1 compared to 10.6 in the Northeast, 9.4 in the West, and 7.4 in the Midwest [2]. Black/African American and Hispanic/Latino gay and bisexual men

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(hereafter referred to as MSM), specifically, 25–34 year olds, and Black/African American women are the most disproportionately affected populations [1, 2].

Myriad structural and contextual factors are associated with the disparate rates of HIV infection in the South. These factors include the interrelated effects of poverty and unemployment [3]; lack of health insurance, adequate transportation, housing, and behavioral health services [3]; and pervasive HIV-related stigma [3]. Barriers to HIV care and treatment are also contributory to the disparity [4]. Eight in 10 new HIV transmissions are from persons who are not aware of their status and those who are aware but not in care [4]. Southern states tend to lag behind other regions in key HIV testing, treatment and care outcomes like knowledge of HIV status, linkage to care and viral suppression among persons with HIV [5]. An analysis of client-level data from persons with HIV supported by the Ryan White HIV/AIDS Program (RWHAP) found that the South had lower viral suppression rates than all other regions, but this disparity largely disappeared when adjusted for variables of age, race/ethnicity, gender and type of insurance [6]. These factors must be considered in plans to reduce HIV-related disparities in the region.

In October 2016, the US Department of Health and Human Services (DHHS) established a workgroup charged with identifying opportunities and activities to address the disparity of HIV diagnoses in the South. The purpose of this paper is to describe initiatives and strategies for addressing HIV in the South conducted by the Centers for Disease Control and Prevention (CDC) and Health Resources and Services Administration (HRSA).

Initiatives to Address HIV-Related Disparities in the South

Centers for Disease Control and Prevention (CDC)

CDC's most significant investment in HIV prevention is funding for state and local health departments. To that end, CDC uses a high impact prevention approach, https://www.cdc.gov/nchhstp/highimpactprevention/index.html that allocates HIV funding for health departments to closely align with the most affected geographic areas and populations including the South. Funding efforts include providing at least $330 million each year ($343.7 million in 2015) to health departments for prevention efforts in communities and local areas where HIV is most heavily concentrated. In fiscal year 2018, CDC funded an inaugural integrated HIV surveillance and prevention program cooperative agreement for health departments (https://www.cdc.gov/hiv/pdf/funding/announcements/ps18-1802/cdc-hiv-ps18-1802-factsheet.pdf). CDC provided funding under this cooperative agreement to health departments in all 50 states, the District of Columbia, Puerto Rico and the US Virgin Islands, and to local health departments that provide services to Baltimore City, Chicago, Houston, Los Angeles County, Philadelphia, New York City and San Francisco. CDC apportioned funding based on the number of people with diagnosed HIV infection in each eligible state, territory, or directly funded city as of 2014.

The overall goals are to improve health outcomes for persons with HIV through achieving and sustaining viral suppression, and reduce health-related disparities, including those in the South. Health departments are to accomplish these goals through the following two central priorities: ensuring that all people with HIV are aware of their infection and successfully linked to medical care and treatment to achieve viral suppression; and expanding access to pre-exposure prophylaxis (PrEP), condoms, and other proven HIV prevention strategies for people at high risk of becoming infected.

Also in fiscal year 2018, CDC funded a three-year health department demonstration project, "Project PrIDE (PrEP. Implementation.Data2Care.Evaluation)" https://www.cdc.gov/hiv/research/demonstration/projectpride.html, that provides services and activities for MSM and transgender persons of color who are at risk for or with HIV in metropolitan areas with a high burden of the disease. The purpose is to support health departments in implementing two public health strategies, PrEP for persons at substantial risk for HIV infection, and "Data to Care" (use of HIV surveillance data to identify and link people with HIV to medical care and other services; https://effectiveinterventions.cdc.gov/en/data-to-care/group-1/data-to-care), to improve health outcomes among persons with HIV infection. Five of the 12 funded health departments are in the South—Baltimore, Houston, Louisiana, Tennessee, and Virginia.

CDC is also providing $115 million over 5 years (through 2019) to strengthen 21 capacity-building organizations and ensure that programs and their staff have the skills, information, and organizational support to best serve people with, and at high risk for, HIV in their communities; 4 are located in the South.

CDC disseminated best practices and lessons learned from the Care and Prevention in the United States (CAPUS) Demonstration Project," a 3-year cross-HHS agency demonstration project funded in fiscal year 2012 and led by CDC [7]. Eight state health departments, six in the South, were funded to focus on improving the health and continuum of care outcomes among racial and ethnic minorities with HIV. Funded jurisdictions also improved implementation of CDC's data to care strategy and addressed locally relevant social and structural barriers to linkage and retention in care, including transportation, housing, HIV stigma, co-location of services, and institutional racism and homophobia.

Lessons learned include the following: strategies that destigmatize and normalize HIV testing are effective for reaching racial/ethnic, sexual and gender minority populations; integrating and coordinating navigation, linkage, retention and reengagement services with existing systems assists grantees with ensuring continuity of care; and addressing social and structural barriers that affect access to HIV prevention and care services requires locally-tailored approaches [7].

CDC supports prevention and treatment messages to reduce HIV risk in disproportionately affected populations and communities through multiple *Act Against AIDS* campaigns, https://www.cdc.gov/actagainstaids/index.html, and supports the dissemination of campaign materials and messaging and national HIV prevention engagement efforts through the "Partnering and Communicating Together to Act Against AIDS (PACT) initiative," https://www.cdc.gov/actagainstaids/partnerships/pact.html. Campaigns include *Let's Stop HIV Together that* raises awareness and fights stigma; *Doing It* that encourages all adults to test for HIV and know their status; *Start Talking. Stop HIV*, that encourages gay and bisexual men to have conversations about safer sex; *HIV Treatment Works*, that encourages people with HIV to get in and stay in care; and *Transforming Health*, a provider campaign to reduce new HIV infections among transgender people, specifically transgender women of color, and improve the health of transgender people who are with HIV. PACT is a funded partnership between CDC and organizations representing populations disproportionately affected by HIV throughout the US, including the South. The current 15 PACT partners assist CDC in achieving national HIV prevention goals through communication, mobilization and outreach activities.

CDC supports community engagement efforts to address the disproportionate rates of HIV in the South. On April 19, 2017, CDC held an HIV in the South Town Hall Meeting to solicit individual feedback from invited participants on addressing HIV-related health disparities in Deep South states (Alabama, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, and Texas). Invited participants were individuals with experience and expertise in conducting HIV prevention efforts in these states. The meeting included a facilitated discussion of the key challenges participants encounter in delivering HIV prevention and care services for MSM, young Black MSM, Black women, Hispanic/Latino MSM, and transgender participants. Discussions focused on innovative solutions, effective strategies, lessons learned, and best practices that participants used in their states and/or jurisdictions to address challenges for delivering HIV prevention services and key partnerships and collaborations created to address the key challenges. Participants discussed several challenges to delivering HIV prevention services in their jurisdictions including HIV-related stigma, competing funding priorities that may not address specific issues found in the South, the higher cost and limited availability of prevention efforts, lack of providers in rural areas and lack of culturally competent providers in general. Participants also stated that partnership efforts to address HIV-related disparities in the South should focus on new methods for engaging MSM; promoting PrEP use; providing HIV-related training to improve the cultural competency of providers; addressing stigma; and addressing social determinants of health, e.g., transportation, housing, and employment in HIV prevention efforts.

Health Resources and Services Administration (HRSA)

Approximately $2.0 billion of the $2.3 billion RWHAP budget is distributed to metropolitan areas and states under Parts A and B. HRSA and CDC collaborate to ensure the appropriate HIV and AIDS surveillance data are used in determining eligibility and funding allocation amounts. HRSA uses total counts of persons with diagnosed HIV infection non-AIDS and persons with infection ever classified as AIDS to calculate funding allocation amounts for eligible jurisdictions. As such, this funding essentially follows the epidemic and accounts for changes over time in HIV prevalence across jurisdictions, thus providing for incremental proportional increases for Southern jurisdictions. Additionally, in 2018 HRSA issued new discretionary Part C Early Intervention Services awards with a majority of the ten new service areas located in the South where service area gaps had been identified. HRSA has implemented several programs to reduce disparities in the South; although these disparities continue, viral suppression among RWHAP clients receiving medical care has improved in Southern states from an average 67.4% (range 52.9–82.7%) in 2010 to 83.9% (range 77.0–91.9%) in 2016.

HRSA supports, through the Secretary's Minority AIDS Initiative Funding (SMAIF), several projects to address regional disparities. Two of the projects utilize Community Health Workers (CHWs). A CHW (https://www.apha.org/apha-communities/member-sections/community-health-workers) is a frontline public health worker who is a trusted member of and/or has an unusually close understanding of the community served. This trusting relationship enables the CHW to serve as a liaison/link/intermediary between health/social services and the community to facilitate access to services and improve the quality and cultural competence of service delivery. A CHW also builds individual and community capacity by increasing health knowledge and self-sufficiency through a range of activities such as outreach, community education, informal counseling, social support and advocacy. Such an approach seems well-suited to the structural and contextual factors involved in addressing HIV issues in the South.

"The Building Care and Prevention Capacity: Addressing the HIV Care Continuum" in Southern Metropolitan Areas ("The Southern Initiative") includes implementation of innovative models of service delivery that result in improvements in RWHAP Part A jurisdictions' HIV care continuum for minority populations. The goal of the project is increasing capacity to serve minority populations with a focus on MSM, youth, cisgender and transgender women, and people who inject drugs (PWIDs). A project-wide CHW program is tailored to each area (Atlanta, Houston, Memphis and New Orleans), implemented in a variety of provider types (community health centers, community-based organizations and medical clinics), and supplemented by specific activities including indexing assessments to measure HIV-positive clients' experience of stigma, focus groups among HIV-positive transgender individuals to assess their experience of barriers to HIV care, stigma-focused social media campaigns, and health informatics optimization to improve detection of HIV-positive individuals poorly retained in or falling out of care.

HRSA also supports "Using Community Health Workers to Improve Linkage and Retention in HIV Care." The purpose of this CHW initiative is to increase the utilization of CHWs to strengthen the health care workforce and improve access to health care and health outcomes for racial and ethnic minority people with HIV (PWH). Seven of the ten RWHAP HIV medical care provider sites are located in the South (New Orleans and Lake Charles, LA; Greenville, NC; Mobile and Birmingham, AL; Houston, TX; and Fort Myers, FL).

Three other HRSA projects have potential implications for informing activities to reduce HIV-related disparities in the South. The SMAIF funded "Leadership Training for People of Color Living with HIV" is intended to develop leadership training programs for people of color, and transgender women with HIV of all ages [e.g., Black, Hispanic/Latino, American Indian/Alaskan Native (AI/AN), and Asian/Pacific Islander (API)]. This initiative will enable trainees to serve as full, active and engaged participants on planning bodies, medical and support care teams, boards of directors, and other mobilization efforts to address National HIV Goals.

The second project, "Partnerships for Care," also SMAIF funded, is a recently concluded 3-year project in which federally-funded community health centers collaborated with CDC-funded state health departments in four states, including Florida, to expand HIV service delivery in communities highly affected by HIV. Project goals were to strengthen the workforce, build infrastructure, and provide HIV services. Community health centers (22 total, 6 of which were in the South) received supplemental funding to expand the provision of HIV prevention, testing, and care and treatment services, especially among racial/ethnic minorities. As of fall 2017, the community health centers implemented routine HIV testing among all patients, including those who may not have been considered to be at risk for HIV. This resulted in the identification of 259 patients with new diagnoses at the 22 health centers, 86% of whom were linked to HIV care within 90 days. In addition, each health center now has one or more HIV care team members who can provide basic HIV care and treatment directly to patients. Additionally, changes to electronic health records have improved delivery, follow-up, and coordination of HIV services. Planned changes will further improve quality of care and service delivery for health center patients with HIV. Building on this work, HAB and BPHC collaborated to support the RWHAP Southeast AIDS Education and Training Center (AETC) to provide training and technical assistance to at least 15 Community Health Centers in the Southeast region to increase clinical capacity for HIV care and treatment by integrating HIV services into primary care.

The third project, "In It Together: Health Literacy for All" is designed for health professionals serving a diverse spectrum of people living with and at risk for HIV. This community-based training effort, targeted in numerous Southern jurisdictions, helps improve the capacity of health professionals to deliver health literacy services to clients and thereby improve their health outcomes.

CDC and HRSA

CDC and HRSA require submission of Integrated HIV Prevention and Care Plans (hereafter referred to as The Plan) from all funded jurisdictions. The Plan is used as a roadmap to identify and outline strategies that will address the HIV prevention and care needs, resources, barriers, and gaps within jurisdictions.

CDC and HRSA conducted a high-level review of plans submitted from jurisdictions located in the South and identified the following ideas and issues that merit further attention in decreasing current disparities: increased use of peer-based linkage specialists, integration of HIV and STI programming, increased engagement with business and faith stakeholders, comprehensive sex education in public schools, increased routine and targeted HIV testing, incorporation of education and stigma reduction messages in all venues of social media, increased understanding and use of evidence-based interventions for young men who have sex with men and African American men who have sex with men; and increased availability of PrEP and non-occupational post-exposure prophylaxis.

Future Initiatives

CDC and HRSA will continue current efforts to address disparate rates of HIV in the South and consider the activities that follow for future initiatives.

- Review most current HIV incidence data for the South and report trends and changes in disparities and determine groups in which incidence is increasing. Use these data to expand existing prevention initiatives.
- Strengthen existing efforts that support use of combination biomedical/behavioral/structural interventions for disproportionately affected populations in the South, e.g., data-to-care strategies to engage or reengage people with HIV infection into care and start or restart ART.
- Review data from PACT partners for outcomes of community mobilization efforts designed to reduce HIV-related stigma and identify lessons learned and best practices to update and revise current and inform future prevention and treatment messages to reduce HIV infection in the South.
- Continue to support projects that increase viral suppression for MSM, young African American and Hispanic/Latino MSM, African American women and transgender persons with HIV through the young MSM and young transgender persons of color notice of funding opportunity.
- Review data from Health Department funded community-based organizations (i.e., number funded and types of services provided) that target disproportionately affected populations in the South with an emphasis on areas where incidence is increasing.
- Explore methods and authority to reallocate RWHAP resources to geographic areas based on new metrics of need and performance. In the future, this could lead to proportional increases in funding awards to Southern jurisdictions and community-based organizations.
- Review/analysis of both RWHAP client-level data (completed with viral suppression documented and driven by age, race/ethnicity, gender and type of insurance) and Bureau of Primary Health Care uniform data set.
- Provide technical assistance webinars for health centers to disseminate recommendations for reducing HIV disparities in the South.
- Release a Lesson Learned Toolkit (CDC, CMS and HRSA) on the activities of the HIV Health Improvement Affinity Group, which included participation from six Southern States.
- Develop and present a National Webinar (CDC, CMS, and HRSA) for HIV/AIDS stakeholders, Medicaid Directors and Medicaid Medical Directors on the HIV Health Improvement Affinity Group to facilitate uptake on addressing the needs of PLWHA.

Closing Statement

Federal efforts to focus on outreach, risk assessment and more routine/targeted testing will result in an initial increase in the number of newly diagnosed cases, overall and in the South. However, programmatic areas addressed in this paper will contribute to an improvement in outcomes along the HIV care continuum and a possible reduction in HIV-related disparities overall and particularly in the South. Community mobilization, leadership and strategic implementation of new initiatives is partially but not solely dependent on the investment of Federal resources. It is thus noteworthy to acknowledge the recent efforts of AIDS United's "Southern REACH (Regional Expansion of Access and Capacity to Address HIV/AIDS)" initiative that supports the improvement of HIV focused policy/advocacy activities of community-based organizations in nine states located in the South (https://www.aidsunited.org/Programs-0024-Grantmaking/Southern-REACH.aspx). The grant awards, with support from the Ford Foundation, support the development of programs that seek to achieve social change, shape responsible HIV public policy, and/or respond to the underlying legal, political, and systemic barriers contributing to disproportionate rates of HIV in the South. Additionally, private support, through Gilead Sciences, Incorporated launched the "COMPASS (COMmitment to Partnership in Addressing HIV/AIDS in Southern States) Initiative," a 10-year, $100 million commitment to support organizations working to address HIV in the South (https://www.gilead.com/responsibility/compass). Gilead is partnering with three coordinating centers to lead the corporate giving program of the initiative and identify and provide funding to local organizations that are committed to addressing HIV throughout the region, focusing on capacity building and shared knowledge; wellbeing, mental health and trauma-informed care; and awareness, education and anti-stigma campaigns. The use of existing CDC and HRSA HIV prevention and care interventions combined with other governmental and public/private investments to change the trajectory of outcomes along the HIV care continuum has the potential to reduce HIV-related disparities in the Southern US.

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Compliance with Ethical Standards

Conflict of interest All authors declare that they have no conflict of interest.

Ethical Approval This article does not contain any studies with human participants or animals performed by any of the authors.

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