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Not a Monolith: Regional HIV Implementation Science Lessons With Latino/a/x Populations

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Abstract

HIV incidence is increasing among Latino/a/x individuals in the United States, especially among young Latino/x gay, bisexual, and sexual minority men. Latino/a/x populations face heightened structural and social barriers to effective interventions for HIV prevention, including pre-exposure prophylaxis, and across the HIV care continuum. Implementation science provides a timely methodology for developing, testing, and scaling effective interventions into practice. Implementation science considers a specific population's priorities and environment, which is especially relevant given the diversity of Latino/a/x populations. In this article, we present lessons learned from our group's experiences leading HIV-related implementation research with various Latino/a/x populations in the United States and Puerto Rico. We highlight the importance of structural and social determinants of health, community-engaged research, and culturally tailored interventions to address HIV disparities. Implementation researchers and institutional leaders can leverage these lessons learned to drive the multilevel change needed to end the HIV epidemic among Latino/a/x populations.

Keywords

Latino; Hispanic; HIV; implementation science; community engagement

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INTRODUCTION

HIV disproportionately affects Latino/a/x populations in the United States (US), with one-third of new HIV diagnoses occurring in Latino/a/x people in 2022.¹ Despite overall advancements in prevention and treatment outcomes nationally, Latino/a/x populations continue to experience disparities across the HIV care continuum, including in the uptake of pre-exposure prophylaxis (PrEP), HIV incidence, and HIV care outcomes.^{1,2} Latino/a/x populations face unique structural and social factors that contribute to HIV disparities, including limited access to health care, language barriers, anti-immigrant policies, job instability, and stigma around HIV and LGBTQ+ (lesbian, gay, bisexual, transgender, queer or questioning) identities.²⁻⁴ Furthermore, Latino/a/x individuals often experience intersecting forms of social marginalization (eg, racism, cisgenderism, xenophobia) that contribute to ongoing HIV disparities.^{5,6} Because Latino/a/x populations in the US are diverse and evolving, these factors vary tremendously depending on the individual, community, and geographic area. Understanding nuances within Latino/a/x communities is crucial for developing and implementing targeted HIV interventions to reach the goals of the Ending the HIV Epidemic (EHE) initiative.^{7,8}

Implementation science offers valuable methodologies for addressing HIV disparities by evaluating, performing, and scaling up evidence-based interventions (eg, PrEP into real-world settings). Implementation science is the application and integration of research evidence into practice and policy.⁹ By studying and reducing barriers to implementation of evidence-based interventions, implementation researchers can develop HIV interventions that are effective, scalable, and sustainable.¹⁰ Given the challenges Latino/a/x individuals encounter related to access and retention in HIV-related care, implementation science is vital for bridging the gap between research and practice.¹¹

In this article, we present lessons learned from our experiences conducting HIV-focused implementation research with Latino/a/x populations. Although HIV research can often be conducted in silos, collaboration across institutions and sectors is essential to addressing the HIV epidemic. This supplement presented an opportunity for us to share and learn from our collective experiences working with diverse Latino/a/x populations in various jurisdictions across the US. We underscore the importance of structural and social determinants of health, community-engaged research, and culturally tailored interventions to address HIV disparities affecting Latino/a/x populations. Our collective lessons learned can guide implementation researchers and academic institutions in efforts to end the HIV epidemic and advance the health of Latino/a/x populations.

Approach

The authors of this article are EHE-funded implementation researchers focused on reducing the burden of HIV in Latino/a/x communities. We conducted 3 formative meetings to formulate and answer the central question, “What are the key lessons learned from designing and conducting implementation research focused on ending the HIV epidemic among Latino/a/x populations in the US and Puerto Rico?” We initially met to share our scopes of work including population, geographical area, and specific focus within the EHE framework (diagnose, prevent, treat, and respond).⁷ We next identified common

themes and contrasting findings, which we iteratively refined and consolidated in an article outline. Two authors (HSS and PAS) concurrently reviewed the 30 articles published by this group from 2014 to 2024, detailing EHE projects and their formative research to comprehensively incorporate results into the themes identified in discussion. Coauthors also provided illustrative examples of identified themes based on ongoing EHE projects that are not yet published. HSS and PAS then conducted a second literature search in PubMed for each identified theme to provide context and directions for future research. All coauthors reviewed and edited the themes, the outline, and the article itself.

THE IMPORTANCE OF STRUCTURAL AND SOCIAL DETERMINANTS OF HEALTH

HIV disparities are largely driven by structural and social determinants of health (ie, the nonmedical factors that influence health outcomes).¹² Much of our implementation research has focused on understanding and addressing the multilevel barriers faced by Latino/a/x populations in accessing HIV services. Thus, we find it essential to begin with a discussion of the structural and social determinants of health that are intrinsic drivers of the HIV epidemic among Latino/a/x populations.

Population-level approaches to ending the HIV epidemic require a focus on the policies and social determinants of health that shape an individual's behaviors rather than the individuals or behaviors themselves (eg, "men who have sex with men"). At the policy level, state and local policies across domains (eg, labor, health, education) have been shown to reduce or exacerbate HIV vulnerability among Latino/a/x individuals.¹³ For example, our group has identified immigration policies and deportation-related concerns as common barriers to accessing HIV services among Latino/a/x immigrant populations.^{8,14,15} Tighter immigration-law enforcement policies have been associated with a "chilling effect," reducing health care participation by eligible immigrant Latinos and their families, including US-born youth and young adults.^{16,17} Such policies have ramifications not only on HIV outcomes but also for the broader health of Latino/a/x populations. Driven by policy, health systems and social determinants of health contribute significantly to HIV disparities.¹⁸ Through qualitative and survey-based research, our group has identified multilevel barriers for Latino/a/x populations to access PrEP and HIV care, including lack of insurance, financial concerns, language discordance, limited health literacy, lack of transportation, and intersectional discrimination in health care settings (eg, based on race, HIV status, LGBTQ+ identity).^{14,15,19,20} Addressing structural and social barriers to HIV care for Latino/a/x populations is therefore imperative to the EHE initiative.

HIV implementation science offers avenues to address the social determinants of health, while informing broader policy reform. Structural and sociobehavioral interventions have been shown to mitigate the effects of social determinants of health on HIV outcomes. For instance, undocumented immigration status is associated with poor HIV-related outcomes across the continuum.^{17,21} Our work has shown that a structured intervention with colocated medical and immigration services demonstrated the potential to improve HIV outcomes for Latino/a/x sexual and gender minority immigrants.²² From a sociobehavioral lens, social

stigma remains a complex challenge. Latino/a/x individuals encounter different stigmas related to intersectional identities that affect engagement with HIV care and prevention (eg, HIV risks and status, experience of migration, LGBTQ+ identities).^{14,15,23} Targeted strategies are needed to address the impact of stigma on HIV outcomes. For example, we have documented how transgender individuals in Puerto Rico have experienced stigma and discrimination when accessing HIV and gender-affirming care.²⁰ Using community-engaged research, we have developed and tested interventions to increase the ability of frontline providers to engage in services with trans people in Puerto Rico and reduce the negative impact of stigma on health care encounters.²⁴ More research is needed to identify effective interventions to reduce stigma at the person, provider, facility, and community levels.²⁵ Addressing stigma and other social determinants of health through implementation science is critical to improving HIV outcomes for Latino/a/x populations.

LESSONS LEARNED: COMMUNITY-ENGAGED RESEARCH IS KEY

Not a Monolith: Recognizing Regional and Population Differences

There is no “one-size-fits-all” approach to addressing HIV disparities, because Latino/a/x communities differ significantly by region, immigration history, socioeconomic conditions, and sexual orientation and gender identity, among other factors. For instance, although all of these groups may be considered “Latino,” Dominican and Puerto Rican populations in New York have different health priorities and sociostructural contexts than Mexican or Salvadorean populations in Texas. Latino/x sexual minority men (SMM) and Latina transgender women are shown to be disproportionately affected by HIV on a national level, yet these disparities are driven by different factors depending on the intersectional identities they experience and the sociopolitical climate of where they live.¹ Community-engaged research is, therefore, key to assessing and addressing the needs of different Latino/a/x populations. The diversity within the Latino/a/x populations should not be considered a problem or challenge when providing HIV services or engaging with them in participatory research. The success of previous initiatives to address HIV disparities has stemmed precisely from the ability to provide services that are as tailored as possible.²⁶

In addition to the diversity of Latino/a/x individuals, our group has noted the critical importance of recognizing the diversity of place. Where a person lives has an inseparable impact on HIV vulnerability in terms of historical policies, local HIV prevalence, and local resources that affect access to care and sociostructural determinants of health.^{13,27} Puerto Ricans in Puerto Rico have different health experiences when compared with Puerto Ricans in other US jurisdictions, as is true for people from other countries in Latin America.²⁸ Regions of the US that have had a long-standing presence of Latino/a/x populations are more likely to have developed infrastructure to serve those communities (eg, bilingual Latino/a/x workforce, Latino-centered community-based organizations and health centers) than emergent immigrant destinations. Implementation science and community-engaged research are thus essential to successfully adapting and scaling evidence-based interventions tailored to Latino/a/x communities.

Academic Institutional Reform for Community-Engaged Research

The EHE initiative highlights that community engagement and partnerships are key to achieving the goal of reducing HIV infections by 90% by 2030.⁷ In our experience, academic institutions' financial, administrative, and appointment processes often pose barriers to conducting community-engaged research and maintaining sustainable partnerships. In terms of financial processes, delayed payment schedules, inequitable payment amounts, and fee-for-service models can lead to community-based partners disengaging from research projects because it is not financially feasible for them to participate in such conditions. In addition, lengthy administrative processes such as institutional review board (IRB) approval and contractual agreements can further hinder community-academic partnerships. Finally, community members are often excluded from leadership roles in academic institutions because they often do not meet the institution's eligibility criteria for such positions. Academic institutions participating in community-engaged research must reform their processes to support rather than obstruct equitable engagement with community members.

Expanding the Pipeline of Latino/a/x Researchers

Academic institutions must also support and expand the pipeline of Latino/a/x trainees in medicine and public health research. Despite representing 19% of the US population, Latino/a/x individuals represent 4% of public health and 6% of medical school faculty in the nation, and this disparity increases with advances in career rank.^{29–31} Latino/a/x researchers often have a deep understanding of the sociostructural factors affecting their communities' health and can facilitate the trust and engagement of community members.³² Latino/a/x investigators are thus critical to developing and scaling sustainable HIV interventions in real-world settings. However, a history of structural racism has led to a shortage of Latino/a/x researchers and health professionals. We cannot effectively improve HIV outcomes among Latino/a/x populations when these same populations are excluded from leading solutions.^{31,32} National programs such as the Centers for AIDS Research (CFAR) Diversity, Equity, and Inclusion Pathway Initiative and the Centers for Disease Control (CDC) Minority HIV Research Initiative offer robust national responses to address the shortage of trainees from backgrounds underrepresented in HIV research.^{32,33} Such programs also illustrate the need for ongoing funding and support of Latino/a/x mentors throughout their careers. We advocate that federal and academic institutions must urgently expand efforts to address the shortage of Latino/a/x researchers, who are essential to advancing the field of HIV implementation research and promoting the health of Latino/a/x populations.^{31–33}

The Role of Cultural Humility

Cultural humility is essential to community-engaged research with diverse Latino/a/x populations, but it is often misunderstood. Although a diverse workforce is crucial for effective HIV research and care, diversity alone does not guarantee cultural humility. Cultural humility is an ongoing process of learning, reflection, and understanding of the sociostructural histories and realities faced by the communities being served.^{34,35} The sociostructural histories of Latino/a/x populations profoundly affect health behaviors,

trust in health care systems, and perspectives on research.²⁸ This history is marked by discrimination, racism, and stigmatization of migrants, people of color, and LGBTQ+ identities.³⁶ Acknowledging this history and planning for its ongoing impacts are essential for the success of community–academic partnerships and HIV implementation research. A lack of cultural humility can impede progress in HIV research by failing to evolve in response to community feedback and needs. Hence, cultural humility remains crucial for all research team members, regardless of background, because it ensures ongoing learning and responsiveness to the diverse needs of Latino/a/x populations.

Creating Equitable Partnerships and Teams

Incorporating community members into all phases of research—planning, implementation, evaluation, and dissemination—is essential for the success of HIV interventions in Latino/a/x populations.³⁷ Community-based participatory research (CBPR), under the umbrella of community-engaged research, actively involves community members in all phases of research while striving for equal partnership and mutual empowerment.³⁷ Our group follows CBPR principles to develop and implement interventions that are culturally relevant, acceptable, and sustainable. In our experiences, we have found the following CBPR strategies to be effective:

- Designate roles for community members on the research team (eg, co-PI, coinvestigator, research assistants) to structure their involvement from project inception to dissemination of results
- Hire community experts as consultants and providing equitable compensation (eg, similar to a physician consultant rate)
- Partner with community-based organizations (CBOs), nurturing long-term partnerships when feasible while also understanding when a CBO has competing priorities that limit involvement
- Foster collaboration across CBOs, such as through the Chicago Queer Latine Collaborative that brings together leaders from 10 HIV-focused CBOs with shared goals³⁸
- Collaborate across institutions, facilitated by centralized groups such as the CFAR or EHE working groups

For instance, in the *Vive* social marketing intervention to promote HIV testing among Latino/a/x immigrants in Maryland, the inclusion of community health workers and CBO leaders on the research team enabled the development of messages that resonated with local Latino/a/x populations.^{39,40} Campaign messaging was tailored to address questions about obtaining HIV testing regardless of immigration status, insurance, and other concerns in a sensitive and culturally appropriate way. CBO partners were also instrumental in distributing messaging to the target audiences in a trusted manner. The *Vive* campaign was associated with increased HIV screening among Latino/a/x individuals at risk for HIV.⁴¹ By using CBPR strategies such as those described above, HIV researchers can improve recruitment, retention, and outcomes by leveraging community insights and belonging.

LESSONS LEARNED: HIV IMPLEMENTATION RESEARCH IN ACTION

Implementation Research Methods

Beyond the study team and partnerships, community engagement is essential in the implementation research itself. In terms of study design, we often use mixed methods approaches, including surveys complemented by multilevel stakeholder interviews or focus groups, to obtain a breadth and depth of understanding of contextual determinants and implementation outcomes.^{42,43} Given the lengthy timeline for traditional qualitative research, we have often incorporated rapid qualitative methods, designed to facilitate implementation science, and timely communication with community partners.^{44,45} Interview questions and surveys should be tailored to the focus community. Questions should preserve anonymity whenever possible because identification can be a deterrent to participation for marginalized populations, such as undocumented immigrants or LGBTQ+ populations. The language and cultural adaptation of the data collection instruments should follow evidence-informed practices consistent with the participants, such as for race measures that are often not reflective of the identities experienced by Latino/a/x individuals.⁴⁶ In terms of recruitment, we recommend the following tailored strategies we have used to ensure engagement of underserved populations, including

- snowball sampling or peer referrals, to reach individuals who may not be connected to health centers or research networks⁴⁷
- advertising through local CBOs, which are often trusted sources of information with a wide reach in local communities^{38,40}
- crowdsourcing (eg, social media contests) that offers a rapid and low cost way of soliciting input from community members, especially for youth and young adults who are a priority population for HIV interventions⁴⁸
- outreach by bilingual staff such as community health workers, which has been shown to be effective especially for recent immigrant populations^{40,47}
- adapting materials to be available in English and Spanish at an appropriate reading level to reduce barriers to participation.^{38,49}

By soliciting and synthesizing the input of community members while removing barriers to participation, research teams become well poised to design effective public health interventions.

Interventions to Expand Access to HIV Prevention and Care

Innovations in HIV prevention and care delivery are urgently needed to overcome barriers to traditional health care settings and expand access among Latino/a/x populations. Mobile health, telehealth, and social marketing interventions present opportunities for care expansion, because 91% of Latino/a/x individuals in the US own smartphones.⁵⁰ Informed by community engagement, our teams have piloted these interventions to promote PrEP uptake and virologic suppression among Latino/a/x populations.

- In the SaludFindr formative work in Atlanta, we explored the potential for a mobile health intervention to address barriers to PrEP among Latino/x SMM,

given high smartphone usage and the nonstigmatizing nature of private phone-based spaces.¹⁵ Qualitative interviews with Latino/x SMM showed that a mobile app could facilitate PrEP access by customizing a list of local PrEP-providing clinics known to provide free or low-cost PrEP care to Spanish-speaking Latino/a/x individuals. We thus developed the SaludFindr app that was found to be highly acceptable by the target audience.

- In a collaborative project between an academic medical center and Latino-focused CBOs in New York, we convened a community expert panel of CBO staff to delineate barriers to PrEP for Latino/x SMM and identify suitable implementation strategies. We developed a telehealth-based PrEP model that was shown to facilitate PrEP uptake by combining tailored outreach, conavigation through CBO and clinic navigators, and low-barrier strategies such as evening hours and use of Spanish-speaking providers.^{14,51}
- In the Chicago-based *PrEPárate* social marketing campaign, we used social media and dating app advertisements to promote an existing PrEP locator website and bilingual hotline.³⁸ A mixed methods evaluation showed that major strengths of the campaign included the colorful logo (designed by a local Latino designer) and the presence of local Latino/a/x LGBTQ+ influencers as campaign ambassadors. The *PrEPárate* pilot campaign was associated with increased PrEP awareness and use among Latino/a/x sexual and gender minority adults.⁵²
- In the CREEMOS study in Atlanta, we combined a Spanish-language social media campaign and peer navigation to use a multilevel approach to increasing awareness and access of sexual health services among Latino/x SMM. During the 3-month pilot study, we enrolled 70 Spanish-speaking Latino/x SMM, highlighting the population's interest in services and the effectiveness of language concordance and trusted peer navigators.

Our work also highlights the limits of technological outreach for many Latino/a/x populations. In Maryland, where there are many recently arrived migrants in both urban and rural areas, peer referrals and community health worker outreach have proven to be more effective in promoting HIV testing, PrEP, and COVID-19 services than a social media campaign alone.^{41,47} Thus, assessing local contexts and determining the most effective strategies for each population remain important.

CONCLUSIONS

Ending the HIV epidemic among Latino/a/x populations is fundamental to ending the HIV epidemic in the US and Puerto Rico.² In these lessons learned from our work in HIV implementation research, we highlight the importance of structural and social determinants of health, effective community-engaged research, and HIV interventions tailored to Latino/a/x populations. We recommend that HIV implementation researchers prioritize addressing structural factors over traditional cultural explanations for disparities, because an emphasis on Latino cultural norms as risk factors can be stigmatizing and can overshadow cultural strengths that can advance health equity.⁵³ Instead, HIV implementation researchers must take multilevel approaches grounded in community engagement to address the

structural and social drivers of HIV disparities. At the same time, policymakers and academic institutions must lead reform to facilitate community-engaged research, build the pipeline of Latino/a/x researchers and health professionals, and improve equity in health care delivery. It is only through collaboration across sectors and collective action that we can develop and scale effective, sustainable HIV interventions to advance the health of Latino/a/x populations.

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