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Journal

Journal of Immigrant and Minority Health, 21(2)

ISSN 1557-1912

Authors

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Publication Date

2019-04-01

DOI

10.1007/s10903-018-0753-2

Peer reviewed



HHS Public Access

J Immigr Minor Health. Author manuscript; available in PMC 2020 April 01.

Published in final edited form as:

Author manuscript

J Immigr Minor Health. 2019 April; 21(2): 332–345. doi:10.1007/s10903-018-0753-2.

From Theory to Application: A Description of Transnationalism in Culturally-Appropriate HIV Interventions of Outreach, Access, and Retention Among Latino/a Populations

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Abstract

Interventions aiming to improve access to and retention in HIV care are optimized when they are tailored to clients' needs. This paper describes an initiative of interventions implemented by ten demonstration sites using a transnational framework to tailor services for Mexicans and Puerto Ricans living with HIV. Transnationalism describes how immigrants (and their children) exist in their "receiving" place (e.g., continental U.S.) while simultaneously maintaining connections to their country or place of origin (e.g., Mexico). We describe interventions in terms of the strategies used, the theory informing design and the tailoring, and the integration of transnationalism. We

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Compliance with Ethical Standards

Conflict of interest The authors declare that they have no competing interests.

Author Contributions Author contributions to the study and the manuscript following the criteria set forth by International Committee of Medical Journal Editors: JAS and RAB shared first-author responsibilities. Both contributed to the design of four of the interventions that are described in this multisite initiative as research liaisons (i.e., provided technical assistance in the acquisition of data and application of theory). Additionally, both directed the content and writing of all manuscript sections. JX was the project officer of the funding agency that proposed the concept behind this multisite initiative (along with the 8th author), and contributed to the writing of the introduction. AM was also a research liaison that contributed to the design of two of the site's interventions that are described in this study, and contributed to the writing of the introduction and discussion sections. LGG was the project coordinator for this multisite initiative and organized the acquisition of all data collected, as well as contributing to the writing of sections describing the demonstration sites in this manuscript. She provided substantial intellectual contributions through her writing and revisions to the co-authors. SZ-H was also a research liaison that contributed to the design of two of the site's interventions that are described in this study, and contributed to the writing of sections that described the application of theory to each intervention. CERD was a consultant on this project and contributed the design of the interventions that focused on recruitment and retention of participants Puerto Rican participants. He made substantial intellectual contributions to the overall manuscript through revisions and edits. AC is the Branch Chief of the funding agency that originally proposed the concept behind this multisite initiative (along with the third author). He contributing to the writing of the introduction and discussion sections of the manuscript. JM is the principal investigator of the grant that supported this manuscript and director of the UCSF Evaluation and Technical Assistance Center, which supervised all research liaisons that are listed as co-authors on this manuscript. As senior author, she made substantial intellectual contributions through writing, editing and providing feedback on each section of the manuscript.

argue how applying the transnational framework may improve the quality and effectiveness of services in response to the initiative's overall goal, which is to produce innovative, robust, evidence-informed strategies that go beyond traditional tailoring approaches for HIV interventions with Latino/as populations.

Keywords

HIV; Latino; Transnationalism; Health disparities; Implementation science; Health service

Background

HIV health outcomes among Latino/a populations in the U.S. have improved as a whole, but new approaches are needed to sustain these improvements and meet national targets [1–4]. Currently, Latino/as account for nearly 25% of new annual HIV diagnoses, despite making up only 17% of the population, with HIV incidence rates remaining three times higher for both Latino/a men and women than non-Latino White men and women [5, 6]. In recent years, approximately 60% of Latino/as diagnosed with HIV in the U.S. were born outside the continental U.S. (primarily in Mexico and Puerto Rico) [5, 6]. As a whole, U.S.-born and foreign-born Latino/as have not reached national targets along the HIV Care Continuum (Fig. 1) [7]. For example, 48% of Latino/as are virally suppressed (compared to 57% of non-Latino Whites), while the national goal is > 80% [8].

Challenges in Reducing HIV Health Disparities

Existing interventions and programs for HIV prevention and treatment—even if culturally tailored—have tended to treat Latinos/as as one homogenous group. However, Latino/a culture and identity vary widely within and between countries [9, 10]. In a national Pew Research study, most Latino/as preferred to identify with their country of origin (e.g., Mexican, Colombian, Bolivian), rather than the label of Hispanic/Latino [11]. And historically in health disparity research, positive and negative health behaviors (e.g., social support, condom use, poor diet, drug use) were often framed as being driven by, or a consequence of, Latino/a "cultural elements" (e.g., *fatalismo*—belief that outcomes [health] are predetermined and inevitable) [12–16]. This framing may be problematic because at the heart of many cultural elements are factors that affect all people, such as access to care, stigma, health literacy, mental health disorders, among others [17–22]. Furthermore, any relationship between a cultural factor and a health outcome often lacks rigorous and empirically-derived data to support it, or the interpretation that specific cultural elements (e.g., *familismo*) are more important to Latino/as than other ethnic groups [23, 24].

Criticisms of cultural elements are not to imply that they are non-existent or unimportant. A notable literature exists of interventions that have integrated cultural elements into them [9]. For example, curriculum-based interventions for HIV prevention have designed the relationship and communication between a health educator and participant to be a fluid and a respectful interpersonal style (*respeto* and *personalismo*), while harnessing the importance of family (*familismo*) or gender roles (*marianismo*) to motivate behavior change [25–27]. But focusing exclusively on cultural elements limits our understanding of what drives HIV

health disparities given the diversity and fluidity of many segments of Latino/a populations [23, 24, 28]. Thus, a transnational framework may be better suited to capture the experiences of current Latino/a populations [23].

Objective

This paper describes a 5-year, multisite transnational initiative to address the aforementioned challenges to reducing HIV health disparities. The Health Resources and Services Administration (HRSA) Special Projects of National Significance (SPNS) launched this initiative in 2013. Transnationalism (described below) is a concept to describe how immigrants maintain connections to their country of origin while living in a new country.

The goal of the initiative was to select 10 demonstration sites across the U.S. that would identify and re-engage an aggregate total of 1000 Latino/as who were newly diagnosed, or who are HIV-positive and had fallen out of care during the study period (2013–2018). Each demonstration site selected and tailored their intervention exclusively for Mexicans (or Mexican Americans) or Puerto Ricans, which was guided by the transnational framework—a framework that recognizes, acknowledges, and builds upon the connections that Latino/as use to maintain ties to their countries/places of origin while living in the continental U.S. [24]. A research center from the University of California, San Francisco assigned selected members with relevant expertise to provide technical assistance to each site on the application of transnationalism. Separate members at this research center are conducting a rigorous multi-site evaluation of outcomes along the HIV Care Continuum (identification and linkage through viral suppression) and costs of these ten interventions (details below in evaluation plan).

Conceptual Framework

Transnationalism in the field of anthropology emerged in the 1990s with the express purpose of describing the "duality" of the immigrant experience [29]. This duality was the observation that many immigrants have allegiance and association with their "receiving" country and, simultaneously, their country/place of origin (from here forward, "place" will be used interchangeably with "country" of origin) [30]. Instead of looking at intersecting cultures as a uni- or bidirectional acculturation process, transnationalism describes a dual process of adapting to a receiving place *and* maintaining one's culture [29–31]. As a result, health and behavior may be influenced by more than one culture and setting [31].

Transnational "practices" are the informal and formal ways immigrants maintain ties to their place of origin [31–34], irrespective of the reason for migration (e.g., economic downturn, civil war, or climatic disasters). Practices can be direct (i.e., willfully traveling across borders to visit family) or indirect (shopping at *Mercados*/markets that carry products found in their place of origin) means of maintaining a connection to one's place of origin [32]. Prior research suggests that most immigrants favor specific practices, and that the frequency (how often) and intensity (how much) of these practices decrease with time and subsequent generations (e.g., international phone calls to family in Mexico) [35].

The prevailing transnational practices observed in the literature were used in this initiative: (1) communication, (2) travel, (3) sending/receiving of economic and social remittances, and (4) civic and political engagement [24, 32–34]. For example, free or low-cost email, text-messaging and video chat services helps facilitate communication among family members, friends and associates, while traveling to and from a place of origin (to the degree possible) also facilitates the maintenance of social and familial ties [36]. Another common practice is the sending of economic remittances, which includes sending money via a financial service company to cover family members' expenses; funding small businesses; or supporting public works and social service projects in their place of origin [32]. In 2013, economic remittances to Mexico from the U.S. were estimated to be \$22 billion [37]. Whether or not this practice impacts a person's ability to pay for their healthcare expenses is not understood [38].

Other remittances are social in nature and include the norms, practices, and identities that flow between a receiving country and a place of origin [39]. For example, gender roles (i.e. need for immigrant women to work) or experiences with mental health services in the U.S. may flow back to the place of origin and influence the gender roles or health-seeking behavior of those who never leave. And least common is the practice of civic and political engagement in a place of origin despite living elsewhere, which involves being a member of a political party, campaigning in two countries, or engaging in protest movements [31, 34].

What influences Transnational Practices and Why They are Relevant for This Initiative?

Transnationalism in health research has grown in recent years. Several studies and a review paper show that maintaining cross-border social ties, traveling across borders, and frequent communication with family in their places of origin is associated with both positive and adverse mental health, sexual risk, and healthcare seeking behavior [40–45]. However, the exact mechanisms of effect have not been explicated, nor has there been a comprehensive test of transnational practices on HIV care continuum outcomes.

Not surprisingly, Latino/as that engage in a high number of transnational practices are those who have lived in the U.S. for the shortest amount of time [35]. But being born in the continental U.S. does not exclude a person from engaging in transnational practices, as the same children who have never visited their parent's place of birth are frequently raised in households where their cultural traditions, beliefs, and values are present on a daily basis [36]. For the current initiative, we are collecting data on the transnational practices that participants are engaging in directly (irrespective of their family's level of transnationalism), and testing the relationships between these transnational practices and HIV care continuum outcomes, as defined by the HRSA HIV/AIDS Bureau performance measures [46].

Transnationalism and Cultural Elements: What are the Differences, What are the Intersections, and Why Does is it Matter?

First, not all U.S.-born and foreign-born Latino/as live transnational lives, and transnational practices do vary from one person to another (e.g., frequency and amount of economic remittances sent home) [41, 45]. Second, the presence of cultural elements (e.g., *machismo* as a barrier to reporting distress) in intervention research may have a broad influence on a

person's healthcare-seeking behavior [47, 48]; thus, transnationalism practices and cultural elements represent two distinct concepts whose relationship is not fully understood [28]. Thus, collecting data on both concepts may provide key insights for clinical-health research.

The primary goals of this initiative are improvements along the HIV care continuum. We operationally defined transnationalism as the practices that immigrants (or their children) engage in to remain connected to their place of origin, which include communication, travel, social and economic remittances, or civic engagement [29, 33]. Cultural elements were defined as the values, beliefs, and attitudes held by Latino society and culture [48].

Demonstration Sites

Described in Table 1 are ten sites across the U.S. that are currently implementing multicomponent HIV interventions that include community engagement, stigma reduction, and linkage to care and healthcare navigation. Six sites tailored intervention activities to individuals of Mexican descent and four projects tailored activities for individuals of Puerto Rican origin. Each site aimed to newly link and/or re-engage 100 Latino/as in HIV care (1000 in total). Table 1 also contains information about the interventions and strategies used by sites to integrate transnationalism into their interventions.

Procedures

Overview of Tailoring and Applying a Transnational Framework—Tailoring is the process of modifying "key characteristics (e.g., metaphors, content, context, goals, delivery) ...without competing with or contradicting core elements, theory or internal logic of the intervention" [49]. Each intervention did vary, but for feasibility and acceptability, each site integrated transnationalism and cultural elements in a way that was most congruent with their organization's capacity and target population [50]. For example, to identify participants using venue-based outreach, sites hosted informational/educational events at embassies, churches with Spanish services, and bars that hosted Latin nights. Outreach materials drew on cultural references of national pride, such as the Taíno sun from Puerto Rico, or the Mexican or Puerto Rican flag, and social media outreach focused on websites geared toward Puerto Rican or Mexican clientele, and used colloquial language specific to areas of origin. Advertisements focused on bodegas, *botánicas* or parks hosting Mexican *futbol* matches.

Each site integrated transnationalism into their interventions through personnel/ interventionists who were dedicated to this initiative exclusively (e.g., peer educators, case managers, social workers). All interventionists systematically documented the transnational practices of their participants. To aid in the collection of transnational practices, the evaluation team at [UNIVERSITY NAME BLINDED] developed a Transnational Practice Checklist – a tool that could be used by interventionist to estimate the level of transnationalism of each participant (see Appendix). The Institutional Review Board at the [UNIVERSITY NAME BLINDED] approved the initiative, as did each one of the site's local IRBs.

For individual-level interventions, interventionists conducted structured assessments of transnational practices. Interventionists then inquired into a participant's migration story and

their family history, and then adapted these histories into their intervention content to account for the range of migration experiences. For example, if a participant frequently video chats with their family in Mexico City, the interventionist would explore issues of HIV disclosure and the presence of social support. Interventionists would also explore alternative medicine use if reported, and how they are viewed in relation to treatment in the U.S. [51]. If a participant travels to and from the U.S. and Mexico or Puerto Rico, the interventionist addresses implications for treatment adherence and emergency care resources while abroad. Although transnationalism was applied differentially in each site, *all sites systematically measured the level of transnational practices in participant's lives, evaluated its role in HIV care, and ensured that interventions leveraged the benefits of it in terms of HIV management.*

To draw on cultural elements, many sites convened focus groups to review draft research materials. With Mexicans at one site, they found that participants responded well to gendered messages that drew on *marianismo* and *machismo*, which included tag lines such as "Hasta la más decente podría tener VIH" (Even the most decent woman could have HIV) or "Hasta el más macho podría tener VIH" (even the most macho man could have HIV). Other messages encouraged men to take care of themselves so they could care for their family (*machismo* and *familismo*), rather than using an individually-driven message to care for oneself for one's own sake.

Analysis

A Brief Overview of the Multi-site Evaluation

The outcomes are improvements across the HIV Care Continuum from baseline (2015) through the final follow-up period (2018), on 6-month intervals (8 waves). Qualitative and quantitative data are being collected to evaluate the effectiveness of these interventions between sites, which is based on measured common factors of patient characteristics, intervention exposure (type and amount of service received), individual, interpersonal, and cultural and community-level barriers and facilitators to care. The HIV Care Continuum outcomes are defined by the HRSA HIV/AIDS Bureau Performance Measure (Table 2) [46]. The goal is to conduct a rigorous and standardized aggregate evaluation across all ten sites, as well as comparative quantitative and qualitative analysis of the sites using their common factors.

The revised Behavioral Model of Health Services Use guides the evaluation plan [52], which posits that health care seeking behaviors are influenced by predisposing factors (e.g., static characteristics, social structure and health beliefs), enabling factors (e.g., facilitators, personal, family and community resources), and perceived need of services. Table 2 describes each outcome, predictor (e.g., transnational practices, level of machismo), and moderating or mediating variables (e.g., acculturation to U.S.). Data on these factors will be compared between sites to help interpret outcomes and provide a fuller picture of the impact of the interventions.

We are capturing transnational practices as defined by how often and/or how much participants communicate, send social and economic remittances, travel and engage in

political activity in their place of origin. Additionally, we are capturing the level of cultural elements among Latino/as of Mexican and Puerto Rican origin. For the quantitative evaluation, sites collect client survey data (across numerous standardized measures) at enrollment and every 6 months until the end of the project. A medical chart abstraction is also done with both retrospective data (outcomes prior to baseline), and prospective data (outcomes collected every 6 months until the end of the project). For intervention exposure, data are collected on an ongoing basis and submitted every 6 months from baseline, and includes costs so that the cost-effectiveness of integrating transnationalism into existing clinic operations can be discerned.

For the qualitative evaluation, key informant interviews are conducted with select program/ intervention staff, participants, and medical providers prior to, and approximately 3 years after baseline intervention activities. We are also conducting a secondary data review of background materials (e.g., site intervention proposals, client charts, intervention notes etc.) and observations of programmatic service delivery, interactions during all-sites meetings, and the clinical environment during annual site visits by the evaluation team.

Discussion

We describe a novel application and evaluation of transnationalism in ten interventions across the U.S. All interventions sought to identify and link in HIV care Latino/as of Mexican and Puerto Rican origin through the systematic assessment of a participant's level of transnationalism while adapting in their place of settlement (i.e., California, Texas, Illinois, New York, North Carolina) [30, 31]. Although transnationalism and its relationship to migration, acculturation, and culture are complex, the initiative is seeking to answer how transnationalism may affect HIV Care Continuum outcomes, especially with recognition that most newly diagnosed Latino/as were born outside the continental U.S. [24].

The impact of a transnational approach on HIV care continuums is to be determined, but there is clear evidence on the benefits of tailoring [53]. Further, while HIV health disparities have narrowed, the application of transnationalism may help answer the call to "sustain" or ensure "durable" viral suppression, which are outcomes held and measured overtime [54]. The ability of Latino/as to "sustain" retention in HIV care and viral suppression will be critical to many U.S. efforts to eliminate disparities. And indirectly, hypothesized positive outcomes of this transnational initiative may have benefits internationally. There is evidence to show that the social networks (i.e., friends, family, sexual partners) of immigrants seek out health-related advice from family who have health care experiences in a new (receiving) country, as concepts and experiences flow both ways [55].

New Contributions to the Literature

Strengths of this initiative are that it encouraged and supported innovation in how transnationalism was applied to each intervention, and how it builds on an emerging literature [40–45]. And as part of the evaluation, transnationalism, cultural elements, and their interacting effect on HIV Care Continuum outcomes are being assessed.

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The use of transnationalism for optimizing medical care interactions has been documented [56–58], but may be especially useful in HIV care given that it can help providers and clinic staff understand an immigrant's points of reference (e.g., influences on etiology of HIV and wellness), social space (e.g., safe spaces and community settings), lifestyle (e.g., views, perspectives), HIV + identity (i.e., culture, norms, ethnicity) and practices (e.g., cross-border travel, social and economic remittances) [36, 39]. Additionally, to address competing priorities, our follow-up data may be able to show how events that occurred outside the continental U.S. (e.g., Hurricane Maria in Puerto Rico, earthquake in Mexico City in 2017) affect migration patterns and health care utilization of our participants [60]. That is, research findings must be contextualized as transnational events may impact participation and survey responses. Although we focused on Latino/as of Mexican or Puerto Rican origin, there may be lessons that can be disseminated to other subgroups. However, we encourage careful application of findings to other Latino/a groups so as not to infer all Latino/as are one homogenous group.

Conclusion

Latino/as with HIV can be best supported with services that are tailored to their unique needs. This initiative is supporting innovation through recognition of transnationalism and how it applies to HIV care engagement among Mexican/Mexican Americans and Puerto Ricans living with HIV. Only through evaluation of immigrant lives and transnational experiences can we better understand and address the factors contributing to optimal HIV care.

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Appendix



A PRACTICAL GUIDE FOR IMPLEMENTING AND DOC-UMENTING THE INTEGRATION OF *TRANSNATIONALISM* INTO INTERVENTIONS OF OUTREACH, ACCESS AND RETENTION FOR MEXICAN AND PUERTO RICAN HIV-POSITIVE POPULATIONS

TRANSNATIONAL PROFILE CHECKLIST*

Instructions: Please use this checklist to informally assess how relevant these issues may be to the client. This information is to be provided to the interventionist (i.e., group leader, peer navigator, promotora, etc...) so that it can be integrated and used in the intervention. This checklist is to be used in an exploratory session, which offers a general sense of the individual's personal transmitional experiences, so as to begin working from the same narrative. This information is key to understand how (if at all) the transmitional experience is affecting their HIVC eree.

Transnational Element	Response	Interventionist Comments
What is your cultural or country-specific point of ref- erence? 1. Where were you born?		
Ethnic Identifier: How do you prefer to identify your- self? (it can be in more than one way). Mexican, Puer- to Rican, Latino, Chicano, Hispanic, Nuyorican, etc(use this information when completing the fol- lowing questions).		
Does being (ethnic identifier, e.g., Mex- ican) make it easier or harder to get, follow, ask ques- tions about your HIV medical care?		
What are some places that you frequently visit that remind you of your culture or country of origin or are frequented by other(ethnic identifi- er)?		
How (if in anyway) does being from		
 how you think about your health? how you think about your HIV status? how you think about your medical care? (Ideas) 		
 the actions you make about your health? the actions you make about your HIV? the actions you make about your medical care? (Norms) 		
Does your decision to send money back home inter- fere or help your		
Do you travel to and from your home country? Why or Why Not? Now, how do you think this helps or hurts your medical care?		
How does communicating with your family back		

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home motivate or interfere with your medical care for HIV?	
How is the health care system here in the U.S. differ- ent from your place of origin?	
Do you think the experience of being from outside the continental U.S./another country and traveling to the U.S. helps or makes it harder for you and your HIV care?	
Do you think your HIV care is the same or different for people who are from? Can you ex- plain?	

(To be completed by intervention staff)

How would you summarize the client's transnational profile in your own words:

How does their transnational profile affect their HIV care (at any level):

*This checklist was for study purposes only.

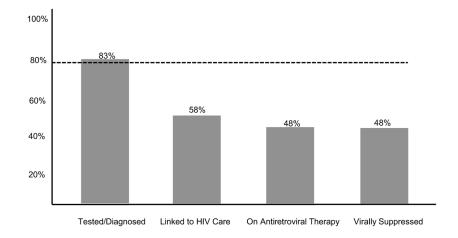


Fig. 1.

The HIV Care Continuum for Latino/as living with HIV in the U.S. Estimates are aggregates from the CDC surveillance data [8]. Dashed line represents targets from the National HIV/AIDS Strategy report [7]

ption of HIV interventions	Ta Description of HIV interventions and integration of transnationalism	Table 1	
L Demonstration site	Intervention strategies		Theory or model informing interventions
	Community engagement	Linkage and retention in HIV care	
Site: AIDS Project of Los Angeles, Los Angeles, CA Project title: Fuerza Positiva Population: MSM of Mexican origin	 Venue-based outreach In-reach Community partnerships Social marketing Print media Social media 	 Individual-level strength-based case management "Hermanos" group level support' skills building 	Social action theory Information motivation behavioral skills Social cognitive theory
Tailoring and integration of transnationalism Iconic Mexic of young Latino MSM, were used in marketing materials. transnationalism, transnational identity and what it means	Tailoring and integration of transnationalism [conic Mexican symbols were used to identify the intervention (e.g., the Mexican flag, the term "Hecho en Mexico"), along with images of young Latino MSM, were used in marketing materials. The project title "Fuerza Positiva" only appeared in Spanish. All staff were fully bilingual and bicultural. The <i>Fuerza Positiva</i> program explores transnationalism, transnational identity and what it means to be an immigrant in their <i>Hermanos</i> support group	ervention (e.g., the Mexican flag, the term "Hecho er appeared in Spanish. All staff were fully bilingual an upport group	n Mexico—Made in Mexico"), along with images id bicultural. The <i>Fuerza Positiva</i> program explores
Site: Bienestar, Los Angeles, CA Project title: Proyecto Vida (life project) Population: MSM of Mexican origin	Clinic presentations and venue-based outreach	Linkage coordination and six session individual- level intervention conducted by linkage coordinators	Antiretroviral treatment and access to service (ARTAS) and motivational interviewing
Tailoring and integration of transnationalism Mexican cult during first encounters. All staff were fully bilingual and b provides information that is used by the patient navigators	Tailoring and integration of transnationalism Mexican cultural values were used in intervention messaging (e.g., personalismo, machismo, tamilismo) to build rapport and support patient navigation during first encounters. All staff were fully bilingual and bicultural. Bienestar uses the transnational checklist to assess each clients' level of transnationalism and transnational identity. The checklist provides information that is used by the patient navigators in their interactions with participants	ssaging (e.g., <i>personalismo, machismo, familismo</i>) t il checklist to assess each clients' level of transnatior	to build rapport and support patient navigation nalism and transnational identity. The checklist
Site: AIDS Arms, Dallas, TX Project title: Viviendo Valiente (Living Brave) Population: men/women (including transgender women) of Mexican origin	 Venue-based outreach Community engagement through group-level health education courses 	Individual-level intervention provides linkage services, patient navigation and individual sessions using strengths-based counseling and motivational interviewing using an ARTAS structure	ARTAS-based on the strengths-based case management model to encourage clients to identify and use personal strengths and goals setting
<i>Tailoring and integration of transnationalism</i> The developed a local transnational and cultural assess cultural elements that most impact their HIV care	Tailoring and integration of transnationalism The Promotores (lay health educator) were bilingual and bicultural, which aided in a shared cultural understanding with participants. The site team developed a local transnational and cultural assessment tool, which is a worksheet completed during one-on-one sessions to engage participants and stimulate conversation around transnational and cultural elements that most impact their HIV care	and bicultural, which aided in a shared cultural under ig one-on-one sessions to engage participants and sti	rstanding with participants. The site team inulate conversation around transnational and
Site: AIDS Foundation of Chicago, Chicago, IL Project title: Salud y Orgullo Mexicano (health and pride) Population: MSM of Mexican origin	Culturally-appropriate social marketing and HIV stigma reduction English and Spanish Posters and radio advertisement placed in Mexican neighborhoods advertisement placed in Mexican <i>loterta</i> game Educational information placed on social media and websites targeting gay men for HIV testing and project enrollment	Navigational services and 5 individual educational and empowering sessions conducted by peer <i>promotores</i> (navigators) to link and/or retain participants in care Sessions: HIV 101, medication readiness and adherence, disclosure, HIV prevention and adhressing individual and structural barriers to care, which included maintaining care when in Mexico	ARTAS, People to people training
Tailoring and integration of transnationalism The project i care. The project also explored how participants' identitie of "healthy," and safe sex norms) both in Mexico and the	Tailoring and integration of transnationalism The project integrated transnationalism by assessing participants' level of transnational identity and whether cross-border practices may influence their HIV care. The project also explored how participants' identities, practices, and engagement in HIV care are shaped by cultural points of reference (e.g., participant thoughts on etiology of disease, definitions of "healthy," and safe sex norms) both in Mexico and the United States	participants' level of transnational identity and wheth are shaped by cultural points of reference (e.g., part	her cross-border practices may influence their HIV licipant thoughts on etiology of disease, definitions
Site: Core Center, Chicago, IL Project title: Proyecto Promover (promote project) Population: men/women (including transgender women) of Mexican origin	1 Social marketing, sex and health education, and HIV stigma reduction group and individual presentations predominately in Spanish at community venues in Mexican neighborhoods	Navigational services and five culturally-tailored educational sessions or <i>charlas</i> conducted by peer <i>promotores</i> (navigators) to link and/or retain participants in care	Socio-ecological model, theory of gender and power, motivational interviewing

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Demonstration site	Intervention strategies	Theory or model informing interventions
	Community engagement	Linkage and retention in HIV care
	2 HIV testing and project promotion through posters and palm cards	
Tailoring and integration of transnationalism To identify as well as non-gendered images of older and younger Lat health experiences to identify potential influences on HIN behaviors, human rights, personal barriers, disclosure, so	Tailoring and integration of transnationalism To identify Latino/as of Mexican origin, advertisements included postca as well as non-gendered images of older and younger Latino/as). Once recruited, <i>charlas</i> (conversations) with peer na health experiences to identify potential influences on HIV care engagement. Additionally, each session aimed to unde behaviors, human rights, personal barriers, disclosure, social support, effective communication, relationships and sex	Tailoring and integration of transnationalism To identify Latino/as of Mexican origin, advertisements included postcards and posters with Mexican cultural imagery (e.g., <i>luchadores</i> —Mexican wrestlers, as well as non-gendered images of older and younger Latino/as). Once recruited, <i>charlas</i> (conversations) with peer navigation captured and used participant migration stories, as well as transnational and health experiences to identify potential influences on HIV care engagement. Additionally, each session aimed to understand the influence of cultural elements that may influence health seeking behaviors, human rights, personal barriers, disclosure, social support, effective communication, relationships and sex
Site: Gay Men's Health Crisis, New York City, NY Project title: LINK II Population: MSM of Puerto Rican origin	 Outreach to other service providers via one-on-one meetings to educate them about the unique concerns of participants 	Social network strategy among high risk or HIV + Social networking framework—peer leaders Puerto Rican MSM approach Goal is to leverage trust to begin conversations about HIV testing and care
	2 Promotion at community events including culturally tailored cards and fliers	
<i>Tailoring and integration of transnationalis</i> materials mentioned anything LGBT or ab- LINK II, peer navigators assessed a person an affinity and a bond with the clients	<i>m</i> Intervention advertisements included the Puerto Ric out HIV; and staff that work directly with clients were 's level of transnationalism and how practices might p	Tailoring and integration of transnationalism Intervention advertisements included the Puerto Rican flag over male faces; to respect people's privacy and appeal to a more 'down low' masculinity, no materials mentioned anything LGBT or about HIV; and staff that work directly with clients were matched to the population (Puerto Rican MSM, Spanish speakers). Once participants were enrolled into LINK II, peer navigators assessed a person's level of transnationalism and how practices might promote or hinder health seeking behaviors, with each navigator using their common background to build an affinity and a bond with the clients
Site: Harlem United, New York, NY Project title: Cúrate (Heal Yourself) Population: men/women (including transgender women) of Puerto Rican origin	Targeted community outreach via peer health promoters to promote the project and educate about HIV prevention	One-on-one navigation provided to support linkage and retention in care, and counseling. Social network recruitment leverages relationships of health promoters to identify people in friend and family networks living with HIV but not in care
Tailoring and integration of transnationalism Focus group (heroin as <i>la cura</i>) and healing one's self; logo draws on transnationalism, the Cúrate program included a chapter outreach curriculum (e.g., how economy on "the Island" internal checklist created. This transnational information	<i>m</i> Focus groups with Puerto Rican men and women guogo draws on the Puerto Rican frog coqui; outreach m ded a chapter on transnationalism and health (definitic a "the Island" may affect stress of participants living in a linformation was used in future check-ins, along with	Tailoring and integration of transnationalism Focus groups with Puerto Rican men and women guided recruitment efforts; the project title Cúrate had both the connotations of healing from drug-sickness (heroin as <i>la cura</i>) and healing one's self; logo draws on the Puerto Rican frog coqui; outreach materials all in Spanish were located in Puerto Rican neighborhoods and service spaces. Regarding transnationalism, the Cúrate program included a chapter on transnationalism and health (definitions and example scenarios of how it might come into play in the patient navigation) as part of their peeroutreach curriculum (e.g., how economy on "the Island" may affect stress of participants living in New York). For patient navigation, the navigator assessed the level of transnationalism using the internal checklist created. This transnational information was used in future check-ins, along with strategies to engage cultural elements such as <i>familismo</i> and <i>personalism</i> .
Site: Rikers, New York City, NY Project title: warm transitions for Puerto Ricans after encarceration Population: currently incarcerated men and women (including transgender women) of Puerto Rican origin	Providers delivering care in jail and the community are trained to provide culturally appropriate care to Puerto Ricans in jail and leaving jail	Puerto Rican Care coordinators link HIV-infected – individuals to care on the outside when they are scheduled for release
Tailoring and integration of transnationalis the community after incarceration. The "W supportive services to Puerto Rican HIV pi transitional care coordination to communit	Tailoring and integration of transnationalism Correctional Health Services, a unit of New York C the community after incarceration. The "Warm Transitions for Puerto Ricans after Incarceration" supportive services to Puerto Rican HIV patients in jail and in the community. Additionally, Latit transitional care coordination to community-based HIV care and other support services	Tailoring and integration of transnationalism Correctional Health Services, a unit of New York City Health + Hospitals, provides transitional care coordination services for people with HIV from jail to the community after incarceration. The "Warm Transitions for Puerto Ricans after Incarceration" delivers system wide cultural-competency and transnationalism trainings to providers of health and supportive services to Puerto Rican HIV patients in jail and in the community. Additionally, Latino/a patient care coordinators work one-on-one with Puerto Ricans patients after their release to provide transitional care coordination to community-based HIV care and other support services
Site: Philadelphia Fight, Philadelphia, PA Project title: Clínica Bienestar (wellness clinic) Population: men/women (including transgender women) of Puerto Rican origin	Targeted community outreach by the outreach specialist, in-reach conducted at prevention point, and community collaboration via quarterly meetings with stakeholders to build knowledge about the transational model and its potential benefits to the target population	Linkage and patient navigation services are provided by the outreach specialist and care coordinators. Co-location of HIV primary care, Hepatitis C treatment, and substance abuse treatment, as well as syringe exchange and

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Demonstration site	Intervention	on strategies		Theory or	Theory or model informing interventions
	Community	y engagement	Linkage and retention in HIV care		
			extensive case management services, aid in the engagement and retention of clients in HIV care		
Tailoring and integration of transnationalism The project titled Clinica Bienestar an AIDS-service organization, and prevention point Philadelphita, a multi-service Ricans who are high risk for HIV and active injection drug users. At the site, the transnationalism, case managers identified transnational barriers associated with left Puerto Rico and reside in high drug and commercial sex work neighborhood	sm The project tion point Phil ve injection dr I transnational d commercial	t itled Clínica Bienestar was the establish adelphia, a multi-service public health or ug users. At the site, the team provides H barriers associated with navigating the he sex work neighborhood	Tailoring and integration of transnationalism The project titled Clínica Bienestar was the establishing of an HIV primary care clinic in a needle exchange program. The merging of Philadelphia FIGHT, an AIDS-service organization, and prevention point Philadelphia, a multi-service public health organization focused on harm reduction, served as the intervention as it tests integrated services for Puerto Ricans who are high risk for HIV and active injection drug users. At the site, the team provides HIV testing, primary care, case management, education, referrals and family connection. Regarding transnationalism, case management, education, referrals and family connection. Regarding transnationalism, case managers identified transnational barriers associated with navigating the healthcare and drug treatment setting, especially for limited-English proficient men and women who have left Puerto Rico and reside in high drug and commercial sex work neighborhood	program. Tl ervention as referrals and red-English p	he merging of Philadelphia FIGHT, it tests integrated services for Puerto family connection. Regarding proficient men and women who have
Site: University of North Carolina, Chapel Hill, NC Project title: Enlaces por la Salud	1	Webinars for providers on culturally- competent HIV care for Mexican Transgender women	Six-session, strengths based intervention, delivered over 6 months Each session has a set curriculum and is provided	7 7	Migratory process framework ARTAS with motivational
(Linked/together for health) Population: men/women (including transgender women) of Mexican origin	19	Community outreach to educate about HIV at tabling of public events	one-on-one, for about an hour. Personal health navigators administer sessions in private setting		
	£	Program promotion through Spanish language materials that use culturally tailored images and references			
Tailoring and integration of transnationalism To identify a transnationalism may influence health and well-being, and foundation from which the patient health navigator could	<i>sm</i> To identify I well-being, a navigator coul	areas of client's life related to transnationalism and the presence of cultural nd migration histories that may impact their current life situation and engage d explore the impact of cross-cultural influences upon health and well-being	Tailoring and integration of transnationalism. To identify areas of client's life related to transnationalism and the presence of cultural elements, each session assessed and covered areas where transnationalism may influence health and well-being, and migration histories that may impact their current life situation and engagement in HIV care. The transnational framework provided a foundation from which the patient health navigator could explore the impact of cross-cultural influences upon health and well-being	on assessed he transnatio	and covered areas where onal framework provided a
MSM men who have sex with men					

USM men who have sex with men

ARTAS Antiretroviral treatment and access to services [59]

Category	Type of variable	Measures	Methods
HIV care continuum	Outcome		
Identification	Outcome	HIV testing; HIV test results	HIV testing forms, patient survey
Engagement	Outcome	Time from diagnosis to entry into care, defined as first routine HIV medical care visit within 3 months	HIV testing forms, medical chart, patient survey
Retention	Outcome	Appropriate visit frequency; defined as at least one HIV medical visit in each 6-month period of the 24- month period, with a minimum of 60 days between the first medical visit in the prior 6-month period and the last medical visit in the subsequent 6-month period	Medical chart, patient survey
Treatment	Outcome	Appropriate prescription of antiretroviral therapy (ART)	Medical chart, patient survey
Adherence to ART	Outcome	Self-reported ART adherence	Medical chart, patient survey
Viral suppression	Outcome	Viral load data from local clinic laboratories	Medical chart, patient survey
Additional outcomes			
Biomedical health	Outcome	Emergency room utilization, hospitalization, mortality	Medical chart, patient survey (ER utilization, hospitalization)
Support services	Outcome/mediator	Mental health treatment, substance abuse treatment	Medical chart, intervention exposure, patient survey
Intervention and client characteristics	Predictor/moderator		
Intervention exposure	Exposure	Content/type of intervention; time since initiation of intervention; intervention exposure (dose)	Intervention exposure, patient survey
Client characteristics	Moderators	Age; gender identity; sex; sexual orientation; place of birth; place of origin	Patient survey
Barriers and facilitators			
Stigma	Mediator	Internalized, felt, enacted HIV stigma, stigma related to homophobia, transphobia, racism	Patient survey
Individual: Ethnic, cultural, acculturation, transnationalism	Mediator	Length of time in US; fluency in English; migration; transnational travel; country or origin; gender norms and beliefs including machismo, marianismo; health seeking behaviors; faith tradition; preference for curanderos/as, travel and communication across borders, sending and receiving of social and economic remittances, political engagement in country of origin	Patient survey
Other individual	Mediator/outcome	Financial resources; employment status; insurance status; distance to health and service programs; housing status; social support; family support; importance of religion; mental health; substance abuse; patient education needs	Patient survey
Other interpersonal	Mediator/outcome	Provider-patient communication; provider cultural competencies; clinical care competencies; domestic violence	Patient survey
Other community/societal	Mediator/outcome	Discrimination; violence; social marginalization; social and political power; immigration experience;	Patient survey

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Table 2