Title: Promoting Viral Suppression Among Transgender Women Living With HIV in Santo Domingo

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Clinical Trial Protocol

Piloting a Multilevel Intervention to Promote Viral Suppression Among Transgender Women Living with HIV in Santo Domingo

Principal Investigator: Dr. Clare Barrington, PhD, University of North Carolina at Chapel Hill

Sponsor/Collaborators: University of North Carolina, The George Washington University, Instituto Dermatológico y Cirugía de Piel (IDCP), National Institute of Mental Health

1. Administrative Information

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2. Background and Rationale

Transgender (trans) women across the globe experience a disproportionate burden of HIV with an estimated global HIV prevalence of 19%.[1,2] In Latin America and the Caribbean, HIV prevalence among trans women is estimated between 18% and 38%, magnitudes of power higher than cisgender adult prevalence.[3,4] Trans women also experience worse HIV care and treatment outcomes than cisgender adults, including lower rates of viral suppression.[5-11] Despite the implications of this for individual and population-level health, few interventions address the multiple social determinants of HIV outcomes among trans women.[4, 7, 12-14]

Stigma is a key social determinant of HIV outcomes.[14,15] Trans women experience intersectional stigma due gender identity, HIV status, and sex work.[15,16] This intersectional stigma occurs in several forms: internalized stigma in the form of endorsing or applying negative beliefs; anticipated stigma in the form of fear that you will be discriminated or mistreated due to your identity; and enacted stigma in the form of actual mistreatment, exclusion, and discrimination.[17-19] These multiple types and forms of stigma can negatively affect health among trans women, including HIV care and treatment outcomes.[15, 20-22] Multilevel responses are needed to improve HIV outcomes among trans women by simultaneously and synergistically addressing individual, provider, and community dynamics.

3. Study Objectives

The purpose of the proposed study is to conduct a pilot randomized trial of the multilevel intervention GAP, or Gender-affirming *Abriendo Puertas*.

3.1 Primary Objective

Assess preliminary efficacy of GAP on viral suppression at 12 months.

3.2 Secondary Objectives

Examine pathways of influence (e.g. decreased stigma, increased cohesion) and experiences with the intervention to identify specific areas for improvement and scale up.

4. Study Design

This is a randomized control trial of the GAP intervention (Gender Affirming *Abriendo Puertas* (Opening Doors)). The GAP intervention includes four components that will be implemented over a 12-month period: 1) individual counseling; 2) peer navigation; 3) provider training and 4) community building. Upon consenting to enter the study, participants will be randomly assigned to the intervention arm (n=60) or the control arm (n=60). The assessment of the GAP intervention will be guided by a mixed methods design, including quantitative surveys, biological assessments, and qualitative interviews.

Both intervention and control participants will complete a baseline socio-behavioral survey and blood draw for viral load testing. These assessments will be repeated at midline (6 months) and endline (12 months). A sub-group of intervention participants (n=20) will be invited to participate in qualitative interviews at baseline, midline, and endline.

Intervention participants will be assigned a navigator upon completing baseline assessments. Navigators will maintain monthly communication (at a minimum) with intervention participants during the 12-month intervention period. Intervention participants will be scheduled for their first individual counseling session within two weeks following enrollment. During the second half of the intervention period (months 6-12), intervention participants will be invited to participate in community building activities hosted at two local trans organizations.

Control group participants will be contacted monthly by a member of the study team to facilitate retention and maintain contact information. They will not receive any other intervention. However, if a control group member attends a community building activity during months 6-12, they will not be turned away.

The study team will facilitate training in gender affirmative care with providers and staff at the HIV clinics where study participants receive care during the 12-month intervention period.

At midline and endline, intervention staff and HIV care providers will be invited to participate in focus groups to document their experiences with the intervention and recommendations for improvement.

5. Study Population

5.1 Inclusion Criteria

- Age ≥ 18 years
- Assigned male at birth and self-identify as trans woman (using locally appropriate terminology)
- HIV-positive (confirmed by rapid test)

5.2 Exclusion Criteria

- Participation in the GAP adaptation study

5.3 Recruitment

Peer navigators will lead recruitment through social networks, referrals, and HIV clinics. The target sample size is 120 participants.

6. Intervention

The GAP intervention includes 4 intervention components:

1) Individual counseling and health education includes 4 sessions facilitated by a trained psychologist. Sessions address internalized stigma through reflective exercises, active listening, relaxation and stress management, information provision and, as needed, referrals to other services such as substance use and violence support. We also aim to promote key concepts from healthcare empowerment including being informed, committed, collaborative and engaged in healthcare. Self-esteem is a cross-cutting theme addressed in all sessions through critical reflection exercises.

Each session is structured around a topical focus and guided by objectives:

- Session 1: Gender identity and sexual health
- Session 2: Managing life with HIV
- Session 3: HIV care and treatment
- Session 4: Life plan

Each session concludes with a relaxation exercise intended to provide a set of tools for participants to use beyond the intervention.

All content will be delivered with sensitivity to the lived experience of trans women. Within each session, the content is flexible and tailored to the needs and interests of the specific participant. Screening for substance use and violence is integrated into sessions 1 and 2 to facilitate tailoring of content and referral to appropriate services as needed. Participants will be asked about their engagement with the trans community to assess their level of connection and identify opportunities to promote engagement or address concerns with engagement, in preparation for the community building component of GAP.

Sessions will be scheduled at one to two-week intervals to facilitate cumulative progression in stigma reduction and self-esteem building. Participants will have the option to do the sessions at IDCP or TRANSSA.

2) Peer navigation is a strengths-based model to address both internalized and enacted stigma. Navigators will provide informational, instrumental, and emotional support for HIV-related and other life concerns through in-person and virtual (e.g. text, WhatsApp) interactions. Examples of activities that navigators carry out include: appointment reminders; accompaniment to HIV and other medical appointments; supporting disclosure to family, friends and partners; and referral to services as needed. Navigators will also work with participants to address barriers to accessing care, develop strategies to use their existing resources and cultivate additional resources to maintain health and well-being, and, when needed, advocate for their rights.

As noted earlier, we will offer the option of having a trans or cisgender peer navigator. We will have a team of 3-4 navigators with approximately 15-20 intervention participants and 15-20 control participants assigned to each navigator. Navigators will be trained in HIV care and treatment and strengths-based approaches and will meet weekly as a team to exchange experiences and address challenges. While the actual intervention strategy of navigation will serve as a tool for retention with intervention participants, navigators will also support retention among control-group participants through regular check ins and reminders about study visits. As navigation can be initiated by either the navigator or client, there will be variation in the number of navigation interactions per participant. Navigators will be trained to initiate at least one interaction per month with each client, leading to a minimum of 12 interactions during the intervention period.

3) Provider capacity building will focus on enacted stigma in HIV clinics through training in gender affirmative care (GAC). GAC in HIV clinics includes both social and medical affirmation. We will focus on both, though medical gender affirmative care is not currently available in the 8 HIV clinics that we will work with. We will facilitate a two-day participatory workshop informed by evidence-based models of GAC[14] with 4-5 participants from each clinic including providers (n=2), phlebotomist (n=1) and other staff who engage with trans participants (n=2). We will raise awareness, identify biases and misconceptions, and work with participants to develop individual and clinic-level plans to improve the overall quality of the clinic experience for trans women. During the training, each clinic will also do a self-assessment of readiness to integrate hormone therapy.

Study staff will facilitate a one-day booster session to assess application of the workshop content. Pre and post-assessments will be conducted at both workshops to document changes in attitudes and practices related to GAC and participants will be asked to provide updates to their readiness assessment at the booster session. Study staff will document clinic context during site visits to contextualize study findings on enacted stigma in HIV clinics. As noted earlier, provider capacity building will potentially affect both intervention and control groups as we will train providers from clinics attended by control and intervention groups.

4) Community Support Building will focus on developing trust through a series of small group sessions. These sessions will begin at midline. This will be done through a combination of structured content, participatory exercises, and social interaction. Each month will have a topical focus, which will be decided upon in response to feedback from the psychologists facilitating individual sessions, navigators, and participants themselves, to make the sessions highly responsive to gaps in other intervention components and participant interest. Expected topics include sustaining ART adherence, relationships, employment, and family dynamics. Sessions focused on the monthly topic will be repeated three times each month with the goal that each intervention arm participant (n=60) will attend at least one group session per month for a total of 6 sessions during the intervention period.

Control Arm: Standard HIV care, with potential indirect exposure to provider training.

7. Outcome Measures

7.1 Primary Outcome

Viral suppression (<400 copies/mL)

7.2 Secondary Outcomes

HIV care and treatment outcomes: Retention in HIV care, ART adherence , ART interruption

Mental health and wellbeing outcomes: Depression, anxiety, drug use, binge drinking, self-esteem

8. Study Procedures

Participants will complete assessments at baseline, midline, and endline. Data collection includes completion of a survey and blood draw for viral load measurement. Qualitative data collection will involve in-depth interviews with 20 participants from the intervention group at baseline, midline, and endline.

9. Statistical Considerations

To estimate the initial effects of GAP, we will use survey, viral load, and monitoring data. We will first examine if randomization succeeded by conducting balance tests with baseline data, which will also inform the specification of the effects estimation model. Second, we will examine loss-to-follow-up (LTF) (expected not to be >10%) and determine if those LTF have different characteristics of those retained and if there is any variation between intervention and control groups. Third, we will estimate initial effects of the intervention. We will first estimate the intention-to-treat (ITT) effect using linear probability (or logistic) model with a GAP intervention indicator as the only explanatory variable and using endline data only. The ITT model will be $Y_i = \alpha_0 + \alpha_1 P_i + \varepsilon_i$, where Y_i is the outcome of individual i, P_i is a dummy indicator variable for being in the treatment group or not, and ε_i is the standard error term. The coefficient α_1 will be our ITT effect estimate. Although the GAP intervention will be randomly allocated across participants, it is possible that some differences in baseline characteristics and outcomes between the groups will be observed. To correct for those imbalances, we will use difference-in-differences (DID) models that include baseline covariates; the DID model estimates intervention effects by taking the difference between the changes observed in the outcome in the intervention group and the changes in the control group, adjusting for baseline differences. The DID model will be estimated using baseline, midline, and endline data and will be specified as: $Y_{it} = \alpha_0 + \alpha_1 P_i + \alpha_2 T1_t + \alpha_3 P_i * T1_t + \alpha_4 T2_t + \alpha_5 P_i * T2_t + \alpha_6 X_i + \varepsilon_{it}$, where Y_{it} is the outcome of individual i at time t, P_i is an indicator variable for being in the intervention group or not, $T1_t$ is an indicator variable for the observation from midline, $T2_t$ is an indicator variable for the observation from endline, X_i represents characteristics of the individual at baseline, and ε_{it} is the standard error term. The coefficient α_3 will be our DID intervention effect at

midline, and α_5 at endline. This DID model allows us to examine the evolution of the intervention effects over time.

A second set of analyses will examine the effect of each component of the intervention on the main outcome at midline and endline. We will estimate the following model: $Y_i = \alpha_0 + \alpha_1 P1_i + \alpha_2 P2_i + \alpha_3 P3_i + \alpha_4 X_i + \varepsilon_i$ where $P1_i$ is a measure of individual counseling (e.g. # of counseling sessions individual i received); $P2_i$ is a measure of navigation (e.g. # of interactions with individual i); and $P3_i$ is a measure of community support building (e.g. # of group sessions attended by individual i). We will further extend this model to examine if different levels of intensity of exposure have different effects on the outcome. We will define three levels of intensity (low, medium, high) depending on the number of navigation interactions to estimate the following model: $Y_i = \alpha_0 + \alpha_1 P1_i + \alpha_{2Med} P2Med_i + \alpha_{2High} P2High_i + \alpha_3 P3_i + \alpha_4 X_i + \varepsilon_i$ where, $P2Med_i$ is a dummy variable indicating that individual i had medium exposure to navigation and $P2High_i$ is high intensity exposure to navigation sessions. In this model, α_{2Med} is the effect of medium exposure to navigation on the outcome and α_{2High} is the effect of high exposure to navigation on the outcome. The reference category is low exposure.

The minimum detectable effect for a power of 80%, a significant level of 5%, and a 50/50 split of the 120 individuals in the sample between the treatment and control group is of +13.3 percentage points, assuming an expected loss to follow up of 10%, and expected baseline prevalence of viral suppression to be 64%.

10. Data Management and Monitoring

Confidentiality of all study participants will be strictly maintained across all study activities. Interviewers, intervention staff, lab staff, support services staff, and all other relevant project staff will be trained on procedures for maintaining confidentiality. Interviewers assigned to conduct the survey assessments and qualitative interviews and focus groups will be hired by IDCP, which has a longstanding history of conducting confidential and respectful HIV-related research activities with key populations. All study data, laboratory specimens, and forms will be identified by a coded participant ID number only, to maintain participant confidentiality.

After study completion, identifying information for participants not required for analysis will be destroyed. Forms, lists, logbooks, appointment books, and any other listings that link participant ID numbers to other identifying information will be stored on a secure, password protected computer in a locked study office at IDCP in the DR, in an area accessible only to authorized study personnel.

11. Ethical Considerations

This study does not raise major safety concerns. However, we will continually monitor wellbeing of both intervention and control group participants. Safety analyses will be included as part of the regular reports to the safety team, composed of all of the key investigators and chaired by the study PI. The safety team will review all social harms reported at their monthly meetings. However, the PI will review the reports in real-time, and should any worrisome pattern or serious harm occur to a study participant as a result of their participation, she will call an ad hoc meeting of the safety team. We will query specifically for known social harms, including stigma, rejection by family and friends, or other adverse events. Intervention participants will meet with study counselors during the first part of the study and will have continuous contact with peer navigators. These interactions will permit monitoring of overall health and wellbeing. Control group participants will be contacted on a monthly basis by a study team member.

12. References

1. Baral SD, Poteat T, Strömdahl S, Wirtz AL, Guadamuz TE, Beyrer C. Worldwide burden of HIV in transgender women: a systematic review and meta-analysis. The Lancet infectious diseases. 2013;13(3):214-22. doi: 10.1016/S1473-3099(12)70315-8.
2. Reisner SL, Poteat T, Keatley J, Cabral M, Mothopeng T, Dunham E, et al. Global health burden and needs of transgender populations: a review. The Lancet. 2016;388(10042):412-36. doi: 10.1016/S0140-6736(16)00684-X. PubMed Central PMCID: PMC7035595.
3. García PJ, Bayer A, Cárcamo CP. The changing face of HIV in Latin America and the Caribbean. Current HIV/AIDS Reports. 2014;11(2):146-57. doi: 10.1007/s11904-014-0204-1. PubMed Central PMCID: PMC4136548.
4. Silva-Santisteban A, Eng S, de la Iglesia G, Falistocco C, Mazin R. HIV prevention among transgender women in Latin America: implementation, gaps and challenges. Journal of the International AIDS Society. 2016;19:20799.
5. Baguso GN, Gay CL, Lee KA. Medication adherence among transgender women living with HIV. AIDS care. 2016;28(8):976-81. doi: 10.1080/09540121.2016.1146401.
6. Chow JY, Konda KA, Borquez A, Caballero P, Silva-Santisteban A, Klausner JD, et al. Peru's HIV care continuum among men who have sex with men and transgender women: opportunities to optimize treatment and prevention. International journal of STD & AIDS. 2016;27(12):1039-48. doi: 10.1177/0956462416645727.
7. Jalil EM, Wilson EC, Luz PM, Velasque L, Moreira RI, Castro CV, et al. HIV testing and the care continuum among transgender women: population estimates from Rio de Janeiro, Brazil. Journal of the International AIDS Society. 2017;20(1):21873. doi: 10.7448/IAS.20.1.21873.
8. Melendez RM, Exner TA, Ehrhardt AA, Dodge B, Remien RH, Rotheram-Borus M-J, et al. Health and health care among male-to-female transgender persons who are HIV

positive. American Journal of Public Health. 2006;96(6):1034-7. doi: 10.2105/AJPH.2004.042010.
9. Mizuno Y, Frazier EL, Huang P, Skarbinski J. Characteristics of transgender women living with HIV receiving medical care in the United States. LGBT health. 2015;2(3):228-34. doi: 10.1089/lgbt.2014.0099.
10. Piña C, Dange A, Rawat S, Jadhav U, Arnsten JH, Chhabra R, et al. Antiretroviral Treatment Uptake and Adherence Among Men Who Have Sex With Men and Transgender Women With HIV in Mumbai, India: A Cross-Sectional Study. The Journal of the Association of Nurses in AIDS Care: JANAC. 2018;29(2):310-6. doi: 10.1016/j.jana.2017.10.001.
11. Poteat T, Hanna DB, Rebeiro PF, Klein M, Silverberg MJ, Eron JJ, et al. Characterizing the Human Immunodeficiency Virus Care Continuum Among Transgender Women and Cisgender Women and Men in Clinical Care: A Retrospective Time-series Analysis. Clin Infect Dis. 2020;70(6):1131-8. Epub 2019/10/02. doi: 10.1093/cid/ciz322.
12. Bukowski LA, Chandler CJ, Creasy SL, Matthews DD, Friedman MR, Stall RD. Characterizing the HIV care continuum and identifying barriers and facilitators to HIV diagnosis and viral suppression among Black transgender women in the United States. JAIDS Journal of Acquired Immune Deficiency Syndromes. 2018;79(4):413-20.
13. Lama JR, Mayer KH, Perez-Brumer AG, Huerta L, Sanchez H, Clark JL, et al. Integration of Gender-Affirming Primary Care and Peer Navigation With HIV Prevention and Treatment Services to Improve the Health of Transgender Women: Protocol for a Prospective Longitudinal Cohort Study. JMIR Research Protocols. 2019;8(6):e14091.
14. Sevelius J, Chakravarty D, Neilands TB, Keatley J, Shade SB, Johnson MO, et al. Evidence for the Model of Gender Affirmation: The Role of Gender Affirmation and Healthcare Empowerment in Viral Suppression Among Transgender Women of Color Living with HIV. AIDS and Behavior. 2019:1-8.
15. Lacombe-Duncan A. An intersectional perspective on access to HIV-related healthcare for transgender women. Transgender Health. 2016;1(1):137-41
16. Perez-Brumer AG, Reisner SL, McLean SA, Silva-Santisteban A, Huerta L, Mayer KH, et al. Leveraging social capital: multilevel stigma, associated HIV vulnerabilities, and social resilience strategies among transgender women in Lima, Peru. Journal of the International AIDS Society. 2017;20(1):21462.
17. Hatzenbuehler ML. Structural stigma: Research evidence and implications for psychological science. American Psychologist. 2016;71(8):742.
18. Katz IT, Ryu AE, Onuegbu AG, Psaros C, Weiser SD, Bangsberg DR, et al. Impact of HIV-related stigma on treatment adherence: systematic review and meta-synthesis. Journal of the International AIDS Society. 2013;16(3S2):18640. doi: https://doi.org/10.7448/IAS.16.3.18640.
19. White Hughto JM, Reisner SL, Pachankis JE. Transgender stigma and health: A critical review of stigma determinants, mechanisms, and interventions. Social science & medicine. 2015;147:222-31. doi: 10.1016/j.socscimed.2015.11.010.

20. Bockting WO, Miner MH, Swinburne Romine RE, Hamilton A, Coleman E. Stigma, mental health, and resilience in an online sample of the US transgender population. American journal of public health. 2013;103(5):943-51.
21. Sevelius JM, Patouhas E, Keatley JG, Johnson MO. Barriers and Facilitators to Engagement and Retention in Care among Transgender Women Living with Human Immunodeficiency Virus. Annals of Behavioral Medicine. 2014;47(1):5-16. doi: 10.1007/s12160-013-9565-8.
22. Tankersley AP, Grafsky EL, Dike J, Jones RT. Risk and Resilience Factors for Mental Health among Transgender and Gender Nonconforming (TGNC) Youth: A Systematic Review. Clinical Child and Family Psychology Review. 2021:1-24.