

# HIV AND SEXUAL HEALTH SIG

## 2020 Abstracts

Click here to see the abstract by Drs. Samuella Ware and Yarneccia D. Dyson, "PrEP Knowledge, Attitudes, and Intentions Among Black College Men in the South." (p. 31)

Click here to see the abstract by Drs. Yarneccia D. Dyson and Samuella Ware, "Assessing Knowledge, Behavior, and Sexual Decision-Making Skills Among Young Black College Students At Risk for HIV." (P. 37)

Hello wonderful HIV and Sexual Health SIG members,

Although we were not able to attend the 2020 conference this year, we are delighted to report that this was a banner year for the SIG. Our membership almost doubled from 69 members in 2018-2019 to 135 members in 2019-2020. Additionally, we had **104 posters, 25 papers, 9 symposia (31 individual presentations within each), and 2 panels** accepted for this year's conference in the areas of HIV, sexual and gender minority health, and sexual health. Given that our SIG is only two years old, this is an incredible achievement and really speaks to the strength of the work that each of you is doing. With that in mind, we have put together this abstract program so that you can familiarize yourselves with the cutting-edge work that is being conducted and would have been presented.

We additionally had multiple SIG awards this year. We congratulate Drs. **Cesar G. Escobar-Viera** and Dr. **Lindsay Young** (tied) on their top-rated student/trainee paper abstracts as well as **Jonathan López-Matos** on their top-rated student/trainee poster abstract. This was also our first year awarding the HIV and Sexual Health SIG Early Career Award which was given to Dr. **Madina Agénor**.

Multiple members of our SIG leadership are rotating off this year, including the chair (Dr. **H. Jonathon Rendina**) and vice-chair of events and membership (Dr. **Courtney Peasant Bonner**). Drs. **Rendina** and **Bonner** have been in SIG leadership roles since the SIG started and the success of this SIG would not have been possible without their excellent leadership.

We are excited to report that for 2020-2021 Dr. **Kimberly Nelson** will be moving into the Chair position, Dr. **Lisa Eaton** will be co-chair, Dr. **Brett Millar** will be vice-chair of events and membership, and **Eric Layland** will be remaining at the student/trainee co-chair. We are hoping to do many exciting things this year, including highlighting the important work our SIG members are doing and promoting an excellent showing at the 2021 SBM annual meeting in Orlando, FL.

Lastly, we would like to thank you for your continued support of the SIG. We are delighted that HIV, sexual and gender minority health, and sexual health research and practice are getting a larger voice at SBM and it could not have happened without each of you. If you are interested in a larger role in the SIG or in having your work promoted by the SIG please feel free to reach out. We would love to hear from you!

Sincerely,

Kimberly Nelson, Chair

H. Jonathon Rendina, Chair  
Kimberly Nelson  
Courtney P. Bonner  
Eric Layland  
*2019-2020 Leadership*

Kimberly Nelson, Chair  
Lisa Eaton  
Brett Millar  
Eric Layland  
*2020-2021 Leadership*

Connect with us:  [@SBMSexSIG](https://twitter.com/SBMSexSIG)

## Abstracts Overview

**104** Posters

**2** Panels

**25** Papers

**9** Symposia

**171** Total Abstracts addressing HIV, Sexual Health, or Sexual & Gender Minority Health

## SIG Award Winners

### Best Poster

**Jonathan López-Matos et al.** *Barriers to PrEP uptake among Latino MSM: PrEP stigma, sexual shame, internalized homonegativity and negative PrEP perceptions*

### Best Paper

**Lindsay Young et al.** *A Pragmatic Randomized Controlled Trial to Accelerate Diffusion of Pre-Exposure Prophylaxis for HIV Prevention*

**Cesar G Escobar-Viera et al.** *Sexual Minority Identity and Depression among U.S. Young Adults: Potential Mediating Role of Negative Social Media Experiences*

### Emerging Scholar Award

**Madina Agénor, Tufts University**

## Program Contents


Symposia	.....	3
Papers	.....	19
Panels	.....	28
Posters	.....	29

## Abstracts Guide to Common Sample, Topics, & Author Information



### Sample Characteristics

 Sexual Minorities	 Women only
 Gender Minorities	 Men only
 People of Color	 Non-US
 People Living with HIV	 Older Adults & Healthy Aging

### Research Topics

 HIV Prevention & Care	 Intervention	 Substance Use
 HIV Pre-Exposure Prophylaxis	 Minority Stress	 Relationships
 Sexually Transmitted Infections	 Mental Health	 Healthcare & providers
 Sex Education	 Cancer & Cancer Survivors	 Violence

### Author Information

 Student/Trainee 1 <sup>st</sup> author
 SIG Award Winner

# SYMPOSIUM ABSTRACTS

## STRESS FROM WITHIN: SEXUAL MINORITY MEN'S COMMUNITY AND ROMANTIC ATTACHMENTS AND HEALTH-RELATED RISKS

Validated across hundreds of studies, minority stress theory has emerged as the predominant explanation for the substantial disparities in sexual minority mental (e.g., depression) and behavioral (e.g., HIV-related risk behavior) health. At the same time, careful examination of many of these studies suggests that minority stress does completely account for this disparity, leaving open the possibility that other less examined phenomena are at play. This panel presents emerging evidence that sexual minority men's experiences of mental and behavioral health challenges might at least partially be explained by stressors existing within sexual minority men's own communities and relationships.

First, we will review qualitative data showing that young sexual minority men today largely experience their community in terms of sex apps. Although the gay community has historically been a source of support and protection for its most vulnerable members, today's young sexual minority men's use of these apps imbues the gay community with intersectional sources of marginalization leaving many young sexual minority men vulnerable to rejection concerns and related health risks within their own community.

Second, a series of eight multimethod studies will show that sexual minority men are particularly stressed by their perceptions that the gay community is focused on sex, status, competition, and exclusion of diversity. We show that gay community stress, in fact, better predicts sexual minority men's mental health than minority stress. Three experiments locate the origin of this stress in the unique, status-based competitive pressures faced by sexual minority men, who by virtue of the fact that their social and sexual relationships often occur with other men might be particularly likely to compete with each other for social and sexual gain.

Third, we will show that sexual minority men's experiences of gay community stress also predict their HIV-risk behavior. We will present experimental evidence showing that sexual minority men's rejection by other sexual minority men leave them prone to risk-taking behavior.

Finally, we will examine stressors emerging from young sexual minority men's romantic relationships. Stigma-related histories leave this population vulnerable to attachment-related difficulties, which are potentially exacerbated within couples' relationships. We will show that attachment anxiety and avoidance within young sexual minority male couples can leave these couples vulnerable to substance use, with implications for couples' intervention.

Ilan Meyer, developer of minority stress theory, will discuss ways that the emerging evidence presented here for within-community stress complements and extends minority stress theory to offer a more comprehensive portrait of the social determinants of sexual minority men's mental and behavioral health than previously recognized.

### “White, Tall, Top, Masculine, Muscular”: Intra-Community Marginalization Among Young Gay and Bisexual Men



Brock Grecco, Phillip Hammack, Ilan Meyer, Bianca Wilson

The LGBT community has been a source of support and resilience to LGBT people, but LGBT people are also susceptible to intra-community rejection and marginalization. LGBT people may find themselves stigmatized by norms governing sexuality, gender, gender expression, race/ethnicity, and social class. We present results of research that aimed to understand how young gay and bisexual men experience intra-community marginalization. We adopted an intersectional approach that attends to the effects of multiple stigmatization. Based on existing literature we hypothesized that the following themes may impact young gay/bisexual men: body type, race/ethnicity, substance use, gender expression, sexuality, HIV/AIDS status, and socioeconomic status.

**METHOD:** Data was collected as part of the *Generations* qualitative study in 5 regions in the United States using advertising and in-person recruitment in LGBT venues. Comprehensive interviews were conducted in person by trained interviewers with 191 men and women of all ages. Interviews were transcribed verbatim and analyzed using Dedoose software. In this paper we report on all young (18 – 25 years-old) gay/bisexual men (including those identified in similar sexual minority terms, like pansexual, N = 32). Interviews were coded for use of intra-community stigmas reported in the literature with the objective of describing themes in the narratives that would support or disconfirm the hypothesized themes.

**RESULTS:** Social apps played a central role in the young men's understanding and experience of community. Many respondents perceived intra-community marginalization related to body, race, gender expression and sexuality. Stigma related to HIV/AIDS status, substance use and social class were minimally present. When stigmas were present, they tended to be experienced interactionally, particularly regarding racialized stereotypes expectations (e.g., Asian men are twinks, effeminate). If an individual was not perceived to meet stereotypical idealized traits for their race, then they felt rejection from and marginalization in the community.

**CONCLUSION:** While research has shown that connection to the LGBT community can have a positive health impact, even ameliorating the negative impact of minority stress, the young men in our study had a sense of community that was tied in with use of social (in particular, sex) apps that may be damaging to health and counteract other positive impacts of connections with the LGBT community. As the primary means of connection to the LGBT community for many in this cohort, sex apps have the potential to negatively impact their identities, health, and well-being with perceptions of rejection leading to feelings of isolation, low self-esteem, and rejection-related stress.

### Sex, Status, Competition, and Exclusion: Intra-Minority Stress from Within the Gay Community and Sexual Minority Men's Mental and Behavioral Health



John Pachankis, Charles Burton, Kirsty A. Clark

Sexual minority men might face unique, status-based competitive pressures given that their social and sexual relationships often occur with other men, who are known to compete for social and sexual gain. In a multistage study, we tested a novel theory of intra-minority gay community stress suggesting that status-focused elements of the gay community contribute to sexual minority men's mental health problems and associated behavioral risks. We first created a measure of gay community stress with items derived from qualitative interviewing ( $n = 49$ ); calculated its psychometric properties, including one-year temporal stability ( $n = 937$ ); and confirmed its structural stability in samples of US ( $n = 96$ ) and Swedish ( $n = 1,413$ ) sexual minority men. Being stressed by perceiving the gay community's focus on sex, focus on status, focus on competition, and exclusion of diversity predicted sexual minority men's mental health over-and-above a comprehensive battery of traditional minority stressors ( $\beta = .17, p < .01$ ) and mediated the influence of gay community status on mental health. To examine the impact of status concerns (i.e., about masculinity, attractiveness, and wealth) on sexual minority men's feelings of exclusion in interactions with other sexual minority men, a series of experiments manipulated 1) the sexual orientation of rejecters (i.e., heterosexual vs. gay;  $n = 103$ ), 2) the social status of sexual minority rejecters (i.e., high vs. low;  $n = 84$ ), and 3) whether the type of rejection from sexual minority rejecters (i.e., status-based vs. non-status-based;  $n = 252$ ). Overall, these experiments provide partial support for the possibility that sexual minority men's status concerns underlie their experience of gay community stress. Together, these studies advance psychological and sociological accounts of sexual minority men's mental and behavioral health beyond minority stress theory, with implications for interventions.

## Risk from within: Gay community stress and sexual risk-taking among sexual minority men



Kirsty A. Clark, Charles Burton, John Pachankis

**Background:** Sexual minority men remain highly impacted by the human immunodeficiency virus (HIV) with social stress being a clear predictor of their risk for infection. The past several decades of research regarding sexual minority men's HIV-risk behaviors has almost exclusively focused on the influence of social stress emanating from outside the gay community (e.g., heterosexist discrimination). However, converging lines of evidence have more recently suggested that sexual minority men also face stress from within their own communities.

**Purpose:** We sought to examine whether social stress from within the gay community (i.e., gay community stress) might influence sexual minority men's risk behaviors, including HIV-risk behaviors, over-and-above more commonly examined social stressors affecting this risk.

**Methods:** We tested whether gay community stress was associated with sexual minority men's HIV-risk behaviors in a large national survey of sexual minority men (Study 1), and experimentally tested gay community stress's impact on behavioral risk-taking and attitudes towards condom use (Study 2).

**Results:** Self-reported exposure to gay community stress was positively associated with HIV-risk behaviors when accounting for the effects of heterosexist discrimination, minority stress, and general life stress (Study 1). Participants who were rejected from an online group of other sexual minority men evidenced greater risk-taking in a subsequent risk-taking task and reported fewer perceived benefits of condom use when accounting for state affect than participants who were accepted by their online group (Study 2).

**Conclusions:** Sexual minority men's experiences of stress and rejection stemming from members of their own community may be an important and overlooked predictor of HIV infection and transmission.

## Intimate relationship quality as a mechanism linking adult attachment and individual health among young sexual minority male couples: A test of the Relationship Process Framework



Tyrel J. Starks, Gabriel Robles

**Background:** Younger sexual minority men (YSMM, aged 18 – 29) face unique challenges in enacting intimate relationships. Experiences of stigma may lead to expectancies – or the anticipation – of rejection from romantic partners, with implications for both relationship functioning and health. Generally, relationships characterized by low levels of satisfaction, commitment and investment are associated with negative health outcomes. The Relationship Process Framework (RPF; Pietromonaco et al, 2013) suggests that Attachment-related beliefs (about the desirability of the self and the reliability of others) are associated with health through the mechanism of relationship functioning. The purpose of the current study was to test a model implied by RPF to predict drug use, a well-established correlate of HIV risk, among YSMM.

**Methods:** Baseline data were analyzed from 70 YSMM couples ( $n_{individuals} = 140$ ) enrolled in a larger trial. Eligible couples were sexually active with relationship length  $\geq 3$  months. Both partners were aged 18 or over, identified as cis-gender male, and were able to communicate in English. At least one partner in each couple was 18-29 years old, reported drug use in the past 30 days, and was HIV-negative. The mean age was 27.01 years ( $SD = 5.79$ ). Most YSMM identified as a racial minority (53.4%). Participants reported the number of days in the past 30 on which they used drugs. They also completed the Experiences with Close Relationships questionnaire and the Multiple Determinants of Relationship Commitment Inventory.

**Results:** Participants' perception of relationship rewards, costs, and barriers to leaving the relationship were positively associated with the use of drugs excluding marijuana; meanwhile, comparisons, alternatives, and investments were negatively associated with this outcome. Relationship functioning was unrelated to marijuana use. Attachment avoidance was negatively associated with positive dimensions of relationship functioning (rewards, comparison to ideal, and investment) and positively associated with negative dimensions (costs, alternatives, and barriers to leaving the relationship). In contrast, attachment anxiety predicted only negative aspects of relationship functioning (costs and barriers to leaving). All possible indirect pathways between adult attachment and the use of drugs other than marijuana (implied by significant observed direct effects) were statistically significant.

**Conclusions:** These findings support the RPF premise that attachment is associated with diminished satisfaction, commitment, and investment in relationships and predict the use of drugs other than marijuana through this mechanism. Findings support the development of behavioral interventions – particularly for drug use – that enhance relationship functioning and target cognitions within sexual minority men's close relationships.



# DEVELOPING AND TAILORING HIV PREVENTION INTERVENTIONS WITH AND FOR ADOLESCENT AND EMERGING ADULT SEXUAL MINORITY MALES

In the United States, adolescent and emerging adult sexual minority males are disproportionately impacted by the HIV epidemic. Researchers and clinicians have increasingly recognized the importance of developing and tailoring HIV prevention interventions among these priority populations. This symposium therefore brings together interdisciplinary and cutting-edge research that aims to understand how to develop and tailor HIV prevention interventions for these key populations. These projects also seek to identify ways interventions can be readily scaled up into health care services. The presentations included in this symposium consider different intervention modalities (i.e., online vs. in-person) and formats (dyadic vs. individual). They describe developmentally-appropriate content and tailoring; consider the impact of unique forms of conflict and intimate partner violence for intervention research and program planning; and draw on intervention studies at different phases of implementation.

The first talk presents preliminary findings from two different ongoing relationship-focused HIV prevention studies which have developed adjunct relationship skill building components to Couples HIV Testing and Counseling (CHTC) – delivered online and in person – to adolescent sexual minority males. The second talk describes the development of an online sexual health promotion intervention that provides adolescents with media literacy tools. The third talk examines manifestations of conflict in counseling sessions with young same-sex male couples focused on HIV prevention and substance use and identifies effective provider strategies for responding to conflict. The final talk presents findings on the unique forms and consequences of intimate partner violence among young sexual minority men in the context of HIV prevention intervention design.

The discussion will be led by Dr. Lisa Hightow-Weidman who is a world-renowned researcher with substantial expertise in HIV prevention interventions for adolescents and young adults and will focus on future directions for research, practice, and policy efforts related to reducing inequities in HIV among sexual minority male adolescents and young adults.

## The importance of “options” in relationship-focused HIV prevention efforts: two interventions with adolescent sexual minority males



Kristi Gamarel, Tyrel J. Starks, Sarah Feldstein Ewing, Sonia Lee, Travis Lovejoy, Lynae Darbes, Lisa Hightow-Weidman, Sylvie Naar, Patrick Sullivan, Rob Stephenson

**Background:** Young gay, bisexual, and other men who have sex with men (YGBMSM) continue to be disproportionately affected by HIV. Although a substantial number of new HIV infections occur in the context of romantic partnerships, there have been limited biomedical and behavioral intervention efforts designed to address the relational context of HIV prevention with and for YGBMSM in romantic relationships.

**Methods:** As part of the Adolescent Medicine Trials Network for HIV/AIDS Interventions (ATN), two projects seek to develop and test relationship-focused HIV prevention interventions for YGBMSM and their partners. *We Prevent* is an online intervention delivered via telemedicine nationally whereas, *We Test* is delivered in person in New York City and Detroit. To date, both studies have completed two of the three phases of these implementation science programs (e.g., qualitative interviews and one-arm first-phase studies to inform and refine the intervention content and format for the Phase 3 RCT).

**Results:** In both studies, YGBMSM ages 15 to 19 completed interviews and a one-arm of each intervention. Phase 1 *We Prevent* themes that led to intervention content included: (1) negotiating sexual consent and boundaries; (2) stigma surrounding sexuality and relationships; (3) monogamy as implied and never explicitly discussed; (4) communication around relationships and HIV prevention. Phase 1 *We Test* formative findings included barriers to Couples HIV Testing and Counseling (CHTC) and relationship dynamics that led to the development of a communication skills video and a brief Motivational Interviewing (MI) focused on Assisting with Identification and Development (MI-AID) in-person. For Phase 2, 6 dyads completed the *We Prevent* one-arm pilot and 12 YGBMSM completed the *We Test* one-arm. Across the studies, participants discussed the importance of communication yet many had difficulty communicating with their partners to complete the sessions. Findings highlighted the need for a menu of delivery options (i.e., individual and dyadic) to accommodate YGBMSM's readiness to engage their partners.

**Conclusions:** Both studies highlight the value of integrating relationship skills and HIV testing, as well as the provision of options for individual- and dyadic-level participation in order to accommodate the needs and preferences of YGBMSM. The next steps of these projects will be discussed on how to provide YGBMSM with the skills and tools they desire to address HIV prevention in their relationships.

## Motivational Interviewing with Male Couples to Reduce Substance Use and HIV Risk: Manifestations of Partner Discord and Strategies for Facilitating Dyadic Functioning



Tyrel J. Starks, Gabriel Robles, Kendell M. Doyle, Mark Pawson, Paula Bertone, Brett M. Millar, Karen Ingersoll

**Background:** While the efficacy of Motivational Interviewing (MI) to reduce substance use is well-established, its use with couples has had mixed results. The development of such interventions is relevant for same-sex male couples, as rates of substance use in this population are high and use is associated with aspects of sexual relationship functioning. One challenge noted in previous research on MI with couples is how to respond when partners disagree with one another or argue against change. Guided by Couples Interdependence Theory (CIT), our group conceptualized conflicts within session as failures in the accommodation process. We utilized qualitative analysis to examine manifestations of conflict in session and identify effective provider strategies for responding to conflict.

**Methods:** The sample included 14 cis-male couples where at least 1 partner was aged 18-29; reported substance use; and was HIV-negative. All couples completed 3 MI sessions lasting 60-75 minutes each. Sessions were transcribed and coded for analysis using Dedoose.

**Results:** Observed conflicts included: conflating thoughts and feelings (expressing thoughts or assumptions as though they were emotions, which often were perceived as blaming and elicited defensiveness), vague or indirect communication (language or signals that were easily misunderstood), and inaccurate assumptions (incorrect inferences about a partner's thoughts or behavior). Effective provider responses included: correcting assumptions (catalyzing disclosure between partners to clarify their attitudes and behavior for one another), shifting focus (to thinking about a preferred past or an ideal future scenario), relationship repair (making amends and moving forward together),

“common ground” reflections (which describe shared values and perspectives), and relationship affirmations (which capture relationship strengths and resources).

**Conclusions:** Observed conflicts aligned with conceptualizations of destructive resolutions to the accommodation process. Elements of both Exit-type resolutions (e.g., blaming or defensiveness), and Neglect-type resolutions (e.g., conflict avoidance or withdrawal) were present. Effective provider responses facilitated dyadic functioning and catalyzed constructive accommodation. Many of these provider responses build upon existing MI skills such as reflections and affirmations; however, they require providers cultivate the ability to direct utterances towards partners individually and the couple as a whole. Use of these provider skills also requires knowledge of dyadic functioning in order to accurately identify and reflect relationship strengths and successful accommodation.

## Understanding intimate partner violence among young male couples in the United States: Implications for HIV prevention intervention planning



Rob Stephenson, Oksana Kutsa, Matthew Rosso, Catherine Washington, Lynae Darbes, Lisa Hightow-Weidman, Ramona Rai, Kristina Felder Claude, Patrick Sullivan, Kristi Gamarel

**Background:** Intimate partner violence (IPV) is a prevalent and pressing public health concern that affects people of all gender and sexual identities. Though studies have identified that same-sex male couples may experience IPV at rates as high as or higher than heterosexual couples, the body of literature addressing IPV among adolescent and young adult sexual minority men is nascent. Young sexual minority men face unique stressors in their relationships as they struggle with identity development, disclosure and familial support, and communication in their relationships. This qualitative study explored perceptions of relationship tensions and support among a sample of YGBMSM to guide HIV prevention intervention efforts.

**Methods:** As part of a larger HIV prevention study for young male couples (“*We Prevent*”), qualitative interviews were conducted with 30 young men who reported they were in a relationship with another male. In-depth interviews (IDI) were conducted online via video-chat with participants from 17 states in the U.S. Participants were recruited via social media platforms. Interviews focused on communication, relationship strengths and challenges, as well as potential ideas for intervention content that could support the HIV prevention needs of YGBMSM in romantic relationships. Audio data were recorded, transcribed and de-identified. Thematic analyses were used to understand the forms and precipitants of IPV.

**Results:** Participants’ age ranged from 15 to 19 ( $M=17.8$ ,  $SD = 1.1$ ) and 48% identified as a person of color. Most identified as gay (83%) or bisexual (13%), and over half of the sample (55%) had been with their partner for less than 6 months. Participants most commonly reported emotional IPV and monitoring and controlling behavior from their intimate male partners, which took the form of judgement, belittling sexual or emotional needs, and power imbalances. While no participants reported physical IPV, several participants reported being pressured to have sex or participate in certain sexual acts. Most participants reported feeling that they lacked the skills to communicate with their partners around sex, boundaries, and consent.

**Conclusions:** Findings support the importance of attending to IPV in HIV prevention approaches for YGBMSM. Future research and interventions approaches will be discussed on how to address IPV in different HIV prevention intervention modalities.

## The Young Men & Media Project: Developing a community-informed, online HIV prevention intervention for 14-17 year old sexual minority males



Kimberly Nelson, Nicholas Perry, Michael Carey

**Background:** Adolescent sexual minority males (ASMM) are disproportionately affected by HIV and other sexually transmitted infections (STIs) in the United States (US). Despite increased HIV/STI risk, there is a lack of formal sexual health education resources to prepare ASMM for engaging in healthy sexual activity. Lacking such guidance, ASMM often turn to the Internet, including pornography, to get information about male-male sexual relationships. Although the Internet can be a convenient and affirming source of sexual health information, it can also be unreliable, often providing misinformation or misleading characterizations of male-male sexual relations. The primary goal of the Young Men & Media project is to develop a community-informed, online sexual health program that promotes the critical examination of online media by ASMM in order to promote healthy sexual development and to decrease their sexual risk-taking.

**Methods:** Two sources of information were used to develop and create the content and form of the intervention website: (1) a cross-sectional online survey of ASMM from across the US ( $N = 207$ , 14-17 years old) and (2) a Youth Advisory Board ( $N = 4-5$ , 16-18 years old). Website programming followed an iterative process from initial development/design to alpha/beta testing in collaboration with the Youth Advisory Board and the website developer.

**Results:** Four main topics areas were identified by youth as important foci for the intervention: (1) male anatomy, including information about how anal sex can be pleasurable and about anal health; (2) HIV/STI prevention information (e.g., transmission risks, accessing testing, condom use); (3) general sexual health information (e.g., types of male-male sex, consent, dating safety, partner communication); and (4) porn literacy (e.g., differences between porn and reality, what’s behind the scenes on a pornography set, normalization of porn use among male youth). Youth felt that intervention content should be interactive (e.g., games, videos, animations) and the website should have an interface that would be familiar to ASMM (e.g., similar to Netflix). Youth preferred a website with a responsive design (i.e., will work on a mobile device, tablet, or computer) as opposed to a downloadable phone application.

**Conclusions:** Sexual health interventions that address the sexual health needs of ASMM are needed to decrease the HIV/STI disparities occurring among these youth. A community-informed, iterative approach to online intervention development with ASMM is likely to result in an intervention that meets the needs and wants of ASMM and, ultimately, may prove to be feasible, acceptable, and effective at preparing them for healthy sexual activity.

# TRANSLATIONAL RESEARCH ON GENDER AFFIRMATION AND HEALTH WITH TRANSGENDER COMMUNITIES TO INFORM PRACTICE AND POLICY

In the past two decades, there has been a notable rise in societal recognition of the experiences of transgender and gender diverse people. Researchers, clinicians, and policy makers are increasingly recognizing stigma and violence as drivers of health inequities. The Model of Gender Affirmation proposed by Co-Chair Dr. Sevelius has gained traction as a means of identifying avenues for intervention. The Model of Gender Affirmation proposes that unmet need for gender affirmation poses substantial health risks for transgender and gender diverse people. To inform efforts to address health inequities among transgender and gender diverse people, it is critical to build a stronger understanding of gender affirmation and its relationship to health and well-being. This symposium brings together cutting-edge empirical research all led by transgender and gender non-binary researchers to foster stronger understandings of gender affirmation in different health domains, as well as identify ways that this research can be translated to improve the provision of health promotion interventions. The presentations included in this symposium consider different types of gender affirmation (e.g., social, medical), experiences of gender affirmation (e.g., partner stigma, migration to urban enclaves), represent diverse transgender and gender diverse communities throughout the lifespan, and have implications for individual- to structural-level interventions.

The first talk presents findings on Latina transgender women's experiences of gender affirmation as part of an ongoing pre-exposure prophylaxis (PrEP) demonstration project. The second talk characterizes the ways in which stigma within relationship contexts can undermine gender affirmation and serves as a precipitant to violence and avoidance of self-care among transgender women of color. The final talk presents qualitative data illustrating transgender young adults' migration stories to San Francisco for gender affirmation at the price of structural vulnerabilities. The discussion will be led by Ms. Joanne Keatley, a world-renowned leader in the field of global transgender health, with extensive expertise in community-engaged research with, for, and by transgender and gender diverse communities, and will focus on future directions for addressing gender affirmation across multiple levels in the field of behavioral medicine globally.

## “Apoyo entre nosotras” (Supporting each other): Triunfo, a Peer-navigation based model to provide intersectional gender affirming care to Transgender Latinx



Luz Venegas, Luis Gutierrez-Mock, Arianna Salinas, Cinthya Herrera, Sophia Zamudio-Haas, Kim Koester, Jae Sevelius

**Purpose:** Transgender women continue to have the highest rate of new HIV infections of any population group in the US, due in large part to a lack of adequate services. When designing programs for Latinx transgender individuals, we must assess and address social and structural barriers to care. For transgender Latinx immigrants, these barriers may include language, legal documentation, employment, and transportation. *Triunfo*, a pre-exposure prophylaxis (PrEP) demonstration project located at La Clínica de la Raza in Oakland, California, uses a peer-navigation model to deliver gender affirming care in combination with immigrant specific services.

**Methods:** We nested an ethnographic study within a larger mixed methods evaluation to qualitatively assess the implementation and outcomes of *Triunfo*. We conducted participant observation of group medical appointments, social events, and support groups over the course of six months. We also conducted in-depth interviews with 15 participants and 3 key informants (physician, coordinator, and peer navigator). A Framework Approach guided analysis. We developed a structured codebook and used Dedoose to organize and code data.

**Results:** *Triunfo* has successfully enrolled 67 participants, many of who had never before received formal medical care. Most participants are immigrants and recent arrivals who sought asylum in the US. Peer navigators connect participants with a range of services relevant to the intersectional needs of immigrant trans Latinx communities. At La Clínica, clinicians provide sexual health prevention and treatment services, hormone replacement therapy, and referrals for gender affirming surgeries. Peer navigators schedule and escort participants to obtain identification, name changes, legal-status support, and other services as needed outside of the clinic. Social support is provided through monthly groups, social events, and casual dinners. The social, structural, and clinical aspects of *Triunfo* are woven together in a way that feels seamless to participants.

**Conclusions:** *Triunfo* redefines and broadens the meaning of healthcare to include the social, mental, and overall wellbeing of participants. By providing care that is compassionate and culturally competent, this intervention successfully served a group of Spanish speaking transgender women and connected them with crucial services, including PrEP.

## A “Queer Tax” on Health and Inclusion: The costs of migration for transgender people seeking inclusive services and community support in the San Francisco Bay Area



Wesley King, Kristi Gamarel, Don Operario, Raha Mouzoon, Victorine Stanislaus, Mariko Iwamoto, Sabrina Suico, Tooru Nemoto

**Purpose:** Transgender (trans) refers to individuals whose gender identity differs from culturally prescribed expectations associated with their assigned sex at birth. Many trans people seek gender affirmation across different domains. Evidence documents unmet gender affirmation needs place trans young adults at risk for a myriad of adverse health outcomes including HIV, non-prescribed hormone use and substance use. As a result, trans young adults may migrate to urban enclaves to fulfill their gender affirmation needs such as obtaining trans-inclusive healthcare and community support. This study explored the experiences and consequences of migration on trans young adults who migrated to San Francisco (SF) Bay Area to access gender affirmative health services and support.

**Methods:** A convenience sample of 60 trans young adults ages 18 to 29 (32% non-binary, 28% trans women, and 40% trans men) participated in a one-time qualitative interview as part of a larger study of hormone use and substance use. Qualitative interviews were audio-recorded and transcribed. We used thematic analysis to develop and refine the codes and themes.

**Results:** Two themes emerged regarding migration and gender affirmation needs: (1) gender affirmation experiences and (2) the price or “queer tax” for gender affirmation. Participants described how gender affirmation needs across healthcare and social domains were met upon moving to SF. However, migration placed many participants at



risk for other structural vulnerabilities, including homelessness, employment discrimination, and racial discrimination in healthcare settings. Despite these vulnerabilities, participants were willing to “pay” this price in order to gain trans-related safety and affirmation.

**Conclusions:** Our findings underscore the importance of understanding how unmet gender affirmation needs and urban migration may place trans young adults at greater risk for adverse structural conditions that can determine health outcomes. Future research and interventions are needed to address gender affirmation needs beyond urban enclaves and reduce health disparities among trans populations.

## The manifestations of stigma within the relationships of transgender women of color: Implications for gender-affirming HIV prevention interventions



Racquelle Trammell, Lilianna Reyes, Laura Jadwin-Cakmak, Ciera Burks, Bré Rivera, Gary Harper, Emily Arnold, Kristi Gamarel

**Purpose:** Transgender women of color are disproportionately affected by the HIV epidemic. One of the most consistently reported contexts for HIV transmission and acquisition among transgender women is within romantic partnerships. Transgender women experience intersectional stigma across all areas of their lives, including within romantic partnerships. Relationship stigma –the anticipation of negative treatment based on being in a relationship with a member of a stigmatized group –has been linked to adverse HIV and other health out-

comes; however, there has been limited research to document the nuances of the relationship stigma experienced by transgender women of color. The current study sought to understand how transgender women of color experience relationship stigma and its impact on their health.

**Methods:** We conducted 5 focus groups (n=33) between January and March 2019 with transgender women of color as part of the Love Her Collective – a community-academic partnership. The overall goal of the study was to identify the HIV-related health needs of transgender women of color in Detroit, Michigan. Qualitative interviews were audio-recorded and transcribed. We employed a phenomenological analytic approach to develop and refine emerging themes related to relationship stigma.

**Results:** Participants ranged in age from 18 to 66 (M=31, SD=13); 79% identified as Black, and 18% identified as Multiracial. In total, 63% identified as living with HIV and 29% did not know their HIV status. Four overarching themes emerged: 1) Forms of enacted relationship stigma that undermine gender affirmation needs; 2) Complex association between enacted relationship stigma and internalized intersectional stigma; 3) Enacted relationship stigma as an antecedent to intimate partner violence, and 4) Enacted relationship stigma undermining health-promoting behaviors, including healthcare seeking.

**Conclusions:** Findings support the importance of gender-affirming approaches to health promotion and HIV prevention that account for the various ways that transgender women of color experience stigma. Approaches that account for the nuanced ways that relationship stigma undermine women’s self-care, including linkage to and engagement in HIV prevention services are needed. Future research on gender-affirming intervention approaches to target the manifestations of relationship stigma in order and increase the use of HIV prevention strategies among transgender women of color will be discussed.

## FROM STIGMA TO PSYCHOLOGICAL AND BEHAVIORAL HEALTH AMONG POPULATIONS IMPACTED BY HIV

For people living with HIV (PLWH) and individuals vulnerable to HIV infection (transwomen; men who have sex with men, MSM), stigma is a major driver of behavioral and psychological health risks. Stigma arises from conflict between the norms of dominant, majority groups and members of disadvantaged groups. Both internalized and enacted stigma contribute to elevated psychological stress and dysregulated behavioral responses among PLWH, transwomen, and MSM. Identifying pathways from stigma to psychological and behavioral health in populations impacted by HIV can help illuminate mechanisms driving disparities and opportunities for intervention.

Substance use can impact HIV treatment, and PLWH use substances at greater rates than people not living with HIV. In the first study, results provide evidence that associations between HIV stigma and substance use are partially mediated by depression among PLWH. Both internalized and enacted HIV stigma were associated with depression, and depression was associated with self-reported number of substances used, substance use severity, and testing positive on a drug test. Interventions on substance use among PLWH must consider links among HIV stigma, mental health, and substance use.

For transwomen, discrimination drives elevated rates of mental health issues and creates barriers to affirming healthcare. In the second study, gender identity and sexual behavior stigmas were associated with severe psychological distress. Experiencing gender identity stigma was also associated with higher prevalence of past year suicide ideation and attempts. Structural and interpersonal interventions to reduce experiences of stigma are critical to preventing psychological distress and suicidality among transwomen.

For young MSM of Color, race-based objectification and rejection by sexual and romantic partners contribute to distress and poor coping. In the final study, trait level mindfulness moderated associations of sexual racism with prevalence of depression, suicide ideation with a plan, and non-suicidal self-injury. For MSM of Color who reported greater trait mindfulness, the association between sexual racism and mental health was weaker. Mindfulness is a promising tool for interventions seeking to modify the effects of stigma experienced by young MSM of Color.

Among populations impacted by HIV, experiences of stigma continue to drive disparities in psychological and behavioral health. The studies in this symposium identify potential points of intervention, including depression, gender identity and sexual behavior stigma, and mindfulness, that may be instrumental in improving the health and quality of life for groups often pushed to the margins. By centering these groups and individuals in health care and interventions, psychological and behavioral health disparities can be narrowed and individual disease burdens reduced.

## HIV stigma and substance use problems among people living with HIV: Do depressive symptoms mediate?



Valerie A. Earnshaw



In the United States, people living with HIV (PLWH) are affected by substance use problems at higher rates than people not living with HIV. In addition to harming overall mental and physical health, substance use problems undermine HIV treatment and secondary prevention efforts. Research identifying risk factors for substance use problems among PLWH is needed to strengthen HIV treatment and prevention efforts.

We examined whether internalized and enacted HIV stigma are associated with three indicators of substance use problems among people living with HIV (PLWH), including numbers of: (1) substances used, (2) substances used at moderate to high risk, and (3) times substances were used before sex, via the mediator of depressive symptoms. Participants included 358 PLWH aged 18-35 from Georgia. At baseline, participants completed measures of internalized and enacted stigma, depressive symptoms, and substance use severity. Substance use was additionally tested via urinalysis. Following baseline, participants reported their use of substances before sex for 28 days via daily text messaging. Data were analyzed using path analysis in R.

On average, participants tested positive for 1.24 (range: 0-6) substances used, reported moderate to high risk on 2.01 (range: 0-8) substances, and reported using substances 1.57 (range: 0-20) times before sex over 28 days. Internalized and enacted stigma were associated with greater depressive symptoms, and depressive symptoms were associated with all three indicators of substance use problems. Moreover, the indirect effects between internalized and enacted stigma with indicators of substance use problems were significant, suggesting that depressive symptoms partially mediated associations between stigma and substance use problems.

Discussion will identify intervention strategies to address stigma among PLWH to reduce depressive symptoms and substance use problems, ultimately supporting support HIV treatment and prevention efforts.

## Gender Identity and Sexual Behavior Stigmas, Psychological Distress, and Suicidality in an Online Sample of Transgender Women in the United States



Jessica L. Maksut, Stefan Baral, Travis Sanchez, Maria Zlotorzynska, Carrie Lyons, Ayden Sheim, John Mark Wiginton

**Introduction:** Studies have consistently documented a high prevalence of adverse mental health outcomes among transgender women in the United States and across the world. Trans-related discrimination limits access to resources in several critical domains (e.g., health care) and serves as a determinant of adverse physical, sexual, and mental health outcomes. Limited scholarship examines how other forms of stigma – including perceived and anticipated stigmas – and stigma due to other socially marginalized attributes or behaviors – including sexuality or sexual behaviors – are associated with adverse mental health outcomes among transgender women. In the present study, we explored associations between perceived, anticipated, and enacted gender identity and sexual behavior stigmas with severe psychological distress, suicidal ideation, and suicide attempts among  $N=381$  transgender women.

**Methods:** Chi square tests were used to compare the prevalence of severe psychological distress, suicidal ideation and suicide attempts across demographic groups, and modified Poisson regression models with log links and robust variance estimators were used to assess unadjusted and adjusted associations between gender identity and sexual behavior stigmas with severe psychological distress, suicidal ideation, and suicide attempts. Covariates included in adjusted models were demographic characteristics that were significantly ( $p < 0.05$ ) associated with the abovementioned three outcomes of interest.

**Results:** 198 participants (52%) had severe psychological distress, as defined as a K6 score  $\geq 13$ . In addition, 226 (59.3%) participants reported suicidal ideation in the past year, and 50 (13.12%) reported one or more suicide attempts in the last year.

Overall, participants were young with about half ( $n=194$ , 50.9%) aged 15-24 years. Most participants were white, non-Hispanic (276, 72.4%) and 44.4% ( $n=169$ ) identified as bisexual or pansexual. Approximately one third ( $n=132$ , 34.6%) of the sample made less than \$20,000 annually, and nearly 40% ( $n=150$ ) reported attending some college or having an associate's degree.

Treated as scales, gender identity stigma (aPR 1.07, 95% CI: 1.03, 1.11) and sexual behavior stigma (aPR 1.03, 95% CI: 1.01, 1.07) were significantly, positively associated with severe psychological distress. In addition, gender identity stigma was significantly, positively associated with suicidal ideation (aPR 1.09, 95% CI: 1.06, 1.12) and suicide attempts (aPR 1.13, 95% CI: 1.03, 1.26) in the past year.

**Conclusion:** Gender identity and sexual behavior stigmas are significantly, positively associated with adverse mental health outcomes among transgender women in the United States. Stigma reduction interventions may have the potential to contribute to reductions in adverse mental health outcomes, including severe psychological distress and suicidality among transgender women.

## Sexual Racism Hurts, but Mindfulness can Help: Mindfulness Moderates Discrimination's Effect on Mental Health for Black and Latino Men who have Sex with Men



Eric K. Layland, Marco Hidalgo, Katrina Kubicek, Michele Kipke

**Background:** Sexual minority men of color not only experience stigma targeting their sexual orientation and their race/ethnicity, but also unique stigma that specifically targets the intersection of these identities. Sexual racism is the rejection or objectification of sexual minority men of color by potential romantic and sexual partners. Like other stigma, sexual racism is associated with elevated incidence of adverse mental health consequences. Mindfulness moderates the effects of stress among African Americans but is predominantly unexplored among young men who have sex with men (YMSM). We examined the potential moderating role of trait mindfulness on the association between perceived sexual racism and psychological symptoms among diverse YMSM.

**Methods:** A community sample of 448 Black, Latino, and Black/Latino YMSM (mean age=22.3 years) reported past week psychological symptoms (somatization, depression, anxiety), past year suicide ideation, ideation with a plan, and attempts, and past three months non-suicidal self-injury (NSSI). Participants also reported frequency of sexual racism and trait mindfulness. We used logistic regression to examine the association between sexual racism and odds of psychological symptoms, suicidality, and NSSI. We then investigated mindfulness as a moderator of this association.

**Results:** Latino YMSM experienced sexual racism less often than Black and Black/Latino YMSM. Sexual racism was associated with higher odds of psychological symptoms (OR: 1.76-1.91), suicidal ideation with a plan in the past year (OR: 1.92), and NSSI (OR: 1.77). Main effects suggested the protective potential of mindfulness, however, mindfulness only moderated the effects of sexual racism on suicidal ideation with a plan (OR: 1.77) and NSSI (OR: 1.89), with marginal buffering effects on depression (OR: 1.34).

**Conclusions:** By framing this study at the intersection of sexual ori-

entation and race/ethnicity stigma, we identify a unique social determinant of health among Black and Latino YMSM. Findings add to limited research on sexual racism underscore the potential utility in exploring its impact on mental health among Black and Latino YMSM. We offer promising evidence of the potential benefit of mindfulness as

a buffer against the effects of sexual racism on depression, suicide ideation with a plan, and NSSI. Future interventions among Black and Latino YMSM may be improved by considering the unique impact of sexual racism and by integrating mindfulness components.

## SOCIAL AND STRUCTURAL DETERMINANTS OF ALCOHOL AND DRUG USE AMONG RACIALLY AND ETHNICALLY DIVERSE SEXUAL AND GENDER MINORITIES

Alcohol and other drug use disparities among sexual and gender minorities (SGM) are attributable, in part, to diverse forms of social and structural stigma and stress. SGM are a heterogeneous population; using an intersectional perspective to consider the health impact of unique stressors allows researchers to identify unique mechanisms underlying disparities and identify potential points of intervention.

SGM of diverse racial and ethnic backgrounds may face additional stress related to their race/ethnicity and unique stigma related to the specific intersection of their race/ethnicity and SGM statuses. The research presented in this symposium examines within-group differences in racially and ethnically diverse SGM samples to understand the connections among social and structural stressors and alcohol and drug use.

In the first presentation, the interaction of both social and structural factors contributed to alcohol and drug use behavior among Latino men who have sex with men (LMSM). For LMSM, barriers to health care and a lack of community collective efficacy appear to negate the protective effects of social support. Results from this study highlight the need to consider the structural and social contexts and barriers to health uniquely experienced by LMSM when identifying protective factors and opportunity for intervention.

Second, among women in same-sex/gender relationships, individual- and couple-level stressors may discretely heighten risks for heavy drinking. Results illustrate an association between relational stress and heavy drinking across all couples. However, for women in interracial/interethnic relationships, couple-level rejection and lack of support were associated with heavier drinking. This intersectional approach to minority stress illuminates heterogeneity in the links between stress and drinking. It also uncovers possible points of intervention for women in same-sex/gender couple relationships generally, with specific implications for interracial/interethnic couples.

Finally, for Black and Latino young sexual minority men (BL-YMSM), intersecting experiences of stress, racism, and homonegativity are associated with more severe drug use. Results demonstrate the universal association of stressful events with drug use across racial/ethnic groups. Experiences of and response to discrimination differed by race/ethnicity, and drug use was linked to certain types of discrimination only among B-YMSM. This study suggests a universal intervention target (stressful events) and opportunity for tailored intervention addressing discrimination on among BL-YMSM.

Together these results point to the need for research that recognizes diversity and heterogeneity among SGM and alcohol and drug interventions that are tailored to the needs and experiences of individuals at the intersections of race/ethnicity and sexual and gender identities.

### Experiences and Health Correlates of Discrimination are Not Universal: Stress, Racism, and Homonegativity as Determinants of Drug Use among Diverse Sexual Minority Men



Eric K. Layland, Bethany Bray, Michele Kipke

**Background:** For Black and Latino sexual minority young men (BL-YMSM), drug use disparities become especially apparent when minority stress (e.g., stressful life events, racism, homonegativity) is considered. BL-YMSM may experience intersectional discrimination targeting the intersection of their race/ethnicity and sexual identities, however, it remains unclear which minority stressors contribute to drug use specifically and whether these pathways are variant across racial/ethnic groups. Therefore, we investigated associations of stressful events and discrimination with drug use and moderation by race/ethnicity.

**Methods:** The sample ( $n=448$ ) included Latino (58.9%), Black (21.0%), and Black/Latino (20.1%) YMSM aged 16 to 24. Participants reported number of stressful life events (e.g., family conflict, HIV diagnosis) in the last six months and frequency of discrimination (i.e., sexual and institutional racism, harassment and shaming homonegativity). Race/ethnicity was coded to compare Black and Black/Latino to Latino participants. Modified Poisson regression with robust error variance was used to estimate prevalence rates of past six-month and lifetime use of tobacco, cocaine, poppers, and other drugs.

**Results:** Stressful life events were associated with prevalence of past six-month use of all drugs (prevalence ratio [PR]: 1.16-1.33). Sexual racism was associated with greater prevalence of six-month poppers use for Black YMSM (PR: 1.92) and lifetime other drug use for Black and Black/Latino YMSM (PR: 1.50-2.35) relative to Latino YMSM. Institutional racism was associated with higher prevalence of lifetime cocaine, poppers, and other drugs use for Latino YMSM only (PR: 1.42-1.57). Shaming homophobia was associated with greater prevalence of six-month and lifetime tobacco use for Black and Black/Latino YMSM (PR: 1.24-2.19) relative to Latino YMSM. Harassment homonegativity was not associated with drug use.

**Discussion:** Results demonstrate similarities and differences across race/ethnic groups in drug use etiology among BL-YMSM. Stressful life events were associated with greater prevalence of all past six-month drug use across race/ethnic groups. The effects of discrimination varied by race/ethnic group and drug. Thus, unpacking the connection between stigma-related minority stress and drug use requires investigation of differences within populations experiencing health disparities (i.e., YMSM). For example, compared to Latino YMSM, Black YMSM reported lower prevalence of poppers use, yet when they experienced sexual racism, their poppers use exceeded that of Latino YMSM. Researchers must account for subgroup differences when attempting to understand how different types of minority-stressors together contribute to drug use outcomes. Future research should address how BL-YMSM may be differentially targeted by and respond to racism and homonegativity.

## Social determinants of substance use among Latino men who have sex with men



Roberto Renteria, Sean Spille, Carolina Lara-Lerma, Frank Dillon, Austin Eklund, Ryan Ebersole

**Background.** Latino men who have sex with men (LMSM) are at higher risk for HIV infection, a risk that is exacerbated by problematic substance use. Little research has focused on structural predictors of substance use. LMSM who report more social support use substances less; yet, it is unclear how this relationship may vary across levels of healthcare access and community collective efficacy. This study investigates whether the link between social support and substance use changes across structural variables (i.e. access to healthcare and collective efficacy). First, we tested the association of perceived social support and substance use, and then tested access to healthcare and collective efficacy as moderators.

**Methods.** Participants were Latino men who endorsed having sex with men in the previous 12 months (N=493). Predictors included access to healthcare, collective efficacy, and perceived social support. Outcomes included the Alcohol Use Disorders Identification Test and the Drug Use Frequency measure. A hierarchical regression analysis examined the association between perceived social support and problematic substance use. Interaction terms were created to test access to healthcare and collective efficacy as moderators in predicting substance use. All analyses adjusted for income, age, marital status, and race.

**Results.** Findings supported that higher perceived social support was associated with lower problematic alcohol use ( $\beta=-0.4$ ) and lower frequency illicit drug use ( $\beta=-0.3$ ). Both access to healthcare ( $\beta=0.2$ ) and collective efficacy ( $\beta=0.3$ ) were positively related to problematic alcohol use. Only access to healthcare ( $\beta=0.3$ ) predicted more frequent illicit drug use. Both access to healthcare and collective efficacy moderated the relationship between social support and each substance use outcome such that this association was stronger among those who reported higher levels of access to healthcare and higher levels of collective efficacy.

**Conclusions.** Social support has been suggested to be a negative predictor of substance use; however, these results demonstrate that this link is not present among all LMSM. Social support did not predict reduced problematic substance use among those reporting lower access to healthcare and lower collective efficacy. Results suggest LMSM reporting higher access to these resources yet low social support may be particularly vulnerable to problematic substance use.

## Understanding links between stress and heavy drinking among queer women in interracial/interethnic intimate relationships



Cindy B. Veldhuis

**Background.** Queer women (e.g., lesbian, bisexual, queer, trans/non-binary) face unique stressors related to their marginalized status (i.e., minority stress). Little research has examined stress and alcohol use within same-sex/gender interracial/interethnic (IRIE) couples, however differential marginalization and privilege may add additional stress which may, in turn, increase risks for heavy drinking. Using an intersectional framework, we examine the associations between individual- and couple-level stressors on alcohol use in these relationships.

**Methods.** Data come from the SOQIR study, a study of diverse women in same-sex/gender relationships living in the NYC area recruited for an online survey (N=215). The online survey included questions about relationship quality, individual- and couple-level minority stressors, and alcohol use.

**Results.** Findings suggest significant differences in the associations between stressors and heavy drinking comparing IRIE and monoracial couples. In terms of individual-level minority stressors, higher levels of adult stress ( $aOR1.10$ ) and stress related to race/ethnicity ( $aOR1.28$ ) were associated with higher odds for heavy drinking. There were no differences comparing IRIE and monoracial couples in these associations. In examining couple-level minority stressors, we found that couple-level discrimination ( $aOR1.07$ ) was associated with higher odds of heavy drinking. There were significant interactions between relationship type and couple-level rejection ( $aOR1.10$ ) and couple-level support ( $aOR1.22$ ) on heavy drinking. Follow up comparisons indicate that women in IRIE couple relationships who are heavy drinkers report significantly higher levels of couple-level rejection and a higher lack of couple-level support compared to their light drinking counterparts, and to heavy drinking women in monoracial relationships. Higher levels of relationship stress were associated with higher odds of heavy drinking ( $aOR1.20$ ); the interaction between relationship stress and relationship type was not significant.

**Conclusions.** In the U.S., almost half of queer women are in cohabiting/married relationships, but little research has focused on these relationships. Far less well understood are the stressors and strains on queer women's IRIE relationships. We found multiple stressors, such as relationship stress, that may increase heavy drinking risks for all queer women. Our findings also suggest unique stressors (couple-level rejection and lack of support) that may disproportionately increase risks among women in IRIE relationships. Our findings highlight important areas for couple-level interventions.

## TO END THE HIV EPIDEMIC, WE MUST CONSIDER INTERSECTIONAL APPROACHES TO HEALTH FOR SEXUAL AND GENDER MINORITIES OF COLOR

Rates of HIV diagnoses stabilized over the last decade, however, some groups continue to experience greater rates of HIV infection and inordinate barriers to care. Despite advances in biomedical intervention to prevent HIV (i.e., pre-exposure prophylaxis, PrEP), HIV infection rates remain disproportionately high among Black and Latinx men who have sex with men (MSM) and transwomen (TW). The national initiative to end the HIV epidemic in the US requires focusing on populations where HIV burden is greatest. We use an intersectional framework to investigate diverse, multi-level determinants of health and HIV prevention among Black and Latinx MSM and TW in HIV high-burden areas.

**Abstract 1:** For Black MSM in the Deep South, a conservative environment converges with personal challenges to acceptance and expression. In-depth interviews uncovered unique, cultural challenges to identity affirmation, social network value in supporting identity validation, and social network composition complexity. Black women were identified as key players in the social support of Black MSM. Engaging Black MSM in HIV prevention in the Deep South will be improved when these intersecting cultural and social factors are considered.

**Abstract 2:** An intersectional approach to syndemic theory considers how inequity and oppression experienced by Black gay and bisexual men



(GBM) and TW contributes to multiple, converging health burdens. Results demonstrate how intersections of racism, homonegativity, and structural disadvantage among Black GBM and TW influence syndemic conditions including HIV risk. Future application of syndemic theory will be enhanced by considering the impact of intersectional stigma uncovered in this study.

**Abstract 3:** Inequitable distribution of PrEP services creates structural barriers to HIV prevention among MSM. Geo-spatial mapping of MSM mobile app users revealed inequitable distribution of PrEP services by race/ethnicity, age, and neighborhood. Black, Latino, and Asian MSM were further from PrEP services than White MSM. In neighborhoods with more MSM of color, resources were more limited. These results support the need to consider both individual and structural factors influencing HIV prevention.

The HIV epidemic cannot be ended without centering the experiences of Black and Latinx MSM and TW. Effective intervention is only made possible by acknowledging and addressing intersectional stigma interlocked with structural and social barriers to HIV prevention.

## To Adequately Increase Uptake of PrEP among Young Black Men who have Sex with Men, more Emphasis is Needed on Interventions to Increase Acceptance of Sexual Identity



Latesha Eloppe, Sophia Hussen, Corilyn Ott, Michael Mugavero, Janet M. Turan

**Background.** The potential to end the HIV epidemic is possible with scientific advances in treatment and prevention of infections among those at highest risk. However in the United States, inequities in infection rates are evident among sexual and racial minority populations, especially Young, Black Men who Have Sex with Men (YBMSM) living in the South. These disparities may be amplified due to disparate utilization of biomedical prevention tools like HIV preexposure prophylaxis (PrEP). Previous in-depth interviews (N = 47) with YBMSM elucidated that intersectional stigma related to race and sexual orientation contextualized in a socially conservative, Southern state was a major barrier to accessing PrEP due to inability to personally accept and freely express sexual identity. As a way forward, we explored potential sources of social support among YBMSM to gain self-acceptance of sexual identity.

**Methods.** Twenty-five In-depth interviews were conducted with YBMSM using constructs from the Anderson's Behavioral Healthcare Utilization Model (ABM). Inclusion criteria: 1) HIV- negative infection status 2) Cis-gender men with self-reported sex with men (in the past 6 months), 3) African American, 4) English speaking, 5) Age 16-29 years. Coding and analyses were conducted with NVivo software. A preliminary coding scheme was created for first-level analysis based on ABM constructs. Then based on this analysis, more refined second-level coding was conducted.

**Results.** The median age of participants was 24, with two-thirds reporting having a regular source for healthcare. Common emerging themes were the following: 1) Cultural norms within Southern, Black communities hindered acceptance of sexual identity; 2) Social-support networks facilitated self-validation of sexual identity and; 3) Social support networks were often complex in composition. Within each theme, we discovered several subthemes related to the critical role Black women play in social support networks.

**Conclusions.** As we move the Ending the HIV Epidemic national public health initiative forward, it is vital to understand the critical steps necessary for largely disenfranchised populations to utilize HIV prevention strategies like PrEP. Results presented have been used to inform quantitative survey development in a mixed methods study to evaluate generalizability among YBMSM in the Deep South. Preliminary results suggests intersectional stigma among YBMSM living in the South must be addressed to reach this national goal.

## An intersectional understanding of syndemics experienced by young Black gay and bisexual men



Katherine G. Quinn, Erika Christenson, Jeffrey A. Kelly, Yuri Amirkhanian

**Background.** Syndemic theory has been useful in illuminating the co-existence and reinforcing nature of multiple health and social conditions that contribute to HIV risk. However, one critique of syndemic research has been its tendency to focus on gay and bisexual men (GBM) as a homogeneous population, with little attention to power and oppression along the axes of race, ethnicity, class, or sexual and gender identity. Applying an intersectional framework to syndemics can help demonstrate how social and structural inequities and oppressions facing young Black GBM contribute to and reinforce syndemic health conditions. The current study aimed to characterize and understand syndemics among young Black GBM by incorporating an intersectionality framework.

**Methods.** In 2018, we conducted 50 in-depth qualitative interviews with a conveniences sample of young Black GBM in Milwaukee, WI and Cleveland, OH. Participants were 18 years of age or older, Black or African American men or trans women, and gay, bisexual, or same-gender-loving. Transcribed interviews were coded using a multi-stage analytic coding strategy in MAXQDA qualitative analysis software. We used thematic content analysis to characterize syndemics and intersectional stigma among this sample and examine how intersectional stigma influences syndemic conditions experienced by Black GBM.

**Results.** Our results demonstrate how racism, homonegativity, and structural disadvantage contribute to syndemic conditions of childhood trauma, depression, substance use, and HIV risk experienced by Black GBM. Our results highlight the nature of intersectional racism and homonegativity in participants' lives, and the expectations of masculinity and structural disadvantage faced by many Black GBM. We then demonstrate how these experiences of intersectional stigma influences the syndemic conditions of childhood trauma, mental health, substance use, and HIV risk. Excerpts from interviews are used to illustrate these themes and demonstrate the importance of incorporating an intersectional lens to understand syndemics among Black GBM.

**Conclusions.** This study demonstrates that broader systems of oppression and disadvantage facing young Black GBM contribute to syndemic conditions. Future conceptualizations and measurements of syndemics must capture these experiences to strengthen our understanding of syndemics among young Black GBM.



## Mapping Inequitable Distribution of HIV Prevention Resources by Race/Ethnicity, Neighborhood, and Age among Men who Have Sex with Men



Eric K. Layland, Lik Sam Chan, Elija Cassidy, Joshua Rosenberger

**Introduction.** Black and Latino men who have sex with men (MSM) disproportionately constitute the majority of new HIV diagnoses. Access to HIV/STI testing and pre-exposure prophylaxis (PrEP) reduces HIV infection risk. However, the location of these resources may not be equally accessible to all MSM, creating subgroups of MSM, often clustered by race/ethnicity, who are at greater risk due in part to limited access to preventative services.

**Methods.** In November, 2018, profile content and geo-location data were collected from Asian, Black, Latino, and white MSM users of a social and sexual networking mobile application in New York City ( $n = 1,692$ ) and Los Angeles ( $n = 1,116$ ). In each city, user location was mapped and stratified by race/ethnicity then PrEP service locations

were subsequently overlaid, and, finally, distances between users and nearest PrEP location were estimated in miles. Regression was used to estimate associations of race/ethnicity, age, and neighborhood with distance to nearest PrEP services.

**Results.** Overall differences based on race/ethnicity, age, and neighborhood were seen in both cities, with city maps illustrating different proportions of PrEP services and racial/ethnic distribution. In Los Angeles, white MSM were 0.12 to 0.17 miles closer than other MSM to the nearest PrEP services. MSM in south LA, who were predominantly Black, were furthest from PrEP services. In New York, Asian MSM were 0.26 to 0.32 miles further from PrEP services than all other groups, however, within boroughs, Black MSM and Asian MSM were further from PrEP services than white MSM. In both cities, the youngest and oldest men were furthest from PrEP services.

**Conclusion:** Results of this study highlight potential structural inequities in healthcare access among MSM in Los Angeles and New York. Geo-spatial mapping provides an opportunity to visualize data to understand demographic differences across locations and identify where service needs may be unmet. Future consideration should be given to the characteristics and distribution of MSM when determining where to provide HIV/STI prevention, with a particular focus on race/ethnicity.

## FEMALE SEXUAL HEALTH AND CANCER: BRIDGING THE GAP TO EFFECTIVE EVIDENCE-BASED BEHAVIORAL INTERVENTIONS

**Objectives:** Each year, tens of thousands of young breast cancer (BC) patients confront the difficult decision to medically suppress their ovarian function and undergo abrupt, premature menopause to reduce their risk of cancer recurrence. Unlike natural menopause, young women undergoing ovarian suppression (OS) face severe and disruptive side effects. Profound sexual dysfunction is one of the most prevalent and distressing side effects of OS for young BC survivors. Unmanaged OS-related sexual dysfunction is also the primary predictor for non-adherence to this potentially life-saving treatment. The need for targeted sexual health intervention for this population is pressing because the use of OS in young women is rapidly expanding. We developed and tested a brief, psychosexual intervention targeted to manage sexual dysfunction after OS in young BC survivors.

**Methods:** 20 young BC survivors with sexual dysfunction received a single half-day group intervention that included sexual health rehabilitation strategies, body awareness exercises and elements of mindfulness-based cognitive therapy (MBCT) skills to address sexual symptoms. The 4-hour group meeting was followed by a single tailored booster telephone call one-month later. Assessment measures were completed at two time points: Baseline and 2-months post-group intervention. The Female Sexual Function Index (FSFI) assessed sexual functioning and the Brief Symptom Inventory (BSI-18) captured psychological distress.

**Results:** Analyses examined changes from Pre- to Post-intervention. Total FSFI scores improved significantly from baseline to follow-up ( $n=19$ ,  $p < .02$ ). Effect sizes were moderately large indicating a significant improvement in women's sexual function post-intervention ( $d = .5$ ). Anxiety as measured by the BSI-18 was also significantly improved at the 2-month ( $p < .000$ ) time-point, compared to Baseline 1.

**Conclusions:** Significant improvements in overall sexual functioning and psychological distress were observed 2 months post-intervention, suggesting preliminary efficacy of this brief, targeted intervention to reduce distressing sexual dysfunction in young BC survivors on OS treatment. These promising results demonstrate that a randomized trial of START-OS is warranted.

## Understanding Sexual Help-Seeking for Women with Breast Cancer: How Do Women Who Seek Help Differ from those Who Do Not?



Jennifer Reese, Kristen A. Sorice, Whitney Pollard, Lauren Zimmaro, Mary Catherine Beach, Stephen J. Lepore

**Background/Objectives:** There are considerable barriers to women surviving breast cancer (BC) in seeking help for sexual concerns. The objectives were to determine, in a sample of BC outpatients, (1) how commonly women sought help for sexual concerns, either from a health care provider (HCP), a non-HCP (spouse/partner/relative/friend), or alternate sources (internet/print materials/radio), and (2) whether women who sought help versus did not seek help differed in

their level of sexual concerns or in their confidence in talking with their BC provider about sexual health (communication self-efficacy).

**Methods:** As part of a sexual/menopausal health communication intervention trial, BC patients completed baseline web-based self-report surveys assessing socio-demographic characteristics, help-seeking behavior for sexual concerns in the past 30 days [3 items; 1: discussed with HCP; 2: discussed with non-HCP; 3: sought information from alternate sources], and communication self-efficacy (score range [0-20]). Sexual concerns were measured during screening using a validated item assessing problems with sexual interest, enjoyment or performance (score range [0-10]). Comparisons between women who sought help versus did not were conducted using Chi-square analyses or t-tests.

**Results:** 144 women (M age=56.0; 62% partnered; 67% White; 15% Stage IV) participated, with 67% reporting sexual concerns (M=4.7).

More women sought help from non-HCPs (59%) than from HCPs (24%) or alternate sources (21%). Women who sought help from any source reported significantly worse sexual concerns ( $M=6.1$ ) than those who did not ( $M=3.3$ ,  $p < .001$ ). Surprisingly, women who discussed sexual concerns from their HCP reported comparable communication self-efficacy ( $M=14.4$ ) as women who did not ( $M=15.3$ ,  $p=.38$ ). However, women who sought help from a non-HCP or alternate sources had significantly **lower** communication self-efficacy ( $M=13.6$  and  $13.0$ , respectively) than those who did not seek help from a non-HCP ( $M=16.1$ ,  $p=.004$ ) or alternate sources ( $M=15.6$ ,  $p=.03$ ), respectively.

**Conclusions:** Findings suggest that women tend to seek help for sexual concerns when such concerns are more severe, that they most often seek help from non-HCPs as compared to HCPs, and that they may seek help from sources other than HCPs partly because they lack the self-efficacy to do so from a HCP. Interventions are needed to improve women's communication self-efficacy and to educate both HCP's and women's caregivers on BC-related sexual health so these groups can effectively provide such support.

## Sexual Health and Relationship Enhancement (SHARE) for Women with Breast Cancer: Results from a Clinical Trial



Kristen M. Carpenter, Hannah Holmes, Lora Black, Katherine Conroy

**Objectives:** Test a group psychosexual intervention -- Sexual Health and Relationship Enhancement (SHARE) -- designed for gynecologic cancer survivors in a sample of breast cancer survivors to determine feasibility and efficacy.

**Methods:** Participants were breast cancer survivors ( $N = 28$ ). The majority (53.6%) was diagnosed at stage I (stage II: 35.7%, stage III: 10.7%). The participants were primarily Caucasian (75%) with an average age of 50.6 years ( $SD = 11.7$ , range = 29-79) and the majority were partnered (75%). Intent-to-treat (ITT) analyses were conducted for treatment outcomes. Using all available data, mixed effects modeling tested for change in treatment outcomes from the initial assessment to 3-, 6-, and 9-month assessments. Cohen's  $d$  effect sizes were reported at post-treatment (6 months) and follow-up (9 months). The reliable change index was used to determine whether reliable clinical change had been achieved for each patient.

**Results:** The 12-session attendance rate was 23%. The mean number of SHARE sessions attended was 9 ( $SD=3.2$ ). The rate therapy dropout was 10% ( $n=3$ ). The patients viewed the treatment as helpful; average helpfulness ratings were 2.5 out of 3.0 ( $SD=0.4$ ) and 84% of ratings fell in the moderately to very helpful range. Using a 0 to 10 point scale for cohesion, the means were 8.0 ( $SD=1.1$ ) for involvement in the therapy experience and 9.2 ( $SD=1.1$ ) for felt support. Significant linear effects of time (improvements) were seen for sexual function, satisfaction, and distress ( $p < .001$ ); sexual behavior did not change. Effect sizes of change from baseline to post-treatment and follow-up on significant outcome measures were large ( $d=0.75-1.06$ ). Most participants' improvement in sexual function (65.2%) and sexual distress

(66.7%) was reliable. Almost half of participants reported clinical levels of sexual distress at baseline that decreased to sub-clinical levels at follow-up, and 16.7% of participants had baseline clinical sexual dysfunction that was sub-clinical at follow-up.

**Conclusions:** SHARE-B is feasible and efficacious for addressing sexual morbidity following breast cancer, indicating it is likely possible to deliver to women with a variety of disease sites improving scalability of the intervention.

## Improvement in sexual function after ovarian suppression: Sexual Health and Rehabilitation after Ovarian Suppression Treatment for young breast cancer survivors (SHARE-OS).



Sharon L. Bober, Christopher Recklitis

**Objectives:** Each year, tens of thousands of young breast cancer (BC) patients confront the difficult decision to medically suppress their ovarian function and undergo abrupt, premature menopause to reduce their risk of cancer recurrence. Unlike natural menopause, young women undergoing ovarian suppression (OS) face severe and disruptive side effects. Profound sexual dysfunction is one of the most prevalent and distressing side effects of OS for young BC survivors. Unmanaged OS-related sexual dysfunction is also the primary predictor for non-adherence to this potentially life-saving treatment. The need for targeted sexual health intervention for this population is pressing because the use of OS in young women is rapidly expanding. We developed and tested a brief, psychosexual intervention targeted to manage sexual dysfunction after OS in young BC survivors.

**Methods:** 20 young BC survivors with sexual dysfunction received a single half-day group intervention that included sexual health rehabilitation strategies, body awareness exercises and elements of mindfulness-based cognitive therapy (MBCT) skills to address sexual symptoms. The 4-hour group meeting was followed by a single tailored booster telephone call one-month later. Assessment measures were completed at two time points: Baseline and 2-months post-group intervention. The Female Sexual Function Index (FSFI) assessed sexual functioning and the Brief Symptom Inventory (BSI-18) captured psychological distress.

**Results:** Analyses examined changes from Pre- to Post-intervention. Total FSFI scores improved significantly from baseline to follow-up ( $n=19$ ,  $p < .02$ ). Effect sizes were moderately large indicating a significant improvement in women's sexual function post-intervention ( $d = .5$ ). Anxiety as measured by the BSI-18 was also significantly improved at the 2-month ( $p < .000$ ) time-point, compared to Baseline 1.

**Conclusions:** Significant improvements in overall sexual functioning and psychological distress were observed 2 months post-intervention, suggesting preliminary efficacy of this brief, targeted intervention to reduce distressing sexual dysfunction in young BC survivors on OS treatment. These promising results demonstrate that a randomized trial of START-OS is warranted.

## INNOVATIVE INTERVENTIONS TO IMPROVE HEALTH OUTCOMES AMONG SEXUAL AND GENDER MINORITY YOUTH: FROM CONCEPTUALIZING TO TESTING

Sexual and gender minority (SGM) youth and emerging adults face well-established disparities in a number of mental health and substance use outcomes, many of them related to societal rejection and discrimination. While some digital health and social media health interventions to improve mental health and substance use outcomes exist, very few have been developed with SGM youth in mind. This is a crucial gap because of the unique developmental characteristics and stressors SGM youth face. Interventions that seek to address health disparities among SGM youth

should consider these characteristics and stressors. The goal of this symposium is to share the process of conceptualizing, developing, and testing technology-delivered behavioral interventions focused on SGM adolescents and emerging adults.

First, Dr. Choukas-Bradley will describe results of two mixed-methods studies focused on mental and behavioral health to provide insights about (a) unique needs of SGM youth with regard to development, identity concerns, and relationships; and (b) optimization of developmentally sensitive social media interventions for this group. Dr. Escobar-Viera will then share the development process and preliminary acceptability results of a social media-delivered intervention to reduce social isolation among rural SGM youth. Next, Dr. Egan will describe feasibility testing results for a web-based game to improve help-seeking behavior and coping among SGM youth. Finally, Dr. Vogel will present 3- and 6-month outcomes of a social media-delivered smoking cessation intervention tailored for SGM emerging adults. Speakers will emphasize the theoretical foundation of the relation between intervention components and expected outcomes. Dr. Sherry Pagoto will integrate the speakers' findings and discuss their implications for the advancement of internet and social media-delivered behavioral interventions and for improving health outcomes among SGM adolescents and emerging adults.

## Developmental and interpersonal contexts of sexual and gender minority youth: Insights for intervention development



Sophia Choukas-Bradley, Michael P. Marshal, Brian Thoma, Rachel Salk, Tina Goldstein, Michele D. Levine

Sexual and gender minority youth (SGMY) report disproportionately high rates of mental and behavioral health problems when compared to their cisgender heterosexual peers. While these disparities are well-documented, less is known about the specific developmental and interpersonal contexts that may contribute to elevated mental health concerns among SGMY. Online research and social media-delivered interventions offer a promising avenue to reach SGMY, many of whom may not be able to participate in traditional research studies or interventions.

This presentation offers insights about SGM adolescents' developmental and interpersonal contexts, gleaned from two recent mixed-methods studies of U.S. SGMY. The first study included in-person qualitative interviews with nine GM youth, and an anonymous nationwide online survey with over 1,900 GMY. This study examined a broad range of mental and behavioral health symptoms, as well as social media use, peer and family relationships, and GM-specific identity development. The second study involved in-person qualitative interviews and quantitative surveys with 20 SGMY in treatment for bipolar disorder. Interviews focused on adolescents' experiences at the intersection of SGM identity, mood symptomatology, suicidality, and behavioral health, with an emphasis on relationships with parents, peers, and romantic partners.

Key insights will be discussed regarding the developmental and interpersonal context of SGMY, which can inform intervention development. For example, adolescence is a developmental period during which youth are typically dependent on parents for basic needs, while also heavily influenced by peers and romantic partners. Our data revealed unique stressors in SGMY relationships with parents, peers, and romantic partners. For many adolescents, interactions with peers occur largely online, and for SGMY, social media offers a double-edged sword. Qualitative interviews highlighted that social media can provide an opportunity to connect with and receive support from other SGM peers, paired with risks of peer victimization or negative feedback. Similarly, social media-delivered interventions for SGMY offer both great promise and unique challenges—providing the ability to reach SGMY who may not otherwise be reachable (e.g., those who are rural or not “out” to parents), and to connect SGMY with one another, while also raising ethical and practical challenges. Implications for intervention development will be discussed.

## A social media intervention to reduce social isolation among rural sexual and gender minority youth: Study design and preliminary acceptability



Cesar G. Escobar-Viera, Jaime E. Sidani, Ariel Shensa, Sam Shaaban, Sophia Choukas-Bradley, Bruce Rollman

**Introduction:** Sexual and gender minority youth (SGMY) are at higher risk of social isolation and depression than cisgender heterosexual youth. For rural SGMY, this risk is even higher. While family and school connections protect heterosexual youth from depression, these may not be as available for rural SGMY. Indeed, reducing social isolation and increasing access to SGM-specific mental health resources are top needs of rural SGMY. Many of them turn to social media (SM) for resources/support perceived as unavailable in their surroundings. However, SM can also be a conduit for negative experiences, potentially increasing risk of negative outcomes. We seek to reduce rural SGMY social isolation by developing educational modules to help them take advantage of SM positive aspects while reducing risk of negative interactions. Next, we applied principles of human-centered design (HCD) to guide the development of a SM-based intervention to deliver these modules to SGMY.

**Methods:** Our study comprises a theory-driven, user-informed development, acceptability evaluation, and usability testing of: (1) educational modules and (2) a social media-based delivery tool. For both components, we use an iterative sequence of expert input, development, and participant feedback via 4 rounds of video-recorded online interviews with 40 rural SGMY ages 14–19 recruited from SM. We collect feedback on intervention content and activities as well as design, aesthetics, features, functionality, ease of use, content relevance, and intervention acceptability.

**Results:** We identified 5 key SM use behaviors (e.g., passive use, negative interactions) consistently associated with social isolation and depression. These behaviors informed the development of 5 SGMY-specific educational modules based on the motivational theory of lifespan development and focused on optimizing SM use to reduce social isolation. This presentation will include preliminary results from content and thematic analysis of qualitative data obtained from the video interviews and descriptive statistics for preliminary acceptability.

**Conclusions:** This is the first study that leveraged HCD to develop and test the acceptability of a SM-delivered intervention focused on reducing social isolation among rural SGMY. While data are still being collected and final results not yet available, we will share insights and lessons learned regarding online recruitment of this population and implementation of HCD techniques for research.



## Feasibility of a Web-accessible Game-based Intervention Aimed at Improving Help Seeking and Coping among Sexual and Gender Minority Youth: Results from a Randomized Controlled Trial



James Egan, Matthew DeLucas, Brooke A. Morrill, Mark S. Friedman, Stephanie Corey, Emmett Henderson, William Louth-Marquez, Elizabeth Miller, Kimberly Hieftje, Robert Coulter, Dorothy Espelage, Simon Hunter, Kaleab Abebe

**Introduction:** Sexual and gender minority youth (SGMY; e.g., lesbian, gay, bisexual, and transgender youth) experience myriad health disparities compared with their non-transgender heterosexual peers. Despite much research showing these disparities are driven by experiences of bullying and cyberbullying victimization, few interventions have aimed to improve the health of bullied SGMY. One possible way to improve the health of bullied SGMY is via a Web-accessible game intervention. Nevertheless, little research has examined the feasibility of using this kind of intervention with SGMY. We tested the feasibility of a game-based intervention for increasing help-seeking and productive coping skills among SGMY. Primary hypotheses were high levels of implementation fidelity, game demand, and game acceptability.

**Methods:** We conducted a 2-arm randomized controlled trial (RCT) testing a theory-based, community-informed, Web-accessible computer role playing game intervention. Control condition received a list of resources. Participants completed online surveys at enrollment and 1 and 2-months after intervention delivery. Our primary outcomes were: implementation procedures; game demand; and game acceptability, measured by the valid multidimensional Gaming Experience Questionnaire. We tested hypotheses using a priori benchmarks for feasibility success.

**Results:** Regarding implementation, 240 SGMY aged 14-18 were randomized into the intervention ( $n=120$ ) or control ( $n=120$ ) conditions. All participants completed the baseline survey, 73.3% completed the 1-month follow up, and 64.2% completed the final follow up. Regarding game demand, after enrollment 55.8% of intervention participants successfully downloaded the game, all of whom reported playing it. Of those who played the game, 46.2% reported having a desire to play it again and 50.8% would recommend it to friends. Regarding game acceptability, game-playing participants exceeded hypothesized benchmarks and reported high positive affect ( $M=2.36$ ; 95%  $CI=2.13-2.58$ ), low negative affect ( $M=2.75$ ; 95%  $CI=2.55-2.95$ ), low tension/annoyance ( $M=3.19$ ; 95%  $CI=2.98-3.39$ ), and high competence ( $M=2.23$ ; 95%  $CI=2.04-2.43$ ) while playing the game.

**Conclusions:** We successfully implemented a Web-accessible game RCT with SGMY. Though the demand for the game was lower than anticipated, SGMY found the game to be highly acceptable. A larger

scale trial is needed to test whether the game-based intervention can reduce health problems for SGMY.

## Digital smoking cessation interventions for sexual and gender minority young adults: Outcomes of tailored and non-tailored interventions



Erin A. Vogel, Danielle E. Ramo, Judith Prochaska, Meredith C. Meacham, Gary L. Humfleet

**Introduction:** Sexual and gender minority (SGM) individuals have higher smoking and social media use prevalence than their non-SGM peers. We tested 3-month and 6-month versions of the Put It Out Project (POP), a Facebook smoking cessation intervention culturally tailored to SGM young adults.

**Methods:** Participants were SGM-identified young adult smokers (age 18-25) recruited from Facebook for 3-month (POP-3;  $N=165$ ) and 6-month (POP-6;  $N=137$ ) pilot clinical trials. Interventions delivered weekly live counseling sessions and 90 daily Facebook posts to participants in groups individually-tailored to readiness to quit smoking. Analyses compared biochemically verified abstinence, self-reported 7-day point prevalence abstinence, reduction in cigarettes per week by 50+% from baseline, making a quit attempt during treatment, and stage of change between groups at 3-month and 6-month follow-ups. Analysis A compared outcomes between SGM participants who received a 3-month tailored intervention (POP-3), a 3-month non-tailored intervention (NT-SGM), and two historical control conditions. Analysis B examined effects of intervention duration (3 months vs. 6 months) and tailoring (tailored vs. non-tailored) among participants in the POP-3 and POP-6 trials.

**Results:** Biochemically verified smoking abstinence did not significantly differ between groups, potentially due to challenges with remote biochemical verification (e.g., non-response, nicotine exposure from e-cigarettes). In Analysis A, POP-3 participants were more likely than NT-SGM participants to report abstinence at 3 (23.8% vs. 12.3%;  $OR=2.50$ ;  $p=.03$ ) and 6 months (34.5% vs. 12.3%;  $OR=4.06$ ;  $p<.001$ ) and reduction in smoking at 3 months (52.4% vs. 39.5%;  $OR=2.11$ ;  $p=.03$ ). POP-3 participants were also more likely to report abstinence at 3 months (23.8% vs. 3.3%;  $OR=6.67$ ,  $p=.01$ ) and 6 months (34.5% vs. 13.3%;  $OR=2.78$ ;  $p=.03$ ) and reduced smoking at 3 months (56% vs. 41.7%;  $OR=2.70$ ,  $p=.01$ ) than SGM participants in a historical control condition who received a referral. In Analysis B, tailored interventions resulted in greater likelihood of reported abstinence (Wald chi-square=6.57,  $p=.010$ ) regardless of duration, and 6-month interventions resulted in greater likelihood of reduced smoking (Wald chi-square=9.49,  $p=.002$ ).

**Conclusions:** Findings preliminarily support the effectiveness of a Facebook smoking cessation intervention tailored to SGM young adults. Three months appears sufficient to increase likelihood of abstinence.

## INNOVATIVE TECHNOLOGY-BASED APPROACHES FOR ADDRESSING THE SEXUAL HEALTH NEEDS OF YOUNG SEXUAL MINORITY MEN

Young gay, bisexual and other sexual minority men (YMSM) experience vast sexual health inequities relative to their heterosexual counterparts. Indeed, YMSM experience a disproportionate burden of the HIV epidemic in the United States, and YMSM of color have the highest rates of new infections compared to all other groups. Unfortunately, efforts to address the HIV epidemic have too often ignored the broader sexual health needs of YMSM, which has contributed to documented HIV prevention fatigue in this population. In addition to HIV prevention, YMSM express a need for information about developing a positive sexual self-image, finding and building healthy romantic relationships, having satisfying sexual relationships, and preventing other sexually transmitted infections. Furthermore, most sexual health interventions that have been developed to date do not consider the unique developmental contexts of adolescence, emerging adulthood, and young adulthood; YMSM in each of these developmental periods have differing needs that are not fully met by interventions developed for adult sexual minority men. Finally, most sexual health promotion programs for YMSM are available only to those who live in the largest urban centers in the United States, leaving vast disparities



in sexual healthcare access across the country. The goal of this symposium is to highlight four innovative technology-based interventions that aim to address multiple facets of YMSM sexual health and have the potential to extend the reach of sexual health programs across the United States.

First, Dr. Mary Gerend will present data from a pilot randomized controlled trial assessing the feasibility, acceptability and preliminary efficacy of a text-message-based mHealth intervention that aims to promote sexual health and increase human papilloma virus vaccine uptake among YMSM. Second, Dr. Brian Mustanski will describe implementation strategies for eHealth interventions by presenting data related to the execution of a hybrid effectiveness-implementation trial of the Keep it Up! HIV prevention and sexual health promotion intervention for YMSM. Third, Dr. Michael Newcomb will use data from a pilot feasibility and ongoing randomized controlled trial to describe facilitators and barriers to the successful use of videoconferencing technology to deliver a relationship education and sexual health promotion program to young male couples across the United States. Finally, Dr. Cynthia Cabral will discuss the use of videoconferencing for a motivational interviewing intervention that aims to reduce HIV risk in adolescent sexual minority men, as well as the unique considerations in using this technology with adolescents. Together, these talks represent four novel and innovative strategies for extending the reach of sexual health interventions to YMSM across the United States.

## Using Text Messaging to Increase HPV Vaccination among Young Sexual Minority Men: Results from a Pilot Randomized Controlled Trial



Mary A. Gerend, Kyrstal Madkins, Shariell Crosby, Aaron K. Korpak, Gregory L. Phillips II, Michael Bass, Magda Houlberg, Brian Mustanski

**Background:** Men who have sex with men (MSM) are at high risk for cancers caused by human papillomavirus (HPV), such as anal cancer. A safe and effective vaccine is available to prevent HPV infection, yet vaccine uptake among young MSM remains low. Guided by theory and formative research, we developed a mobile health (mHealth) intervention called txt2protect to increase HPV vaccination among young gay and bisexual men. This study assessed the acceptability, feasibility, and preliminary efficacy of the intervention in a pilot randomized controlled trial.

**Methods:** Young MSM aged 18-25 were recruited from the Chicago area via social media and a local registry to participate in a 9-month sexual health program delivered via text messaging. After completing the baseline assessment, participants were randomly assigned to the treatment (n = 72) or control condition (n = 76). The treatment condition focused primarily on HPV vaccination, with only brief mention of other sexual health practices (e.g., condom use, PrEP, HIV testing), whereas the control condition focused on a variety of sexual health practices with only brief mention of HPV vaccination. Participants received daily text messages for the first three weeks and monthly text messages for the remaining ~8 months of the trial. Primary outcome measures included acceptability (satisfaction with the intervention), feasibility (recruitment and retention), and efficacy as determined by HPV vaccine initiation (i.e., receipt of the first dose of the 3-dose series) by the end of the trial.

**Results:** Participants in the treatment and control condition reported high levels of satisfaction with the program (scores > 4 on a 5-point scale) and scores were similar across conditions. Although retention in the trial was high with over 87% of participants completing the final 9-month assessment, some challenges related to participant recruitment were encountered. Rates of HPV vaccine series initiation were significantly higher among participants in the treatment condition (19.4%) relative to the control condition (6.6%), OR = 3.43 (95% CI: 1.17, 10.08).

**Discussion:** Findings suggest that txt2protect is a highly acceptable and potentially promising mHealth intervention for increasing HPV vaccination among young gay and bisexual men. Future research is needed to refine and strengthen the intervention and explore additional recruitment methods for extending its reach.

## Accelerating eHealth behavioral interventions into practice: The Keep It Up! hybrid effectiveness-implementation trial



Brian Mustanski, Nanette Benbow, Kathryn Macapagal, C. Hendricks Brown, Justin Smith, Bruce R. Shackman, Benjamin P. Linas, Patrick Janulis

**Background:** Despite substantial NIH investment in developing eHealth HIV interventions, little implementation research has examined strategies to effectively scale up these programs. To advance eHealth intervention implementation, we are conducting a county-randomized comparative implementation trial of two delivery approaches for Keep It Up! (KIU!), an online, CDC-best-evidence HIV prevention program for young men who have sex with men (YMSM) that just tested HIV negative. Strategy 1 is a traditional approach of community-based organizations (CBOs) integrating the program into their ongoing HIV testing operations. Strategy 2 is direct-to-consumer (DTC) strategy with home-based HIV/STI testing. This presentation describes the protocol for target county selection and outcome measures in the trial as an illustration of implementation research for behavioral interventions.

**Methods:** We reviewed geographic clustering of counties with 1,500+ YMSM. Standalone counties were automatically selected for inclusion. Among clustered counties, we selected the one with the most Black and Latino 18–29-year-olds and removed those directly adjacent, repeating this procedure until 64 counties were selected. Two adjacent counties were added based on topography.

Selected counties were stratified and randomized 2:1 to receive KIU! via the CBO or DTC strategy. Funding proposals were solicited from CBOs in the 44 CBO-strategy counties. Counties with successful CBO applicants were checked against the DTC counties to ensure balance. Outcomes for this type III hybrid trial follow RE-AIM, with the primary outcomes being impact (reach x effectiveness) and cost per infection averted. We also capture various metrics of adoption and implementation from YMSM self-report, KIU! meta-data, and CBO and DTC staff reports and interviews.

**Findings:** The CBO-strategy arm selected 14 CBOs for funding in the first round. A second funding announcement was released Fall 2019, with the goal of selecting another 8 CBOs, resulting in 22 counties per arm. The subsequent panel presentations will discuss the pragmatic design of each arm as well as the refreshing of the intervention technology to meet the demands of scalability.

**Implications for Behavioral Interventions:** Given the national urgency to end the HIV epidemic, understanding the best strategies to implement eHealth HIV interventions to reach the most people is critical to realizing the cost-effective scalability promised by such interventions. Careful selection of research targets and unobtrusive measures is critical to maintaining scientific rigor while remaining pragmatic in these studies.

## Using Videoconferencing to Extend the Reach of Relationship Education and HIV Prevention for Young Male Couples



Michael Newcomb, Jim Carey

**Background:** Young men who have sex with men (YMSM) bear a disproportionate burden of the HIV epidemic, and many new infections occur in the context of serious romantic relationships. Relationships also provide myriad benefits that promote mental and physical health. Thus, our team developed 2GETHER, an innovative relationship education and HIV prevention program for young male couples. This presentation will describe the adaptation of 2GETHER for remote administration via videoconferencing as part of a national randomized controlled trial, as well as barriers and facilitators to the use of this medium for intervention.

**Methods:** We adapted 2GETHER in two phases. Phase 1 included researching videoconferencing platforms, refining intervention content for online delivery based on literature review and expert consultation, and internal testing. In Phase 2, we conducted a pilot trial of the adapted intervention with 10 dyads (N = 20). Participants were diverse in terms of race/ethnicity, HIV status, and geographic location. After completing a baseline assessment, couples completed group skill building sessions, followed by individualized couple sessions for skill implementation. Upon completion, participants completed a 2-week posttest and exit interview.

**Results:** During Phase 1, we made several alterations to the group sessions to address participant fatigue. First, we split the 2 group sessions into 3 sessions to minimize loss of attention. Second, we pre-recorded videos of narrated PowerPoint slides of intervention content and sent them to participants 1 week prior to group sessions to facilitate briefer, more focused group discussions. The content and format of the individualized sessions were not altered. All group and individual sessions were conducted via BlueJeans videoconference, which we selected for its usability, ability to conduct group meetings with ease, and security features. During the Phase 2 pilot feasibility/acceptability trial, all participants completed all study components and reported few concerns with the format or content. In this pilot trial and the ongoing randomized controlled trial of this adapted intervention, we have identified several barriers to successful implementation of this approach, including difficulty conveying affect and building rapport via videoconferencing, distractions and loss of privacy in participants' home setting, and variations in access to sexual healthcare services by area of participant residence.

**Discussion:** Results support the feasibility and acceptability of delivering 2GETHER online via videoconferencing; we have been able to

reach couples throughout the country with diverse relationship and sexual health experiences. Together with evidence of preliminary efficacy from the original pilot trial, 2GETHER shows strong promise of efficacy in addressing the health needs of young male couples across the U.S.

## Videoconference Motivational Interviewing with Young Sexual Minority Men (YSMM): Opportunities and challenges



Cynthia Cabral, Carly Wolfer, Ore Shalhav, Ali Talan, H. Jonathon Rendina, Tyrel J. Starks, Kathryn Macapagal, David Moskowitz, Michael Newcomb, Brian Mustanski

**Background:** Younger sexual minority men (YSMM, aged 14-20) frequently do not have access to sexual health education that meets their unique needs, and report that any sexual health education they receive centers on the experiences of their cis heterosexual counterparts. YSMM are also at an increased risk for HIV transmission.

**Methods:** The Northwestern University SMART Project aims to address this concern by providing a comprehensive interactive online sexual health education program for YSMM intended to reduce participants' HIV and STI risk. If participants are not responsive to the online education component of the SMART program, they have the opportunity to be randomized to a brief Motivational Interviewing intervention delivered via videoconference (e.g., Facetime, Skype) delivered by Masters and PhD level e-coaches with mental health training. This discussion will focus on "lessons learned" for delivering a motivational interviewing intervention remotely with this population.

**Results:** To date, 185 participants have been randomized to the SMART e-coaching condition. Of these, 89 have engaged in at least one session of e-coaching and 75 have completed the e-coaching sessions. Unique challenges with this intervention strategy include negotiating boundaries during e-coaching calls, discussing and clarifying limits to confidentiality, managing inquiries from parents and guardians, and ensuring flexibility around scheduling e-coaching calls. Participants who have completed the e-coaching calls report a positive experience overall, stating that it was helpful to talk to the e-coaches about sex, safe sex practices, and their sexual identity as a YSMM.

**Conclusions:** Continued engagement and flexibility with YSMM are vital factors in the remote delivery of a motivational interviewing based intervention intended to reduce HIV/STI transmission. These findings support the continued development of such interventions for YSMM.

# PAPER ABSTRACTS

## Poor sleep and tiredness predict daily self-efficacy for medication adherence in older sexual minority men living with HIV



Brett M. Millar, Mathilde Ghislain, Nicola Forbes, Juan P. Castiblanco Bustos, Carly Wolfer, H. Jonathon Rendina

**Background:** Given the myriad health benefits of achieving and maintaining an undetectable viral load for people living with HIV, we need to better understand the complex factors that can compromise medication adherence on a given day. Existing research, however, has rarely considered the role of sleep, even though the evidence base for poor sleep's deleterious impact on cognition, emotion, and self-regulation, is vast and growing. Our study explores how last night's sleep quality and today's current tiredness each predict today's self-efficacy for medication adherence, emotion dysregulation, and perceived ability to handle challenges, among a sample of older sexual minority men living with HIV.

**Method:** Our EMA study involves a 21-day daily diary design. Participants are NYC-based older (50+) sexual minority men (SMM) living with HIV, reporting suboptimal antiretroviral (ART) adherence. As well as other mood and behavior items, the daily diary asks about: last night's sleep quality (A), current tiredness (B), medication adherence self-efficacy (C), emotion dysregulation (D), and perceived ability to handle today's challenges (E). Multilevel linear modeling tested six models: the influence of within-person A on C-E, and the influence of within-person B on C-E separately, adjusting for between-person A and B, respectively.

**Results:** Analyzing 845 days of data from 46 participants (mean completion of 18.4 diaries, out of 21), worse-than-usual sleep quality and greater-than-usual tiredness each predicted: lower self-efficacy for medication adherence ( $B=0.01$ ,  $p<.05$ ;  $B=-0.29$ ,  $p<.001$ ), greater emotion dysregulation ( $B=-0.01$ ,  $p<.01$ ;  $B=0.60$ ,  $p<.001$ ), and lower perceived ability to handle the day's challenges ( $B=0.01$ ,  $p<.01$ ;  $B=-0.13$ ,  $p<.01$ ).

**Discussion:** We found that last night's poor sleep and current tiredness predicted each outcome in a sample of older SMM living with HIV. This highlights the relatively under-studied importance of sleep for factors likely affecting medication adherence. Interventions to improve sleep health thus have the potential to improve ART medication adherence, as well as general physical and mental health. These are especially needed for older people living with HIV given that rates of sleep disturbance associated with normative aging are particularly elevated in the context of HIV, as well as other comorbid chronic conditions. This much-needed focus on sleep represents an innovative opportunity for behavioral medicine research and practice to utilize a broader, whole-person framework in addressing the factors that can either promote or compromise health.

## Syndemics, Self-regulation, and HIV Transmission Risk among Gay and Bisexual Men



Raymond L. Moody, Christian Grov, H. Jonathon Rendina

**Background:** Research has identified multiple epidemics that disproportionately affect gay and bisexual men (GBM), have high levels of comorbidity, and work synergistically to increase HIV transmission risk

behavior (TRB). The syndemic framework has been useful in identifying GBM at increased risk of TRB but less is known about potential mechanisms that link the epidemics that are part of the HIV syndemic. The present study is a longitudinal analysis of executive attention and emotion dysregulation as mediators of the effects of childhood sexual abuse and intimate partner violence on depression, sexual compulsivity, polydrug use, and TRB.

**Methods:** Data are from One Thousand Strong, a cohort of HIV-negative GBM from across the United States ( $Age=40.33$ ,  $SD=13.67$ ). Childhood sexual abuse and intimate partner violence were assessed at baseline and 12-month follow-up. Executive attention, emotion dysregulation, depression, sexual compulsivity, and polydrug use were assessed at 24-month follow-up. TRB (i.e., condomless anal sex with male casual partner) was assessed at 36-month follow-up. A negative binomial logistic regression model was estimated using Mplus with executive attention and emotion dysregulation as mediators of the associations between childhood sexual abuse and intimate partner violence on depression, sexual compulsivity, polydrug use, and TRB.

**Results:** The analytic sample included 922 GBM. In our path model, adjusting for sociodemographic characteristics, childhood sexual abuse was directly associated with greater emotion dysregulation and poorer executive attention, and was positively associated with depression and sexual compulsivity through these difficulties with self-regulation. Intimate partner violence was associated with greater emotion dysregulation but not with executive attention, and was positively associated with depression and sexual compulsivity through these self-regulation difficulties. Childhood sexual abuse and intimate partner violence were both associated with TRB through the combined indirect effects of self-regulation difficulties, depression, sexual compulsivity, and polydrug use.

**Conclusions:** The results from this study provide supporting evidence that executive attention and emotion dysregulation mediate associations between several epidemics considered part of the HIV syndemic among GBM. Interventions that target executive attention and emotion dysregulation may have a significant impact on TRB among GBM by reducing the syndemic burden in this population.

## Minority Stress and the HPA Axis: Daily internalized HIV stigma and cortisol reactivity among sexual minority men with HIV



H. Jonathon Rendina, Ali Talan, Aria Tilove, Ore Shalhav, Laurel Weaver, Joseph A. Carter, Hyejin Park

**Background:** The minority stress literature has established both between-person and within-person effects of internalized HIV stigma—a common stressor for people living with HIV—on a range of affective and behavioral health outcomes. However, little published work to date has examined the extent to which minority stress activates a hypothalamic-pituitary-adrenal (HPA) axis response, which may help to elucidate one mechanism through which stigma leads to health disparities.

**Method:** We collected ecological momentary assessment data on stigma paired with three salivary collections (i.e., at waking, around noon, and around 9pm) for ten days from sexual minority men (SMM) living with HIV in New York City. Daily data on internalized HIV stigma were disaggregated into between- and within-person effects based on standard procedures for variance decomposition. In addition to log cortisol values for each time point, we also calculated an area under the curve (AUC) value for each day. We conducted three mixed models to examine how disaggregated effects of afternoon reports of internalized



HIV stigma were associated with daily AUC and the afternoon and evening cortisol levels adjusted for morning levels. Across models, we adjusted for daily caffeine use, nicotine use, and exercise.

**Results:** We analyzed 252 days' worth of data across a diverse sample of 46 SMM. Across models, results were consistent—we found a significant and positive effect of between-person internalized HIV stigma on cortisol AUC ( $B = 0.79, p < .001$ ) as well as afternoon ( $B = 0.04, p = .02$ ) and evening ( $B = 0.10, p < .001$ ) log cortisol levels. In other words, people who tend to experience higher levels of internalized HIV stigma across days also experience higher cortisol on a given day. In contrast, we did not identify within-person effects ( $B = 0.79, p = .94$ ;  $B = -0.03, p = .47$ ;  $B = 0.06, p = .14$ ), suggesting unique daily experiences of internalized HIV stigma did not *co-occur* with increased cortisol.

**Conclusions:** This study provides support for a biopsychosocial model of minority stress and health, suggesting that SMM prone to experiencing internalized HIV stigma have higher daily levels of cortisol. Surprisingly, we did not find increases in cortisol during specific *event-level* occurrences of higher internalized HIV stigma. Given the immune-suppressing effect of cortisol, particularly if chronically activated, this suggests the importance of stigma reduction interventions to improve health for SMM living with HIV.

## Using perceptual mapping to understand PrEP use in trans women by patient self-advocacy: Implications for message development



Sarah Bauerle Bass, D'Avanzo A. D'Avanzo, Jesse A. Brajuha, Guitierrez Luis, Mohammed Alhajji, Patrick J. Kelly, Jae Sevelius

**Background:** US estimates indicate trans women are 34 times more likely to have HIV. Pre-exposure prophylaxis (PrEP) shows significant promise for reducing HIV risk, but trans women have low levels of use. Understanding unique barriers to PrEP use among trans women is important for reaching this at-risk population.

**Methods:** 128 trans women from Philadelphia and San Francisco were surveyed to assess perceptions about PrEP. A k-means cluster analysis using a modified patient self-advocacy (PSA) scale was conducted and then Perceptual mapping (multidimensional scaling) and vector modeling methods were used to create 3-dimensional maps to show how barriers and facilitators to PrEP use differed by group and potential message strategies for an intervention. This method is used in commercial marketing to assess highly targeted strategies for message development.

**Results:** Perceptual maps show conceptual differences about barriers and benefits of PrEP use between “engagers” (high PSA) and “avoiders” (low PSA). Message strategies for benefits of PrEP use were similar (“Makes me feel in charge”), but were dissimilar for barriers (Engagers were concerned about feeling less feminine if on PrEP and noted a preference for using condoms; Avoiders were concerned that even if they were on PrEP they would get “HIV anyway”). Both groups were concerned about the possible effect on hormones. Additional message strategies for engagers include addressing that they have worries about other “more important” things in life and a concern that their sex partners would think they would “give them HIV” if on PrEP. Importantly, both groups say that spending time in the trans community and that having sex is an important way to feel good about being a trans woman were important and could be emphasized in messaging.

**Conclusions:** These methods are useful in understanding trans women's unique PrEP perceptions and potential message strategies that could be embedded in communication and interventions. While conceptual differences were seen in those with high and low PSA,

message strategies are similar, making it possible to target interventions to both groups.

## A Pragmatic Randomized Controlled Trial to Accelerate Diffusion of Pre-Exposure Prophylaxis for HIV Prevention



Lindsay Young, John Schneider

**Background:** Despite clear efficacy of Pre-Exposure Prophylaxis (PrEP) in preventing HIV transmission, meaningful uptake in populations most likely to seroconvert has yet to occur. Newer network type interventions may be useful for PrEP implementation, particularly as the epidemic in the United States becomes more concentrated.

**Methods:** We tested a peer change agent Type I network intervention aimed at increasing early PrEP linkage to care among the network members connected to young Black men who have sex with men (YBMSM) experiencing high rates of HIV from 2016-2018. The intervention included a single half-day training and mini-booster sessions on how YBMSM can engage and motivate their network members to seek out and start PrEP. We randomly assigned 423 YBMSM in Chicago to receive the network intervention versus a time-matched control, with an independently collected primary surrogate outcome of PrEP referral and/or linkage to a PrEP orientation appointment among the Facebook network friends of YBMSM study participants.

**Results:** Each study participant in the trial had on average 1822 Facebook network friends. Over the 55-week observation period, there were 65 network members with observed PrEP referral or linkage to care. Network members with referral or linkage were more likely to be connected to study participants in the intervention arm than the control condition (aOR 1.50 (1.09-2.06);  $p=0.012$ ). During the observation period PrEP referral was most likely to occur within 3 days of an intervention session compared to control OR 0.07 (0.02-0.013);  $p=0.007$  resulting in 1-2 referrals of network members per session.

**Conclusions:** A peer change agent Type I network intervention was effective at diffusing PrEP through a social network of individuals highly susceptible to HIV. This low intensity intervention demonstrated network level impact in increasing PrEP referral and linkage to care among populations that have experienced limited PrEP care engagement in the United States. (Funded by the National Institute of Allergy and Infectious Diseases; ClinicalTrials.gov number, NCT 02896699)

## The Structure of HIV Risk and Protection in a Facebook Group Affiliation Network among Young Black Men who have Sex with Men



Lindsay Young, Kayo Fujimoto, John Schneider

The social networks of young sexual and racial minorities are critical in determining the HIV protections and risks they experience. Increasingly, their interactions occur via social networking sites (SNS) like Facebook, making online networks critical prevention engagement frontiers. Here, we underscore the intermediary role played by Facebook groups in an online HIV risk network among young Black men who have sex with men (YBMSM). Although HIV risks and protections are thought to emerge from the organization of individual behaviors in a network, Facebook group memberships could supplement such organization by virtue of the topics discussed in those spaces. As such, we investigate how Facebook group topics directly related to HIV vulnerability (e.g., LGBTQ Identity) and indirectly related (e.g., Professional Development) work in combination with HIV-related traits of YBMSM as mechanisms of online interaction.



We draw on data from a longitudinal cohort study of YBMSM in Chicago. Demographic, behavioral, and network data, including Facebook group affiliations, were collected from consenting respondents (N=347). We conceptualize YBMSMs' Facebook group affiliations as a network comprised of two node sets — YBMSM and Facebook groups — with ties between YBMSM and groups representing their group affiliation. Then, using a class of statistical models called exponential random graph models, we estimate the likelihood of group affiliation ties being present as a function of group topics and YBMSMs' HIV-related characteristics.

The main component of the Facebook group affiliation network included 82 groups and 221 YBMSM, with 1,260 affiliation ties between them. Topically, the 82 groups were categorized as focusing on *LGBTQ Identity, Personal/Professional Development, General Chat, Nightlife, Sexual Attraction, or Other*.

Results show that individuals were less likely to belong to LGBTQ Identity, Sexual Attraction, and Chat groups and more likely to belong to Personal/Professional Development groups. Meanwhile, YBMSM who were members of at least one LGBTQ Identity, Sexual Attraction, and/or Nightlife group were more likely to cluster around pairs of these groups, respectively. Finally, group topic preferences were significantly associated with specific HIV-related characteristics. YBMSM who engaged in condomless sex tended to affiliate with LGBTQ Identity groups, those who knew about PrEP tended to affiliate with Chat groups, and regular testers tended to belong to LGBTQ Identity and Nightlife groups.

As SNS are now mainstreamed, it behooves researchers to understand their role in forging sexual norms in high-risk populations. Developing interventions that leverage the Facebook group network of YBMSM and, by extension, the topics they discuss, may prove more effective than off-the-shelf interventions that remain agnostic to the needs and interests of this population.

## Addressing life stressors: Results of an individually tailored intervention for patients with a history of repeat STIs



Steven A. John, Nicole B. Carnegie, Immaculate Apchemengich, Lindsay Emer, Lance S. Weinhardt

**Background:** HIV and sexually transmitted infection (STI) counseling and testing services focus on behavior change theory, but patients presenting with repeatedly acquired STIs indicate the need for more intensive services focused on broader, upstream life stressors inhibiting behavior change. We sought to test the efficacy of an individually tailored socio-contextual intervention focused on addressing life stressors to reduce repeat STI risk.

**Methods:** A Midwestern sample of STI clinic patients with a history of repeatedly acquired STIs ( $n = 128$ ,  $M_{age} = 29$  years, 65% male, 91% Black or African-American) were randomized to receive either the standard of care intervention or experimental, individually tailored strengths-based prevention case management with electronic health record chart review conducted at 12 months post-intervention to compare rates of incident STI. We used multiple imputation to support intent-to-treat and fully-adjusted logistic regression precision model analyses.

**Results:** Individuals who received the experimental intervention had a lower rate of repeat infection compared to the standard of care group at 12 months post-intervention (37% vs. 43%, respectively). After adjusting for baseline variable imbalances and precision variables, patients in the standard of care group had 2.37 times higher odds of repeat infection compared to those in the experimental group at 12 months post-intervention ( $p = 0.065$ ). Individuals who scored higher in

internal locus of control had significantly lower odds of subsequent STI (AOR = 0.91;  $p = 0.046$ ). Higher score on the drug abuse screening test (i.e., DAST-10) was significantly associated with higher odds of subsequent STI (AOR = 1.47;  $p = 0.002$ ).

**Discussion:** A supplemental, case management intervention had a meaningful intervention effect on reducing repeat STI risk among patients with a history of repeat infections in our underpowered analysis. Prioritizing socio-contextual needs is important when patients present with repeat infection. Combining this intervention strategy with STI partner referral services and substance use prevention and treatment programs should be tested in future implementation science research to further reduce the risk of repeatedly acquired STIs among STI clinic patients with a history of recurrent STIs.

## Caballerismo and communication as predictors of partner recruitment among Latinx sexual minority couples



Gabriel Robles, Trey V. Dellucci, Beverlin del Rosario, Ruben H. Jimenez, Tyrel J. Starks

**Background:** Latinx sexual minority men (LSMM) have the largest growing incidence rates of HIV diagnoses. Couples-focused research among sexual minorities has received considerable attention, because transmission risk behaviors are higher among main partners. Many dyadic studies utilize a sequential index approach to recruiting couples. One person in the couple (the index case) is recruited into the study. He is then asked to recruit his partner. While this sequential recruitment strategy is promising, some evidence suggests that index recruitment may bias samples to over-represent couples with better dyadic functioning. Given that LSMM have higher incident rates of HIV than other ethnic groups, it is critical to identify factors that would facilitate partner recruitment of LSMM into HIV prevention programs.

**Methods:** A national sample of 635 Latinx index cases was recruited via social media apps and 95 index partners were able to recruit their partner. Most men identified as gay (88.2%), earned less than \$30k per year (62.6%), had less than a bachelor's degree (61.9%), and were HIV negative/unknown (77.4%). Most index partners identified their main partner's ethnicity as also being Latinx (66.2%) and completed the survey in English (80.3%). Participants provided demographic information and completed the Communication Patterns Questionnaire and the Machismo Scale measuring both *machismo* and *caballerismo* (e.g., chivalry).

**Results:** Logistic regression analyses were conducted to examine the effect of dyadic communication, *machismo* and *caballerismo*, and demographic factors on the ability to recruit one's partner. The model tested all potential interactions of dyadic communication, *machismo* and *caballerismo* on the ability to recruit one's partner. Non-significant interactions were removed using a reverse hierarchical entry procedure. Analyses adjusted for HIV status, demographics and relationship length. Results indicated that index partners who were high in *caballerismo* and low in *machismo* had greater success in recruiting their partner, while those who were low in both *caballerismo* and *machismo* were the least successful. Second, there was a significant interaction between the constructive communication and *caballerismo*. Those who were high in *caballerismo* and low in constructive communication had the highest probability of successfully recruiting their partner, while positive communication was only a predictor of successful recruitment when *caballerismo* was low.

**Conclusion:** The findings in the present study have significant theoretical and clinical implications. The findings suggest that although communication is a useful health behavior to examine among couples, these factors would benefit from further consideration of cultural factors relevant to racial minorities, thus, better tailoring campaigns to recruit LSMM and facilitate partner engagement.

## “HIV made me stronger:” Conceptions of Successful Aging among Older Women Living with HIV



Anna A. Rubtsova, Tonya N. Taylor, Gina Wingood, Deborah Gustafson, Marcia Holstad

Older (age 50+) women living with HIV (OWLH) face multiple challenges related to the intersection of HIV infection and aging, e.g. multimorbidity and polypharmacy, as well as HIV- and gender-related stigma and discrimination. However, in our previous quantitative study we found a high prevalence of self-rated Successful Aging (SA) among OWLH enrolled in the Women’s Interagency HIV Study (WIHS). In the sample of 386 OWLH, 84% rated their SA to be 7 or higher on a scale from “1” (least successful) to “10” (most successful). Little is known about what accounts for this high prevalence and exactly how OWLH understand SA. To date, several studies examined SA among predominantly white male HIV-seropositive adults but not among OWLH. Therefore, the purpose of this qualitative study was to examine subjective understandings of SA among OWLH. The study used purposive sampling to recruit OWLH enrolled in WIHS and, as a comparison group, OWLH who were not enrolled in WIHS but received clinical care. The sample for these analyses included 19 OWLH who participated in semi-structured interviews - 10 in Atlanta, GA (3 WIHS and 7 non-WIHS) and 9 in Brooklyn, NY (5 WIHS and 4 non-WIHS). The interviews were conducted between October 2018 and March 2019 and ranged from 30 to 120 minutes. Transcribed interviews were analyzed using qualitative content analysis methodology within the grounded theory approach. Several themes emerged in participants’ definitions of SA, such as self-care, taking HIV medications, and being resilient (“HIV made me stronger”). Both WIHS and non-WIHS participants emphasized life course perspective in their definitions of SA, i.e. women viewed their aging successful as a more stable phase of life in contrast to hardships they experienced while being younger (e.g., drug use, incarceration). Taking together with our earlier quantitative findings, these results suggest that SA is achievable among OWLH. Interventions enhancing resilience should be considered to promote SA in OWLH.

## Different Types of HIV Stigma and Medication Adherence: The Mechanistic Roles of ART Knowledge and Adherence Self-efficacy



Chengbo Zeng, Xiaoming Li, Shan Qiao, Xueying Yang

**Background:** Previous studies have demonstrated the negative relationship between HIV-related stigma and medication adherence among people living with HIV (PLWH). Yet, little is known about the relationships between different types of stigma (i.e., perceived community stigma, internalized stigma, and enacted stigma) and medication adherence. Additionally, there is few studies investigating the mechanisms through which types of stigma affect medication adherence. Based on the information-motivation behavioral skills (IMB) theory, the current study proposed that different types of stigma could impair medication adherence through their negative influences on ART knowledge and adherence self-efficacy. This study aimed to examine the mechanistic roles of ART knowledge and adherence self-efficacy on the relationships between different types of stigma and medication adherence.

**Method:** Data were derived from a baseline data of a prospective cohort study. Data collection was conducted from November 2017 to February 2018 in Guangxi, China. Six hospitals/clinics in five cities with the largest number of HIV patients were selected, and 1,198

PLWH were recruited. Participants were assessed on sociodemographic characteristics, medication adherence, different types of stigma (i.e., perceived community stigma, internalized stigma, and enacted stigma), ART knowledge, and adherence self-efficacy. Path analysis was used to examine the indirect paths from different types of stigma to medication adherence through ART knowledge and adherence self-efficacy.

**Results:** Among the 1,198 PLWH, 64.4% were male, and mean age was 39.4 years. The indirect paths from internalized stigma to medication adherence through ART knowledge (Std.β=-0.013, 95%CI: -0.004~0.000, p=0.049) and adherence self-efficacy (Std.β=-0.033, 95%CI: -0.008~-0.003, p< 0.001) were statistically significant. Perceived community stigma could only affect medication adherence through adherence self-efficacy (Std.β=-0.012, 95%CI: -0.003~0.000, p=0.015) but not through ART knowledge (Std.β=-0.001, 95%CI: -0.001~0.000, p=0.526). There were no significant indirect effects from enacted stigma to medication adherence through ART knowledge (Std.β=-0.004, 95%CI: -0.005~0.000, p=0.213) and adherence self-efficacy (Std.β=-0.009, 95%CI: -0.008~0.000, p=0.07).

**Conclusion:** The mechanistic roles of ART knowledge and adherence self-efficacy are different in the relationships between different types of stigma and medication adherence. To improve medication adherence among PLWH, tailored interventions focusing on different types of stigma are warranted. Health education on increasing ART knowledge and resilience based intervention on improving adherence self-efficacy can also alleviate the negative influences of stigma on medication adherence.

## Sexual Satisfaction and Sexual Agency is Associated with Well-Being for Women Regardless of Age or Relationship Status



Christine M. Curley

Health psychology has focused primarily on nutrition, exercise, and smoking cessation to improve wellness, largely failing to discuss the health benefits of sexual satisfaction. This study found a significant association between sexual satisfaction, relationship satisfaction, and sexual agency, and well-being for women of varying ages.

Studies have found a strong association between sexual satisfaction and overall well-being, but have not directly examined whether this differs for women of varying ages or depends upon relationship status. This study recruited women to examine: (1) that there will be an association between age, sexual agency, relationship satisfaction and sexual satisfaction; (2) that higher levels of sexual satisfaction will be associated with higher levels of overall well-being; (3) which factors are more strongly predictive of sexual satisfaction; and (4) the extent to which relationship status impacts the association between the variables examined.

**Methods:** The survey sample consisted of 347 women aged 18-76; ( $M= 34.29$ ;  $SD=14.19$ ); 79.9 % White; and 63% heterosexual (of participants reporting their sexual orientation). Participants answered a series of survey questions about their overall well-being, sexual satisfaction, sexual agency, relationship satisfaction, and sociosexual orientation using established validated measures, as well as demographic questions including relationship status and socioeconomic status.

**Discussion:** For all women, regardless of age, higher sexual satisfaction was correlated with higher overall well-being; this finding is important as it counters the misconception that sexual satisfaction matters less for women as they grow older. Higher sexual agency scores were associated with higher sexual satisfaction scores. Particularly striking was the strength of the correlation between sexual

agency and sexual satisfaction, and that sexual agency was a stronger predictor of sexual satisfaction than relationship satisfaction.

Regression analyses revealed that the strongest predictor of sexual satisfaction was sexual agency, followed by relationship satisfaction, with neither age nor sociosexual orientation being significant predictors. Partial correlations indicated that relationship status does not alter the association (1) between age and overall well-being; (2) between sexual satisfaction and overall well-being; (3) between sexual agency and overall well-being; and (4) between sexual agency and sexual satisfaction.

## Predictors of Suicidal Ideation and Suicide Attempts among a Nationwide Cohort of Sexual Minority Men (SMM)



Ali Talan, K. Marie M. Sizemore, Nicola F. Tavella, Aria Tilove, H. Jonathon Rendina, Raymond L. Moody

**Background:** Research has documented significant associations between minority stress processes and negative health outcomes, including suicidality (i.e. suicidal ideation and suicide attempts). Consistent with the minority stress theory, suicidality among SMM is associated with discrimination, harassment, and other victimization, emanating from diverse sources (e.g., family, peers, schools, and communities). While much of the literature has focused on interpersonal discrimination, little is known about how structural discrimination, represented by state-level policies regarding LGBT populations, influence risk of suicide among GBM individuals. We hypothesize that stigma at the structural level shape prejudiced policy, facilitate marginalization, and increase risk of suicidality.

**Methods:** Data are from UNITE, a cohort study of HIV-negative SMM from across the United States (N=7952; Mage=32.7; SD=11.4). Suicidality was assessed using the NIMH Ask Suicide-Screening Questions Toolkit. We conducted chi-square analyses to examine group difference on suicidality. We also conducted a binary logistic regression to examine the association between structural discrimination and suicidality, adjusting for sociodemographic characteristics, interpersonal discrimination, internalized homophobia, and mental health factors known to influence suicidality risk. We adjusted for resiliency (e.g., perceived social support, gay community attachment, “outness”). Structural discrimination was assessed by the State Equality Index (SEI), measuring LGBT-related legislation (e.g., parenting, religious refusal and relationship recognition, non-discrimination, hate crimes, health/safety, and youth-related laws and policies).

**Results:** We found that 20.7% of the sample reported a suicide attempt in their lifetime. In the past few weeks, 17.6% reported experiencing suicidal ideation, with 9.1% reporting thoughts of killing themselves in the past 7 days. Significant differences by sociodemographic characteristics, interpersonal discrimination, internalized homophobia, resiliency and mental health factors, were identified. Our regression analysis indicated that individuals living in states with the most comprehensive equality measures had significantly lower odds of both suicidal ideation (AOR = .84, p=.03) and suicide attempts (AOR = .85, p < .001).

**Conclusion:** Limited research on minority stress includes measures of stigma at both the individual and structural level to determine whether these factors independently predict adverse health outcomes. This study demonstrated that structural discrimination, in addition to known individual and interpersonal risk factors, increase risk of suicidality among GBM. These results suggest that identifying structural interventions may help to reduce sexual orientation-related disparities in suicide attempts.

## Hablando Claro: Clear Talk! Applying an Intergenerational Approach to Prevent HIV among Latinas



Melawhy L. Garcia, Natalia Gatdula, Lilia Espinoza, Erika Bonilla, Mara Bird, Britt K. Rios-Ellis

**Background:** Hispanic/Latinos in the U.S. are disproportionately affected by HIV/AIDS. By 2016, Latino men who had sex with other men were the second most-affected subpopulation, and HIV diagnoses in Latino gay/bisexual men increased by 13%. Latinas who engaged in heterosexual contact were the fifth most-affected subpopulation. One in 6 are unaware of their HIV status. Despite public health efforts, Latinas experience a complex set of factors that place them at risk for infection. Risk factors include lack of access to health care, low socioeconomic status, traditional cultural norms (e.g., lack of sexual health communication), and low rates of HIV testing due to lack of knowledge and low perceived risk.

**Objective:** To test the efficacy of Hablando Claro: Clear Talk!, a culturally tailored intervention to reduce HIV infection risk among Latina adolescents (12-18 years old) and their female caregivers by increasing HIV knowledge, intergenerational sexual communication, and HIV testing.

**Methods:** Hablando Claro: Clear Talk! is an adaption of the evidence-based intervention Teen Health Project. Intergenerational dyads participated in one introductory session, two half-day sessions, and four monthly support groups led by trained community health workers. Intervention content, discussions, and activities based on Social Cognitive Theory focused on increasing: 1) HIV knowledge; 2) adolescent-caregiver communication about sex; and 3) HIV/STI risk reduction skills, self-efficacy, and testing. A one-group pretest-posttest design was used to assess the efficacy of the intervention. Assessments were self- or verbally administered prior to the sessions (pretest), immediately after (posttest), and three months after the intervention.

**Results:** Adolescents and their female caregivers (N=293) enrolled in the study. From pretest to three-month follow-up, HIV knowledge increased for adolescents and caregivers (p < 0.001 for each) and HIV testing increased significantly for adolescents (p < 0.05). Significant increases were observed for adolescent-caregiver sexual health communication as well as comfort in communicating about sex for both adolescents and caregivers (p < 0.001).

**Conclusion:** Our findings provide preliminary evidence that integrating sexual health and HIV risk-related knowledge with skills-based practice for Latina women and adolescents are effective components of a culturally tailored HIV prevention intervention for Latinas.

## Sexual Minority Identity and Depression among U.S. Young Adults: Potential Mediating Role of Negative Social Media Experiences



Cesar G. Escobar-Viera, Ariel Shensa, Michael Marshal

**Introduction:** Sexual minority young adults (SMYA) face higher risk of depression compared to their heterosexual peers. Minority stress theory posits that experiences of rejection and discrimination might influence these outcomes. While social media (SM) is a key source for connecting and finding support among SMYA, it may also be a source of negative (rejection- and discrimination-related) SM experiences among SMYA. No study has explored whether these negative SM experiences influence mental health among SMYA. We sought to fill this gap by assessing a potential indirect path via negative SM experiences in the association between sexual minority identity and depression among a national sample of U.S. young adults.



**Methods:** Online survey among 2,408 adults ages 18-30. We categorized sexual orientation in lesbian, gay, and bisexual (LGB) and non-LGB. We assessed negative SM experiences with four Likert-scale items covering different types of negative interactions. Answers were averaged to create a continuous scale from 1 'never' through 5 'more often than once a week.' We assessed depression using the Patient Health Questionnaire (PHQ-9), scores 0-27. We used generalized structural equation models and standardized coefficients to assess direct and indirect effects of sexual minority identity on depression via negative SM experiences, controlling for relevant demographic variables. We used Stata 15 for statistical analyses.

**Results:** We found a statistically significant positive relationship between LGB identity and reporting of higher depressive symptoms (Path C = beta: 0.17;  $p < 0.01$ ; 95% C.I. 0.13 – 0.21). An indirect, statistically significant relation was found between LGB identity and depression (Path C' = beta: 0.13;  $p < 0.01$ ; 95% C.I. 0.09 – 0.17) via negative social media experiences (Path AB = betas: 0.12;  $p < 0.01$ ; 95% C.I. 0.08 – 0.16 and 0.31;  $p < 0.01$ ; 95% C.I. 0.27 – 0.35, respectively). The AB-C' path model explained 19% of variance in depression.

**Conclusions:** Our findings indicate that reducing negative SM experiences among sexual minority individuals may be a significant intervention to help reducing depressive symptoms among this population. These results suggest it is important to continue studying the unique SM experiences of SMYA. Future research needs to focus on the potential contribution of positive SM interactions to mental health outcomes, as well as change overtime of the potential influence of both positive and negative SM experiences on depression.

## Identification and changes in perceived stigma intersectionality within a virtual community of young people living with HIV



Mary M. Step, Theodore Russell, Steven A. Lewis, Josh D. Kratz, Jennifer McMillen Smith, Ann Avery

**Background:** Intersectionality refers to the idea that multiple aspects of social identity (e.g., race, sexual orientation) can interact to create and maintain health disparities. The accumulated burden of these perceived stigmas may be key to addressing HIV disparities in linkage to care and viral suppression. *Positive Peers* is a smartphone application that aims to provide young people living with HIV (YPLH) a supportive virtual community to counteract perceived stigma and ultimately better manage their illness.

**Method:** A mixed methods study that included survey and intensive interviewing modalities was conducted with out-of-care or newly diagnosed young people (18-34) living with HIV. Participants volunteered to download the *Positive Peers* mobile application to their phones and participate in a prospective observational study for 18 months. *Positive Peers* offers users multiple health management, tools and information, SMS communication functions, and frequently refreshed HIV relevant blogs and advice. Demographic data, medical record data, self-reports of perceived stigma were collected at enrollment, and prospectively at six, 12 and 18 months from baseline ( $n = 128$ ).

**Results:** Interview transcripts revealed that most participants viewed themselves as outside the boundaries of mainstream society, and also as targets of discrimination and social exclusion. We detected the repeated theme that living with HIV created an additional layer of minority status to an existing intersectional social identity of being black and LGBTQ. Participants desired virtual space defined by inclusion and security and described *Positive Peers* as a non-discriminatory community consisting of people with similar life experiences. Fixed effects regression analysis showed a trend for decreased overall perceived stigma ( $f = 3.62, p < .059$ ), and significant decrease in negative self-image ( $f = 6.03, p < .015$ ) across the study period for all participants.

On average the effect is small, but with some significant variation between participant ethnic groups, age, and disease status.

**Discussion:** Positive HIV status functions as a layer of intersectionality with race and sexual orientation that compounds the stigma perceived by YPLH. The *Positive Peers* mobile application provides a virtual space where disparity populations can normalize their experience. These data support the notion that technology interventions tailored toward disparity groups may be useful tools for reducing the burden of intersectional stigma and support HIV care outcomes.

## Military Sexual Trauma History and Impaired Romantic Relationship Functioning among US Army Reserve/National Guard Soldiers



Jennifer Fillo, D. Lynn Homish, Gregory Homish

There has been growing attention to the alarming prevalence of military sexual trauma (MST) in the US Military, as well as its physical, mental, and behavioral health consequences. However, far less attention has been paid to the toll MST can take on service members' romantic relationships. In the civilian literature, sexual trauma history is directly linked to impaired relationship functioning. Undermining these relationships may be especially harmful in military populations because partners are a critical source of support, often playing a vital role in aiding recovery from service-connected conditions. To shed light on this important issue, this research examined relations between MST history and multiple indicators of current romantic relationship functioning among male and female service members and veterans. Data were drawn ( $N = 356$ ) from Operation: SAFETY, an ongoing longitudinal study examining health and well-being among U.S. Army Reserve and National Guard soldiers and their partners. OLS regression analyses examined associations between participants' MST history and multiple indicators of current romantic relationship functioning (i.e., marital satisfaction, intimacy, negative social exchange), as well as potential differences by sex. MST history predicted lower current romantic relationship satisfaction ( $b = -9.44, p = .012$ ). MST history also predicted lower emotional intimacy ( $b = -1.46, p = .027$ ) and recreational intimacy ( $b = -1.11, p = .038$ ), but was unrelated to sexual intimacy ( $b = -0.08, p = .253$ ). Interactions with participant sex revealed that the detrimental effect of MST history on social intimacy was greater for females than males, and the effect of MST history on intellectual intimacy only held for females. Further, MST history predicted more negative social exchange in current romantic relationships (total score:  $b = 3.95, p = .010$ ). Specifically, those with a history of MST reported greater insensitivity ( $b = 1.34, p = .020$ ) and interference ( $b = 1.04, p = .004$ ) in their relationships. Results revealed that the consequences of MST extend beyond service members to also impair functioning in their romantic relationships. Soldiers with MST history were less satisfied, had lower intimacy, and had greater negative social exchange in their current romantic relationships. Findings demonstrate the far-reaching consequences of MST and underscore the need for interventions aimed at preserving this important source of support for service members.

## Risk factors of consensual and survival sex in a sample of homeless and formerly homeless young adults

Eldin Dzubur, Harmony R. Rhoades, Danielle R. Madden, Brian W. Redline, Sara Semborski, Benjamin F. Henwood

**Introduction:** Daily recall methods have been successful in capturing sex events and understanding context and correlates in high-risk samples, such as young adults experiencing homelessness. Although homelessness among young adults is thought to be associated with



risky sex, including exchanging sex for goods or services (i.e., survival sex), less is known about sex risk among young adults who have transitioned from homelessness to housing programs compared to those who remain homeless.

**Objective:** The objective of this study was to examine predictors of consensual and survival sex events in a sample of homeless and formerly homeless young adults.

**Methods:** Participants (N=123 housed, 109 homeless) were recruited from housing and service programs. Participants completed a questionnaire examining previous 90-day consensual and survival sex events, followed by a 7-day smartphone-based daily-recall regarding consensual and survival sex events. Age (M=22.2, SD=2.3), gender (54% male), race (42% Black), ethnicity (37% Hispanic), housing status, and relationship status (34% exclusively monogamous) were entered as covariates in logistic regressions predicting whether or not an individual had consensual sex or survival sex over the measurement period.

**Results:** Approximately 80% of participants reported consensual sex in the past 90 days, 28% reported consensual sex over 7 days, and 10% reported survival sex either in the past 90 days or over 7 days. Sex events in the past 90 days were positively associated with consensual sex during the week, and survival sex in the past 90 days was positively associated with survival sex during the week (ps < 0.001). Those in an exclusively monogamous relationship were more likely to report having any sex event during the week and more sex in the past 90 days than individuals in other relationships (ps < 0.001). Homeless participants were more likely to report survival sex during the week than participants in housing programs (p < 0.01).

**Discussion:** The study found that housing status may be protective against risky survival sex events, regardless of relationship status, indicating that supportive housing programs may provide a more stable environment. Although relationship status was an indicator for consensual sex events, exclusively monogamous relationships are thought to be low-risk. Future studies may seek to exclusively sample high-risk individuals, such as those in unstable relationships, to facilitate within-subject findings.

## Adapting a Positive Affect Intervention for Mobile Delivery: Development of the Positively Healthy App Based Intervention



K. Marie M. Sizemore, Shannon S. Gray, Carly Wolfer, Aria Tilove, Hyejin Park, Ali Talan, H. Jonathon Rendina

**Background:** Individuals living with HIV are disproportionately affected by stressful life events. Stress is not only associated with HIV progression, it is also linked to transmission risk behavior. In the United States, the majority of individuals living with HIV are sexual minority men (SMM) for whom sexual minority stress and HIV-related stress add to general life stressors to increase health risks. Studies show that mindfulness and positive affect buffer against stress for HIV+ individuals, however limited research has examined their potential health benefits for HIV+SMM. Moskowitz's (2014) Positive Affect intervention includes a mindfulness module, and has demonstrated efficacy in populations living with HIV. In our proof-of-concept pilot, we adapted the Positive Affect intervention for mobile app delivery.

**Methods:** The Positively Healthy app was designed as an ecological momentary intervention (EMI), and uses a just-in-time-adaptive-intervention (JITAI) delivery format. Participants were 22 HIV+SMM (M<sub>age</sub>=37.82; SD=10.52), the majority were Black (31.8%) or Latino (31.8%). Participants completed a baseline assessment, where we introduced to app based intervention. Participants then completed a 90-day ecological momentary assessment (EMA). JITAI activities were triggered, based on reported stress in the EMA survey, at a 2:1 ratio.

Over the 90 day intervention period, participants also received a daily positive message, and had access to on demand content in the app. After 90 days, participants completed a post-intervention assessment and focus group session, where we assessed feasibility and acceptability of the Positively Healthy app.

**Results:** On average, participants reported feeling stressed 25/90 days. Participants responded to 82.1% of the intervention activities and viewed 62% of the positive messages over 90-day period. A review of our qualitative interview data indicated that the app based delivery was acceptable and feasible for HIV+SMM. However, participant feedback also revealed that our intervention content would benefit from further adaptation to enhance its cultural appropriateness for our target population. Our focus group data indicated that participants related most to the mindfulness content within the app, and they expressed interest in using the app in adjunct to a mindfulness-based practice (e.g. yoga).

**Conclusion:** Our proof-of-concept pilot findings suggest the mobile app is an acceptable and feasible platform for delivery. We note that this adaption did not include tailoring the intervention content to the unique needs of HIV+SMM. Future directions for this research include utilizing community input to further adapt the Positively Healthy app to maximize its relevance and acceptability for HIV+SMM. This formative research is a necessary first step in planning for a larger trial to test the efficacy of the adapted intervention.

## Scaling up Evidence-based Teen Pregnancy Prevention in High-Need Communities: the Keeping it Real Together Intervention



Luanne Rohrbach

**Introduction:** Numerous factors facilitate the scale-up of evidence-based prevention interventions (EBIs) in community settings, including incorporating EBIs within existing systems, building organizational infrastructure and capacity for EBIs through training and technical assistance, establishing practitioner-scientist partnerships, and utilizing data systems to assess needs and evaluate impacts. Since 2010, the Teen Pregnancy Prevention Program, funded by the US Department of Health and Human Services, has sponsored efforts to scale up and evaluate EBIs that target sexual risk behaviors among youth. We describe the results of a multi-component project that scaled up an HIV/AIDS and pregnancy prevention intervention in schools and surrounding high-need communities located in Los Angeles County.

**Methods:** Over an 8-year period, we recruited 42 middle schools and 325 teachers to implement a comprehensive sexual health education program. Process evaluation data were collected from teachers, including student attendance, dosage, implementation fidelity, and program acceptance. School-based program implementation occurred in the context of a community-wide intervention that also included parent education, community mobilization, and disseminating information about youth-friendly clinics. To assess the effectiveness of the program in delaying sexual onset, we surveyed 9th-grade students each spring, from 2012 to 2019, in 10 high schools that project middle schools fed into (n=8000). Using a quasi-experimental design, we compared two groups of youth, those who received and did not receive the intervention during middle school.

**Results:** Our scale-up model focused on capacity building in program sites, including teacher training and regular technical assistant visits from project staff; identifying and supporting a lead teacher at each school; creating an online toolkit for resources and online process evaluation data reporting; regular meetings of a Teacher Advisory Board; and establishing a system for collecting outcome data. Overall, the program reached more than 50,000 students. Outcome data showed that students who had received the intervention were less likely to report initiation of sexual activity by 9th-grade compared

to students who did not participate. The program group also reported few pre-sexual behaviors and better outcomes on psychosocial variables hypothesized to be mediator of program effects.

**Conclusions:** Scale-up of evidence-based programs in community settings requires not only resources (both internal and external), but also a plan for building capacity, supporting implementation, collecting evaluation data, and sustaining implementation that is co-developed and endorsed by key community stakeholders.

## Comparing Variations in Childhood Sexual Trauma Measures in Predicting Adverse Health & Functioning Outcomes in Adulthood



Ashley Schuyler, Joseph Catania

**Background:** Research has linked experiences of childhood sexual trauma (CST) with adverse adult outcomes that span physical, psychological, and social domains of functioning. Differences in conceptualizing and measuring CST, however, have produced inconsistent results and inhibit the examination of basic trauma-related variables hypothesized to impact adult outcomes. In general, CST measurement lacks a conceptual grounding in established theoretical frameworks such as traumatic stress models. We compared a commonly used measure of CST (exposure) with a theoretically-derived measure of a key dimension of CST severity (i.e., duration; Hoier et al., 1992); measures are compared with regards to adverse adult outcomes across multiple domains. The majority of past studies are additionally impeded by the use of small/opportunistic samples with limited variation in outcome measures. We address this problem by using data from the National Sexual Health Survey (NSHS).

**Methods:** The NSHS is a national probability sample of U.S. adults (18-70 yrs.; N=6,537). Measures assessed perpetrator-specific sexual experiences in childhood (< 18 years) that involved the use of force or threats, the number of perpetrators, and the length of time over which the sexual trauma occurred with each perpetrator. We compared a dichotomous CST exposure measure to a multi-level measure of trauma duration. Controlling for background characteristics (age, race/ethnicity, gender, sexual orientation) we compared CST measures in the prediction of adverse outcomes across domains of physical (3 outcomes) and mental health (6 outcomes), intimate relationships (3 outcomes), & achievement (4 outcomes) (logistic regression & likelihood ratio tests).

**Results:** Relative to the CST exposure measure, the multi-level CST severity measure had significantly larger relationships to five adverse outcomes within two of the domains examined (mental health, achievement). Both measures had significant but similar relationships to all remaining outcomes. The multi-level variable showed significant dose-response relationships (i.e., greater duration with more adverse outcomes) in 7 models. Generally, those reporting the highest degree of CST severity demonstrated the largest effects. We observed both linear and non-linear relationships to adult outcomes.

**Conclusions:** The current findings suggest that a theoretically-derived measure of CST severity provides substantially more information about adverse outcomes in adulthood than more commonly used measures of CST exposure. The results also suggest that chronic traumatic stress related to CST should be studied in large heterogeneous samples where a wider range of outcomes and outcome values are employed. Integrating theoretical concepts to standardize CST measurement has important implications for screening and secondary prevention across the life span.

## Trajectories of HIV risk behaviors and substance use after initiating pre-exposure prophylaxis (PrEP) in a clinical setting



Brooke Rogers, Tyler B. Wray, Philip Chan, Christina T. Chu, Megan Pinkston, Siena Napoleon, Sabrina H. Strong, Matthew J. Murphy, Collette Sosnowy

**Introduction:** The past decade has been marked by significant advances in biomedical prevention of HIV including the use of antiretroviral medication as pre-exposure prophylaxis (PrEP). Several studies have identified patient and provider concerns that PrEP could result in “risk compensation” or an increase in several HIV risk behaviors. The purpose of this study was to evaluate that hypothesis by examining trajectories of alcohol, substance, and high-risk sexual behavior after initiating PrEP in a clinical setting.

**Methods:** Patients from a hospital-based clinic who identify as men who have sex with men (N=248) completed surveys at their PrEP visits, which occurred approximately every 3 months, per clinical guidelines. For this study, participants were followed for a maximum of 18 months after their first PrEP visit (up to 6 PrEP visits). Latent class growth analysis identified classes of trajectories in binge drinking, and illicit drug use, and condomless anal sex frequency.

**Results:** Best-fitting LGCA models identified 3 classes for trajectories of binge drinking (BIC=1826.97, LMR-LRT = 43.12,  $p = .021$ , BLRT = 45.73,  $p < .001$ , Entropy = 0.76), 2 classes for trajectories of illicit substance use (BIC=758.12, LMR-LRT=105.78,  $p = .002$ , BLRT=112.18,  $p < .001$ , Entropy = 0.92), and 2 classes for trajectories of sexual risk (BIC=5063.73, LMR-LRT=217.7,  $p = .042$ , BLRT=230.87,  $p < .001$ , Entropy = 0.97) over the initial 18 months of PrEP care. In that time, there were no significant increases in any of these risk behaviors. In fact, those with the highest use of alcohol use gradually reduced their use ( $b_1 = -0.14$ ) after starting PrEP. The same downward trend was found for those with the highest illicit substance use to start ( $b_1 = -0.2$ ). Those with a highest number of condomless anal sex partners saw a small, but non-significant increase in partners (by .83 partners).

**Discussion:** Findings demonstrated that alcohol use, illicit substance use, and sexual transmission risk behavior did not significantly increase after PrEP initiation. Concerns about increased risk after initiation are often cited as a barrier among providers and patients; however, our results directly contradict the risk compensation narrative. From a public health perspective, it may be helpful to use these findings to inform future clinical interventions and educational materials provided to patients.

## Effect of Patient-Physician Race/Ethnicity Concordance on HPV Vaccine Initiation



Sharice Preston, Sharon Coan, Erica L. Frost, C. Mary M. Healy, Maria Fernandez, Ross Shegog

**Background:** Physicians play a critical role in influencing parent acceptance of the HPV vaccine. Patient-physician racial/ethnic concordance has been found to be a factor influencing the patient-physician relationship and subsequent outcomes in numerous contexts but, to date, little has been done to investigate concordance on vaccination outcomes. Concordance may influence HPV vaccination initiation rates by improving patient-physician communication and fostering trust. We examined the association between patient-physician race/ethnicity concordance on HPV vaccine initiation.

**Methods:** We studied pediatricians (n=121; mean age 46.5; non-Hispanic White 56.8%) and their patients (n=46,964; mean age 13.8; non-Hispanic White 52%) from a Texas pediatric clinic network from 2014 to 2015. Multinomial logistic regressions, adjusted for physicians' individual differences, were used to assess the association between patient and physician race/ethnicity on HPV vaccination rates.

**Results:** Overall, HPV vaccine initiation varied across groups (64% of non-Hispanic Black, 65% of Hispanic, and 53% of non-Hispanic White patients). Forty-two percent of non-Hispanic Black, 48% of Hispanic, and 61% of non-Hispanic White physicians were racially/ethnically concordant with their patients. Racial/ethnic concordance was associated with higher rates of HPV vaccine initiation compared to discordant physician-patient relationships. Non-Hispanic White patients had a lower odds of initiating HPV vaccination than patients of all other races (OR 0.64, CI[0.61-0.66]), although these odds increased when they saw a non-Hispanic White physician (aOR 0.72, CI[0.62-0.84]). Non-Hispanic Black (aOR 2.28, CI[1.47-3.53]) and Hispanic (aOR 2.42, CI[1.67-3.49]) patients were more likely than non-Hispanic White patients to initiate HPV vaccination with non-Hispanic Black and Hispanic doctors, respectively.

**Conclusion:** It is important that providers understand the potential impact their personal demographics may have on their relationship with their patients. These findings suggest sustained support for initiatives to increase provider diversity. Research is needed to further understand the mechanisms that drive discordant patient-physician relationships and affect outcomes like HPV vaccination.

## Pilot Trial of Cognitive Behavioral Therapy Intervention to Improve Contraception Use in Women at Risk for Unintended Pregnancy



Stephen J Lepore, Collins N. Bradley, David W. Sosnowski, Melissa Godfrey

Over one-half of pregnancies are unintended (UP) and UP has been linked to poorer maternal and child health. UP risk is greatest in low-income and minority women, particularly if they suffer from depression and low self-esteem. We tested an innovative behavioral intervention aimed at lowering risk for UP via improved contraception use in high-risk women. The intervention consisted of telebased, peer-led contraception education and cognitive behavioral therapy (CBT). There is evidence that using peers in the delivery of CBT is acceptable and beneficial among low-income and minority women. Eligibility included: not sterilized; not pregnant or planning to be; sexual intercourse past 3 months; inconsistent or no birth control; 18-45 years old, own smartphone, and have elevated depressive symptoms. Baseline data were collected before women (N = 133) were randomized to Intervention or a treatment as usual control group. The intervention included 8 telephone sessions with a peer specialist, a mobile app to monitor mood and activities, and a workbook. Data were collected via telephone interviews pre-intervention and at 4-, 10-, and 14-week follow-ups. The main outcomes at 14-weeks were consistent birth control use, distress symptoms and self-esteem. Mediators included sexual/contraceptive self-efficacy, coping, and mattering to others at 10-weeks. Missing data were handled using multivariate imputation by chained equations. Contraception consistency was only analyzed in women having intercourse with a male partner at 14-week follow-up. Participants were mostly (82.0%) non-White; 60.2% lived in poverty; 51.1% had history of UP. Participants completed a median of 6 phone sessions; 88.7% rated the CBT workbooks as somewhat or very helpful; 81.5% rated the Daylio app as somewhat or very helpful. Results suggested that being in the CBT group may have increased the odds of consistently using contraception relative to controls: odds ratio = 1.98 (95% CI = .86 – 4.54), p = .05. Sensitivity analyses using original data were similar: odds ratio

= 2.28 (95% CI = 1.01-5.27), p = .02. There was no statistically significant effect of the intervention on distress symptoms or self-esteem at 14-weeks. Among the mediators, there was a significant positive effect of intervention on 10-week sense of mattering to others (p < .05 imputed and original data), but this was unrelated to subsequent contraception use. In sum, using peer specialists to deliver CBT targeting psychological risk factors to improve contraception use is theoretically compelling, but as an innovation it is risky. Women in the intervention appeared to have improved contraception use but may need treatments that are more intensive to realize improved psychological functioning (e.g., more homework, more sessions). Given the generally high adherence to and positive ratings of treatment, more intensive treatment may be feasible.

## Body image, intimate relationships, and sexual health among gender minority youth: A qualitative study



Allegra R. Gordon, Rose Eiduson, Gabriel R. Murchison, Madina Argénor

**Background:** Gender minority (GM; e.g., transgender, gender non-binary) youth experience substantial sexual health inequities compared to their non-GM peers. These inequities may be driven by exposure to social stressors including stigma and violence, which can negatively impact body image and relationship power, both of which have been linked to adverse sexual health outcomes in non-GM youth. Yet little is known about the role of body image and intimate relationships in reducing or exacerbating sexual health risk factors among GM youth.

**Methods:** We conducted 30 in-depth interviews with GM young people (18-28 years) in the U.S. Northeast (gender identity: transgender women=8, transgender men=5, non-binary=17; race/ethnicity: White=18; Multiracial=5; Black n=4; Latinx=2; Asian=1). Interviews were transcribed, double-coded, and analyzed using a template-organizing style guided by a gender affirmation framework.

**Results:** Participants described several ways body image was related to intimate relationships, with implications for sexual health. We identified three themes. (1) Gender dysphoria and experiences with transphobia, racism and fatphobia affected body image and impeded sexual intimacy and perceived sexual decision-making power (i.e., the ability to communicate about sexual desires and/or make decisions about sexual activities) for several participants, and these experiences varied by gender identity. (2) Experiences with sexual violence were common, representing a profound barrier to both positive body image and to sexual health and wellbeing. (3) Multiple forms of resilience enabled participants to cultivate body appreciation and develop a sense of sexual decision-making power—particularly in the context of gender affirming romantic and sexual relationships (e.g., in which partners supported gender identity exploration, used affirming language for body parts and sexual activity, and engaged in dialogue about sexual health decisions such as barrier use for STI prevention).

**Implications:** In this formative study we identified critical connections between body image, intimate relationships, and sexual health risk factors among diverse GM youth. Sexual health promotion interventions should account for the role of body image and intimate relationships and should build on within-community resilience resources, including the experiences of those in supportive sexual/romantic relationships, in order to better meet the needs of this under-served population.



# PANEL ABSTRACTS

## Practical and ethical considerations for conducting online research among sexual and gender minority youth



Kimberly Nelson, Sophia Choukas-Bradley, Allegra R. Gordon, Kathryn Macapagal

Sexual and gender minority (SGM) adolescents and young adults experience substantial mental and physical health disparities. As SGM youth are often considered “hidden” or “difficult-to-reach,” many researchers seeking to address SGM health disparities use online methods to recruit, assess, understand, and intervene with these youth. Although online methods can be effective, they also have drawbacks and unique ethical considerations. This is particularly true for research that is asking about or intervening on more sensitive topics (e.g., sexual health, suicidality, substance use, eating disorders, traumatic experiences) or recruiting participants who are below the age of majority and not “out” about their SGM status to their guardians.

The proposed panel will include four researchers who utilize a diverse array of online methods (e.g., online focus groups, surveys, social media, interactive intervention websites/apps) to assess and address SGM health disparities among youth. Panelists will provide an overview of online methods for recruitment, data collection, intervention development/implementation, and community engagement with SGM youth. Within each of these topics panelists will present the benefits/challenges of selected methods and ethical considerations specific to working with SGM youth. Following that overview, there will be a discussion of how to address the rapidly evolving technology and consumer preference landscape when designing and conducting online research with SGM youth. The panel will conclude with time for audience questions and discussion. The overall goal of the panel is to introduce the SBM audience to the unique benefits, challenges, and ethical issues of conducting online research with SGM youth and highlight the importance of addressing these factors throughout the research process.

## Translating Research into Practice to Close the Health Disparity Gap in the LGBTQIA+ Community



Lauren Wiklund, Kaston D. Anderson-Carpenter, Jae Sevelius, Terence Ching, NiCole T. Buchanan

The health and well-being of sexual and gender minoritized (SGM) individuals is a matter of public health concern. LGBTQIA+ individuals continue to experience negative and disparate health outcomes compared to heterosexual, cisgender peers (Rice, Vasilenko, Fish, & Lanza, 2019). Members of this community report overt discrimination and implicit bias from health care providers that interfere with their receipt of high quality, comprehensive care (Rice et al., 2019). The gold standard in clinical science calls for evidenced based practices to inform clinical care; however, most treatment protocols are based, developed, and normed on cisgender, heterosexual, European Americans. As a result, we measure successful treatment outcomes with a ceiling of equivalence to the normed population rather than creating protocols that could be more effective for a specific population (Hall, Yip, & Zarate, 2016). This perpetuates the harmful and oppressive practice of comparing minoritized people to the majority rather than creating a knowledge base that is tailored for their unique needs.

Translating research into policy and practice to address current and reduce future health disparities is of imminent importance. This panel will bring together a diverse group of researchers and activists at the cutting edge of their fields and invite lively audience discussion about innovative ideas for advancing health and well-being for SGM individuals. Topics addressed in this panel discussion will include transgender-specific wellness programs and interventions, psychedelic-assisted psychotherapy, and addiction treatment in marginalized communities. In addition to providing a discussion forum, members of the community are invited to coalesce in this academic forum.



# POSTER ABSTRACTS

## How does stigma inform sexual and gender minority health interventions? A systematic review



Joseph A. Carter, Eric K. Layland, Nicholas Perry, Jorge Cienfuegos Szalay, Kimberly M. Nelson, Courtney Peasant Bonner, H. Jonathon Rendina

**Background.** Health disparities among sexual and gender minorities (SGM) are driven in part by societally imposed, and heteronormatively informed experiences of stigma. These health disparities are worse among SGM who hold multiple marginalized identities. To achieve equity in health outcomes, research examining empirical psychological and behavioral interventions that address SGM stigma, particularly from an intersectional perspective, are vital. We conducted a systematic review to explore how existing interventions address stigma, and examine whether stigma affects intervention efficacy.

**Methods.** This systematic review encompassed existing psychological and behavioral health interventions among SGM populations. Eligible studies were peer-reviewed, published in English from 2003 onward, and reported empirical results of a behavioral or psychological intervention that address stigma and were implemented among SGM populations.

**Results.** We identified 37 interventions, most of which were conducted among sexual minority men ( $n=28$ ). Most interventions were tailored or adapted for the unique needs of SGM ( $n=28$ ). The majority ( $n=26$ ) targeted proximal stigma (e.g., internalized, anticipated). Fewer ( $n=20$ ) addressed distal stigma (e.g., enacted, structural). Eleven studies addressed stigma in the content of the intervention, but did not directly measure or intervene on stigma as an outcome. The most common targeted outcomes were HIV transmission ( $n=20$ ), health among people living with HIV ( $n=4$ ), and mental health ( $n=7$ ). Interventions rarely examined stigma as mediating or moderating intervention effects ( $n=5$ ). Seventeen interventions applied an intersectional framework or targeted additional sources of stigma beyond SGM stigma.

**Conclusion.** Interventions are increasingly considering health disparities within the context of stigma. Future research should explore whether stigma affects the efficacy of currently existing psychological and behavioral interventions. Further, interventions may ben

efit from an intersectional approach to examining SGM stigma. The majority of interventions in our review focused on cisgender sexual minority men, with few considering intersecting sources of stigma related to racial/ethnic or gender minority status. Application of an intersectionality framework will be important for intervention development that effectively targets multiple, intersecting sources of stigma among SGM communities.

## Sexual Identity, Relationship Patterns, and HIV Risk Behaviors among Cisgender Men who Partner with Transgender Women



Demetria Cain, Simone J. Skeen, Ruben H. Jimenez, Tyrel Starks, H. Jonathon Rendina

**Background:** Cisgender men who partner with transgender women (TW) are often portrayed as an elusive, highly stigmatized population. While these men are pivotal to the dynamics of transmission risk that drive HIV disparities among TW, little is known about their sexual identities, relationship patterns, and sexual health self-management strategies. We present descriptive findings from a first-of-its-kind dataset comprising cis men who describe their main partners as TW.

**Methods:** Data were taken from a large national online survey recruiting individuals from geo-targeted sexual networking apps from November 2017 to August 2019. Cis men ( $n=541$ ) were selected and categorized based on sexual orientation identity as gay, queer, heterosexual, and bisexual. Differences in relationship patterns and HIV risk behaviors were examined.

**Results:** A majority of cis men identified as bisexual (60%), followed by gay (19%), heterosexual (13%), and queer (10%). Heterosexuals were more likely to be in a relationship with TW 3 months or less and gay men were more likely to be in the relationship 1 year or more ( $X^2 = 81.67, p = 0.00$ ). Queer, heterosexual, and bisexual men reported more condomless anal sex with their TW partner ( $X^2 = 7.89, p < .05$ ). A majority of men in all groups reported also having a casual male partner in the past 6 months: 90% of bisexual, 88% of gay and queer, and 66% of heterosexual men. Gay and heterosexual men were less likely to know their HIV status ( $X^2 = 26.01, p = 0.00$ ), with more heterosexual men (12%) never testing for HIV. Queer men were more likely than any other subgroup to have ever been

prescribed PrEP, with heterosexual men the least likely among all respondents to have ever been prescribed PrEP ( $X^2 = 24.57, p = 0.00$ ).

**Conclusion:** These findings are an essential first step toward informing outreach and risk-reduction strategies responsive to the lived experiences of cis men who partner with TW. Effective approaches to HIV prevention must acknowledge the heterogeneity of identity and relational dynamics among these men and their sexual networks.

## Family Planning and HIV Prevention Intervention Needs of South African Adolescent Girls: Cultural Consensus Modeling Approach



Jennifer L. Brown, Lochner Marais, Jessica Sales, Carla Sharp, Jan S. Cloete, Molefi Lenka, Kholisa Rani, Gause Gause, Anthony E. Hitch

**Purpose:** South African adolescent girls experience high rates of unintended pregnancies and STI/HIV. To inform the development of a culturally-tailored dual protection intervention emphasizing the prevention of *both* unintended pregnancies and STI/HIV, cultural consensus modeling (CCM) was employed. CCM is a methodology to determine shared cultural beliefs or norms using a four-phase mixed quantitative and qualitative methodology. The aim of this study was to qualitatively examine South African adolescent girls' pregnancy and HIV prevention intervention needs.

**Methods:** Participants were Sesotho-speaking South African adolescent girls aged 14 to 17 years ( $N=25$ ; Mean age = 15.8) recruited from the Mangaung Metropolitan Municipality in the Free State Province. Participants were a subset of adolescents who previously participated in a quantitative data collection phase and who were identified as highly consistent with the prevailing cultural consensus model. Interviews focused on participants' perceptions of *other adolescent girls'* pregnancy and HIV prevention needs to elucidate shared cultural beliefs and norms rather than individual beliefs. Interviews were conducted in Sesotho, transcribed verbatim in Sesotho and translated into English. Two independent coders identified key themes in the data using a Grounded Theoretical approach with discrepancies resolved by a third coder.

**Results:** Results focused on themes related to intervention content and desired implementation setting. Participants identified limited overall exposure to pregnancy prevention information, with existing sexual health education content focused on HIV prevention and condom use. The importance of including content to address the role of peers as a key motivating factor for pregnancy and STI/HIV prevention method selection was emphasized. Participants preferred that sexual health interventions be delivered by trusted community organizations serving adolescents or via school-delivered programs. Participants also reported that there would be adolescent interest in assisting with the development of new sexual health interventions.

**Discussion:** Results point to the importance of cultural context for tailoring of dual protection intervention content among South African adolescent girls. There were identified gaps in information related to pregnancy prevention. In line with prevalent South African HIV prevention messaging (Abstinence, Be Faithful, and Condom Use: ABC), ABC prevention themes emerged along with an important role of peers. Interventions with a youth-focused format delivered within schools or via trusted community organizations were viewed as most acceptable. Development of culturally-sensitive dual protection intervention approaches incorporating study findings are urgently needed to address reproductive health disparities among South African adolescent girls.

## Mastery, not Social Support, Buffers the Impact of Food Insecurity on Depressive Symptoms in People Living with HIV



Redd Driver

The HIV epidemic in the United State is heavily concentrated among members of socially and economically disenfranchised communities. For people living with HIV (PLWH) who are living in poverty, HIV disease progression may be exacerbated by a multitude of factors including food insecurity and depression. These factors have been demonstrated to directly and indirectly adversely impact HIV-related health outcomes. To better understand and intervene on the effects of poverty and depression on HIV infection, the Stress Process Model is a useful framework, particularly as it may elucidate social resources as moderating variables as targets for intervention. One psychosocial resource that has often been studied in relation to HIV is the moderating role of social support on HIV-related health outcomes. In addition, for highly impoverished PLWH a sense of mastery as a psychological resource related to personal control and self-efficacy, may also serve as a

buffer in the association between poverty-related stress and depression. In the present study we sought to examine the dual processes of social support and mastery in moderating the relationship between food insecurity and depressive symptom among PLWH. Multivariate regression analyses were performed on data collected from 180 PLWH (37% women) screened for alcohol use and who were experiencing food insecurity. We constructed a regression model to test the moderating roles of social support and mastery in the relationship between food insecurity and depression while controlling for age, alcohol use and years since diagnosed with HIV. Results indicated that one third of the sample reported experiencing extreme food insecurity as indicated by experiencing recent hunger. In bivariate analyses experiencing depressive symptoms was positively associated with food insecurity ( $b = 1.54$ ,  $SE = 0.32$ ,  $p < .001$ ), and independently negatively associated with both social support ( $b = -0.23$ ,  $SE = 0.07$ ,  $p < .001$ ) and mastery ( $b = -0.36$ ,  $SE = 0.07$ ,  $p < .001$ ). In adjusted multivariate models, mastery ( $b = 0.12$ , 95% CI [0.01, 0.24],  $p = .04$ ), but not social support ( $b = 0.04$ , 95% CI [-0.07, 0.14],  $p > .05$ ), was found to moderate the relationship between food insecurity and depressive symptoms suggesting that mastery serves as a buffer to depressive symptoms over and above the influence of social support among highly impoverished food insecure PLWH. The present study demonstrates the utility of including mastery enhancing components in interventions for PLWH in an effort to improve mental health and HIV-related clinical outcomes.

## Psychosocial predictors of self-reported HIV status



Ore Shalhav, Ali Talan, H. Jonathon Rendina, Nicola F. Tavella

**Background:** HIV testing is a form of self-care and prevention as individuals who partake in regular testing are engaged in managing their health and preventing infection of partners. Differences in self-reported HIV status (negative versus unknown) indicate differences in HIV testing behavior. HIV testing uptake may be predicted by an individual's sexual-risk behavior, sociodemographic characteristics, and psychosocial factors. These factors may likewise predict HIV risk more broadly.

**Methods:** Data are from UNITE, a cohort study of SMM from across the United States ( $N = 7951$ ;  $M_{age} = 32.7$ ;  $SD = 11.4$ ) who reported negative or unknown HIV status at baseline. We conducted chi-square analyses to examine group difference on self-reported HIV status. We also conducted a binary logistic regression to examine the association between psychosocial factors and self-reported HIV status, adjusting for sociodemo-

graphic characteristics and sexual risk behavior. Sexual risk behavior was measured by self-reported number of male casual partners and condomless anal sex acts within the last 6 months.

**Results:** We found that 78.5% of the sample reported a negative status and 21.5% reported an unknown status. Significant differences by sociodemographic characteristics and psychosocial factors (e.g., "outness" sexual shame, sexual pride, perceived HIV risk) were identified. Our regression analysis indicated that sexual risk behavior did not predict self-reported status. Participants who were more "out" with regards to their sexual orientation (AOR = .84,  $p = .00$ ) and reported more sexual pride (AOR = .91,  $p = .01$ ) had significantly lower odds of reporting an unknown status. Participants with greater perceived HIV risk (AOR = 1.06,  $p = .00$ ) and more sexual shame (AOR = 1.21,  $p = .00$ ) had significantly higher odds of reporting an unknown status.

**Conclusion:** Our model demonstrated that all 4 psychosocial factors correlate with self-reported HIV status when controlling for sociodemographic characteristics and sexual risk behavior. Those who are less out, feel less sexual pride, and more sexual shame are less likely to know their status, yet engage in similar sexual risk behavior as those who do. Surprisingly participants with unknown status reported higher perceived risk of HIV, which suggests that perceived risk rather than actual risk is more predictive of lack of engagement in testing. Therefore, interventions to increase testing may benefit from emphasizing positivity rather than risk.

## Barriers to PrEP uptake among Latino MSM: PrEP stigma, sexual shame, internalized homonegativity and negative PrEP perceptions



Jonathan López-Matos, Stephen S. Jones, Nicola F. Tavella, Brian Salfas, Ali Talan, H. Jonathon Rendina

**Background:** Although Pre-Exposure Prophylaxis (PrEP) has been available as a biomedical HIV prevention strategy since 2012, specific sub-groups continue to be at high risk for HIV acquisition. While PrEP can help reduce new infections, its uptake among Latino sexual minority men (LSMM) continues to be slower when compared to other populations at risk. Furthermore, previous research has found associations between negative perceptions and PrEP-related stigma (PRS) serving as barriers to uptake. Other studies have also analyzed internalized homonegativity (IH) and sexual shame (SS) as potential factors that may influence perceptions about PrEP among MSM in general. Since research with LSMM and PrEP uptake continues to be limited, this study sought to analyze the mediating effect

of PRS on the association between internalized homonegativity, sexual shame and the negative perceptions about PrEP that could hinder its uptake among LSMM.

**Methods:** Cross-sectional data were taken from a national sample of 1,011 LSMM from across the United States. The *Internalized Homophobia Scale* was used to measure IH and the *Sexual Pride and Sexual Shame Scale* was used to measure SS. We assessed negative perceptions about PrEP using the *Decisional Balance to PrEP Use Scale* and PrEP-related stigma using the *PrEP Stigma Scale*. Data were analyzed using path analysis on Mplus and were adjusted for demographic variables, with negative perceptions about PrEP as the outcome.

**Results:** Average age was 23.5 years (SD=2.9) and all participants identified as Latino. After controlling for covariates, direct effects of IH and SS on the negative perceptions about PrEP remained significant (IH:  $\beta = 0.13$ ,  $p < 0.05$ ; SS:  $\beta = 0.17$ ,  $p < 0.05$ ) as well as direct effects on PRS (IHS:  $\beta = 0.15$ ,  $p < 0.05$ ; SS:  $\beta = 0.16$ ,  $p < 0.05$ ). Further, a significant direct effect was observed of PRS on the negative perceptions about PrEP (PRS:  $\beta = 0.23$ ,  $p < 0.05$ ). Significant indirect effects were observed from IH and SS through PRS to the negative perceptions about PrEP (IH:  $\beta = 0.04$ ,  $p < 0.05$ ; SS:  $\beta = 0.03$ ,  $p < 0.05$ ).

**Conclusions:** These findings support the hypothesis that PrEP-related stigma may exacerbate negative perceptions, which can serve as a barrier to PrEP uptake among LSMM. Although the association of internalized homonegativity and sexual shame with negative perceptions about PrEP was significant independent of PRS as a mediator, when PRS was added, the association continued to increase. Interventions targeting PrEP uptake among LSMM may need to address individual-level barriers associated with perception and stigma related to PrEP. Future research is also needed to understand the link between internalized homonegativity, sexual shame, and PrEP-related stigma and how other cultural factors among LSMM may influence perceptions about PrEP.

## Impact of egocentric networks on physical, emotional, and sexual violence among a sample of college students



Meg Patterson, Tyler Prochnow, Jordan L. Nelon, Mandy N. Spadine, Sydney E. Brown, Beth A. Lanning

**Introduction:** Intimate partner violence (IPV) is an increasing concern on college campuses. While research has identified individual-level risk factors related to IPV among college students (e.g., hooking up, alcohol use, gender),

less has investigated interpersonal relationships and IPV. The purpose of this study was to use social network analysis, an innovative approach to exploring social connections in relation to behaviors and outcomes, to understand how social connections relate to the odds of a college student experiencing IPV.

**Methods:** 697 students provided demographic and behavioral data (individual-level variables) as well as information regarding up to 5 individuals they felt closest to in their life (egocentric network variables) via an online survey. Hierarchical logistic regression analyses were conducted using individual-level variables and network variables to predict a history of physical, emotional, and sexual violence among this sample.

**Results:** Egocentric network variables added 8.8% - 11.4% of explained variance in predicting the odds of sexual (Naglekerke  $R^2 = .303$ ,  $p < .001$ ), physical (Naglekerke  $R^2 = .280$ ,  $p < .001$ ), and emotional violence (Naglekerke  $R^2 = .203$ ,  $p < .001$ ). Being connected to people who have a history of IPV significantly increased a student's odds of indicating a history of physical (OR = 1.034,  $p < .001$ ), emotional (OR = 1.023,  $p < .001$ ), and sexual violence victimization (OR = 2.879,  $p < .010$ ) themselves. Having more disconnected egonetworks was related to sexual violence victimization (OR = 1.305,  $p = .017$ ), while being connected to more people of the same gender was related to emotional violence victimization (OR = 1.988,  $p = .043$ ). Gender and hooking up were related to all types of IPV.

**Conclusion:** Egocentric networks were important in explaining history of IPV in this sample. Notably, people with a history of violence tend to populate one another's personal networks. These findings add to the current literature that largely focuses on individual-level risk factors related to IPV. The way college students' close networks are composed and structured help in understanding IPV in this population, and should be considered in prevention and reactionary efforts on college campuses.

## Cigarette smoking and metabolic syndrome in youth living with HIV: Findings from electronic health records in the United States



Sitaji Gurung, Kit Simpson, Terry T. Huang, H. Jonathan Rendina, Christian Grov, Richard Zhao, Demetria Cain, Tyra Dark, Sylvie Naar

**Background:** Detectable viral load (VL) has been found to be associated with cardiovascular disease (CVD) and smoking among HIV-positive population. A recent study reported 20.4% of youth living with HIV (YLH) smoking cigarette daily or almost daily, and

observed significance of cigarette smoking with higher mean log<sub>10</sub> VL. Metabolic changes leading to the development of atherosclerosis can start early in life, but are often undiagnosed in their early stages. Metabolic syndrome is a growing concern that may surpass smoking as one of the leading risk factors of CVD. We examined the association of smoking and metabolic syndrome with VL in YLH aged 14-26y.

**Methods:** The data for this study were drawn from the *Adolescent Medicine Trials Network 154 Cascade Monitoring Protocol*. De-identified electronic health records of YLH who received care in 2016 were extracted from multidisciplinary adolescent HIV clinics across the United States. This study utilized a subsample of 398 YLH. Multivariable linear regression was used to examine whether smoking and components of metabolic syndrome are related to a greater likelihood of high VL.

**Results:** Our sample included a higher proportion of blacks (76.8%) and males (69.6%) with mean age of 21y. Overall, 44.4% had a detectable VL, 26.9% were cigarette smokers based on ICD-10 diagnoses of tobacco dependence, and 27.6% met the criteria for metabolic syndrome. In bivariate analyses, having a detectable VL compared to those without detectable VL significantly increased the odds of being a smoker ( $p < 0.05$ ) and were more likely to have low HDL cholesterol ( $p < 0.001$ ). Subsequent analyses controlled for demographic and clinical covariates demonstrated that being a smoker was associated with a log<sub>10</sub> increase in VL copies/mL by 0.36 (CI 1.08, 1.92;  $p < 0.05$ ) and having two components of metabolic syndrome was associated with a log<sub>10</sub> increase in VL copies/mL by 0.45 (CI 1.20, 2.03;  $p < 0.01$ ).

**Conclusions:** Smoking and the presence of two components of metabolic syndrome were associated with VL non-suppression, highlighting the importance of smoking cessation in viral suppression and in reducing the overall burden of CVD risk in YLH. Our findings of greater prevalence of metabolic syndrome suggests routine monitoring of metabolic risks in YLH.

## PrEP Knowledge, Attitudes, and Intentions Among Black College Men in the South



Samuella Ware, Yarneccia D. Dyson

Most new HIV infections occur among Black men between the ages of 17-24; 52% in the southern region of the United States (U.S.). In 2012, Pre-exposure prophylaxis (PrEP), a daily HIV infection prevention pill, was approved by the Food and Drug Administration in the U.S. and in 2018 it was approved for adolescents. PrEP use and uptake have been slow, especially among Black men, with only



1% of individuals who can benefit from this prevention tool receive it. Accordingly, this study aims to examine PrEP knowledge, attitudes, and intentions of young Black college men in the South. This study is part of a larger concurrent mixed methods study conducted in 2019 that examined the sexual health needs of Black college students enrolled at five Historically Black Colleges and Universities or Minority Serving Institutions in the South. This study includes the quantitative portion which included a 70-item online survey. Those who answered questions about PrEP were included (N=108). Students were asked about their knowledge of PrEP, attitudes of PrEP as a prevention strategy, and intentions to use PrEP if they had access. Univariate, bivariate, and multivariate analyses were conducted.

Majority of our sample had not heard of PrEP (58%), however, 64% thought PrEP was a good prevention strategy, and 63% said they would use PrEP if available. Within the past 3 months, on average, students engaged in condomless vaginal sex 6 times, condomless anal sex 2 times, and had 4 partners. In a bivariate analysis, PrEP knowledge was significantly associated with age with older students were likely to have previous knowledge of PrEP. Regarding sexual orientation, those that identified as queer (gay or lesbian, bisexual, or other) were more likely to have previous PrEP knowledge. PrEP attitudes were significantly correlated to the number of sexual partners. In regression models, condomless vaginal sex was negatively associated with PrEP use intentions. Additionally, number of partners was negatively associated with PrEP attitudes. Intentions to use protective behaviors (ie. limiting partners or using condoms) was significantly positively associated with PrEP attitudes and PrEP use intentions. This shows that Black college men consider PrEP an element to their prevention toolbox but are not being informed of PrEP and additionally may have low-risk perception. More research is needed on young Black men to understand their risk perceptions and attitudes and use intentions towards PrEP.

## Focus on single tablet regimens and lipid profile among youth living with HIV in multidisciplinary adolescent HIV care settings



Sitaji Gurung, Kit Simpson, H. Jonathon Rendina, Christian Grov, Terry T. Huang, Stephen S. Jones, Tyra Dark, Sylvie Naar

**Background:** HIV itself and antiretroviral therapy (ART) are known to contribute to the elevated risk of cardiovascular disease (CVD), including lipid abnormalities. Although early treatment with ART might reduce the negative effect of HIV on overall cardiovascular risk, many HIV medications have intrinsic toxicity

profiles. Single tablet regimens (STRs) have become an integral part of HIV management. STR has the potential for improved adherence due to a lower pill burden, especially among youth living with HIV (YLH). The current study examined whether detectable VL and STR contribute to lipid abnormalities among YLH aged 14-26y.

**Methods:** We analyzed a subsample of 398 de-identified electronic health records of YLH extracted from multidisciplinary adolescent HIV clinics for the *Adolescent Medicine Trials Network 154 Cascade Monitoring Protocol*. We conducted bivariate and multivariable logistic regression analyses to examine differences in lipid abnormalities by VL and STR status.

**Results:** Our sample included a higher proportion of black (305, 76.8%) and males (69.6%) with mean age of 21y. Nearly half (44.4%) of YLH had a detectable VL and a majority of YLH were currently on ART. Nearly half (40.7%) of YLH did not meet the ideal range of HDL and 28.5% were in the clinically high range of LDL cholesterol. Similarly, 15.1% of YLH had high total cholesterol and 15.4% had high triglycerides. Among those who were currently prescribed STR, we observed a significantly lower proportion of YLH with high total cholesterol compared to those who were not on STR (14.2% vs. 33.3%;  $p < 0.05$ ). Among those with detectable VL, we observed a significantly higher proportion of YLH with low HDL compared to those without detectable VL (50.9% vs. 33.3%;  $p < 0.001$ ). After adjusting for demographic and clinical covariates, treatment with STR significantly decreased the odds of having high total cholesterol (CI 0.03, 0.59;  $p < 0.01$ ) and low HDL (CI 0.03, 0.88;  $p < 0.05$ ) compared to those not on STR. On the other hand, having a detectable VL significantly increased the odds of having low HDL compared to those without detectable VL (CI 1.24, 3.47;  $p < 0.01$ ).

**Conclusions:** Detectable VL significantly increased the odds of having low HDL, while the use of STR is associated with a more favorable lipid profile. Our findings suggest the adoption of STR may be an important strategy to lower VL and protect YLH against metabolic dysfunction associated with HIV.

## The Role of Relationship Functioning in Predicting Discussions and Uptake of PrEP among Men in Same-sex Relationships



Kendell M. Doyle, Tyrel Starks

Gay and bisexual men (GBM) are disproportionately affected by HIV transmission risk. Among GBM, main partnerships account for the majority of new HIV infections. Pre-exposure prophylaxis (PrEP) is recommended for

at risk populations, such as GBM in relationships. Previous research suggests that men in same-sex relationships are reluctant to discuss PrEP uptake with their main partner due to fear that such a discussion will undermine partner trust and threaten the relationship. The role of relationship functioning (RF) regarding discussions and uptake of PrEP among GBM in relationships has yet to be investigated but may provide valuable insight of interpersonal factors predicting individual level health outcomes.

Data were gathered from the baseline assessment of 59 seroconcordant-negative couples ( $n_{individuals} = 118$ ) participating in a randomized controlled trial assessing the adjunct components of Couples HIV Testing and Counseling. Eligibility required both partners to be aged 18 or over, identified as cis-gender male, were sexually active and had a relationship length  $\geq 3$  months. At least one partner in each couple was 18-29 years old, reported drug use in the past 30 days, and was HIV-negative. Of these 118 individuals ( $M_{age} = 26.55$ ,  $SD = 4.78$ ) half identified as a racial minority (50%). The Multiple Determinants of Relationship Commitment Inventory scale was used to measure RF.

Results of an Actor Partner Interdependence Model (APIM) suggest significant partner effects between relationship functioning factors and discussions of PrEP with main partners. Partners with higher scores on MDRCI Rewards ( $B = .049$ ; 95% CI: .005, .092;  $p < .05$ ) and Comparisons ( $B = .037$ ; 95% CI: .002, .073;  $p < .05$ ) were significantly more likely to discuss PrEP with their main partner. Additionally, partners who reported more desire for alternatives to their current relationship on the MDRCI were more likely to be prescribed PrEP currently or in the past ( $B = .069$ ; 95% CI: .000, .138;  $p < .05$ ).

Contrary to the concerns expressed by many GBM, results suggest that PrEP communication is associated with better, not diminished, RF. Men who discussed PrEP with their partners had higher satisfaction and commitment compared to those who did not. Analyses provide some indication that high-functioning couples are able to tolerate PrEP communication successfully. These findings also suggest it is at least plausible that discussing biomedical HIV prevention may be linked to enhanced RF.

## Cervical Cancer Prevention Behaviors and HPV Vaccination Intention



Meardith A. Pooler-Burgess, Fran Close

In May 2018, the World Health Organization (WHO) released a call to action for the global elimination of cervical cancer. In support of this call to action, a U.S. congressional brief-



ing was held in June 2019 to endorse and advocate for the elimination of HPV-related cancers through HPV vaccination and evidence-based cancer screening. This exploratory study aimed to explore the relationship between cervical cancer prevention behaviors and HPV vaccination intention among minority women.

This study included quantitative data collection utilizing a developed questionnaire (Phase I), and qualitative data collection using semi-structured individual interviews (Phase II). By employing a sequential, mixed-methods research design, this study explored: (1) cervical cancer knowledge, attitudes and screening behavior (2) HPV knowledge, attitudes, and HPV vaccine behaviors (3) the association between cervical cancer knowledge, attitude, Pap screening behavior and HPV vaccination intention, and (4) perceived facilitators and barriers that may influence HPV vaccination.

Phase I findings revealed majority of respondents had high cervical cancer knowledge scores and favorable attitudes towards cervical cancer screenings. 76% of respondents had high cervical cancer prevention behaviors, indicating they receive routine Pap tests at least every 3 years. HPV knowledge scores and attitude towards HPV vaccination were slightly lower compared to cervical cancer. Additionally, nearly 41% of respondents with age-eligible children had negative HPV vaccine behaviors, indicating no intention to give their child the vaccine and not initiating the HPV vaccine series. Significant associations were identified between cervical cancer knowledge and cervical cancer attitude, cervical cancer attitude and cervical cancer behavior, and cervical cancer knowledge and HPV vaccine behavior. Correlation analysis showed a significant positive relationship between cervical cancer screening behavior and HPV vaccine behavior. Phase II findings revealed perceived barriers such as low perceived susceptibility, lack of HPV knowledge and awareness, and negative provider experiences hindered HPV vaccination of the child. Perceived facilitators of HPV vaccination included positive provider experiences, personal experiences with HPV, and provider recommendation.

Women that had positive cervical cancer prevention practices were more likely to be supportive of the HPV vaccine for their child. In alignment with U.S. Healthy People 2020 goals, and the recent call to action to eliminate HPV-related cancers, findings from this study can be used to inform an additional, potentially effective HPV vaccine recommendation opportunity, which in turn could considerably increase HPV vaccination among minority adolescents and decrease racial disparities in regard to cervical cancer and other HPV-related cancers.

## Cultural and Syndemic Factors Influence PrEP Willingness, Intentions, and Uptake among Partnered Latinx Sexual Minority Men



Stephen Bosco, Gabriel Robles, Tyrel Starks

**Background:** While HIV incidence remained generally stable since 2011, rates increased by 13% among Latinx sexual minority men (LSMM). PrEP is highly efficacious at preventing HIV, yet uptake among eligible SMM has been slow, and slower among LSMM specifically. Many new HIV infections among SMM occur between main partners and guidance for dissemination specifically recommends PrEP for partnered men who have sex outside their relationships. The Motivational PrEP Cascade identifies significant declines of PrEP-eligible individuals across stages from willingness, intention, to uptake. Syndemic Theory has been utilized to explain disproportionate rates of HIV in marginalized communities; however, minimal work has examined the impact of syndemic conditions on the PrEP cascade. Among LSMM, cultural factors (machismo and caballerismo) might also influence motivations of PrEP uptake. Given that LSMM have higher rates of HIV infection and are less likely to use PrEP, it is critical to identify barriers to PrEP uptake among this high-priority community.

**Methods:** Data were gathered from a US-wide online study of 625 LSMM in a same-sex relationship. We focus here on the 368 LSMM reporting an HIV-negative status and PrEP eligible based on CDC guidelines. The mean age was 30 and mean relationship length was 45 months. Participants completed demographics, the Machismo for Latino Men scale, and measures of syndemics (depression, childhood sexual abuse, intimate partner violence, substance use) and PrEP willingness, intentions, and uptake. **Results:** More than half (61%) of the men were PrEP-eligible, 53% reported willingness to start PrEP, 26% intended to start PrEP, and 21% are on PrEP. Over half (51%) reported experiencing 5 or more out of 10 syndemic conditions. Chi-square tests examined the influence of >5 syndemics on PrEP-eligibility, willingness, intention, and uptake. LSMM reporting 5 or more syndemics were more likely to be PrEP-eligible and to indicate greater intent to start PrEP. There was a significant association of machismo ( $\exp(B)=1.02$   $p<.05$ ) and caballerismo ( $\exp(B)=0.97$   $p<.01$ ) on PrEP eligibility. Similarly, caballerismo was negatively associated with the odds of intending to start PrEP ( $\exp(B)=0.98$   $p<.05$ ) while machismo was not associated with PrEP intentions. There were no significant effects of cultural and syndemic factors on PrEP uptake.

**Conclusions:** Our findings highlight the role of cultural and syndemic factors on PrEP uptake among LSMM, influencing both PrEP eligibility and intentions, but not willingness. An integration of cultural ideals of masculinity (e.g., Machismo) may be particularly useful in addressing negative views of PrEP in LSMM. Future work to address protective cultural values in the face of adversity represents a beneficial route for reducing HIV among LSMM.

## Adoption of Pre-Exposure Prophylaxis: Qualitative Analysis of the Persuasion Stage of Diffusion for African American Young MSM



Ashley Schuyler, Zainab Alidina, M. Margaret Dolcini, Gary Harper, J. Dennis Fortenberry, Ryan R. Singh, Omar B. Jamil, Lance M. Pollack, Joseph Catania

**Background:** African-American MSM represent the population with the greatest risk of HIV infection in the US, yet adoption of pre-exposure prophylaxis (PrEP) among African-American MSM remains low. Applying Diffusion of Innovations (DOI) theory can aid in the identification of antecedents to PrEP adoption, with perceived characteristics of the innovation (i.e., PrEP) playing a key role in the persuasion stage of adoption decision-making. We apply DOI theory to examine qualitative data describing perceptions of PrEP among a sample of high-risk African-American young MSM (AAYMSM).

**Methods:** Qualitative data were collected from a sample of HIV-negative and HIV-status unknown AAYMSM (N=181; 17-24 yrs.; 67% ≤ high school education) via individual interviews. Open-ended questions asked broadly about participants' experiences with and thoughts about PrEP. Descriptive coding techniques were used to analyze data and identify perceptions of PrEP's key characteristics.

**Results:** Data revealed AAYMSM to be at three stages of PrEP diffusion: knowledge (PrEP-unaware; 11.6%), persuasion (aware but hadn't adopted; 72.4%), and adoption/discontinuance (current or prior use of PrEP; 16.0%). Men in the persuasion stage discussed characteristics of PrEP they had learned about through vicarious experience via media/social networks. Perceptions of PrEP's efficacy and side effects emerged as the most prominent among men in this stage. Many men in this stage perceived PrEP to be effective and beneficial, while others described uncertainty or negative perceptions of PrEP's efficacy. Perceptions of side effects were more mixed. Collectively, data regarding efficacy and side effects revealed three substrata of readiness to adopt PrEP for men in the persuasion stage – highly ready (n=40), moderately ready (n=20), and least ready

(n=9). Other less frequently mentioned characteristics of PrEP included those related to its relative advantage (e.g., compared to condoms) and compatibility (e.g., low level of HIV risk).

**Conclusions:** Applying DOI theory revealed key perceptions of PrEP among men who are aware of the HIV prevention tool, but had not yet adopted it. Future research aimed at developing quantitative measures to examine stages of PrEP diffusion and related factors can help in identifying and mitigating important barriers to PrEP adoption among AAYMSM.

## A Systematic Review of Quantitative Stigma Measures Among Young Sexual Minority Men



Jorge Cienfuegos Szalay, Ore Shalhav, Ali Talan, H. Jonathon Rendina

**Introduction:** Young sexual minority men (YSMM) have the highest rates of new HIV infections in the U.S., with Black and Latino YSMM specifically being disproportionately affected in comparison to their White counterparts. Research suggests that one of the major drivers of the disparity is intersectional stigma. Intersectionality theory suggests that interlocking stigmatized identities (e.g. race, ethnicity, sexual orientation, gender expression) produce unique detrimental effects. The confluence of multiple identities in addition to sexual minority status and gender expression place Black and Latino YSMM at increased risk of suffering negative health outcomes. Given the lack of quantitative stigma measures developed through an intersectional framework, the focus of this study was to conduct a systematic review to identify currently available measures for multiple forms of stigma among YSMM.

**Methods:** PubMed and PsycInfo were used to identify peer-reviewed papers that contained a quantitative measure of stigma focused on at least one domain of interest (e.g., race/ethnicity, sexual orientation, or gender expression) with samples that included YSMM. A variety of search terms were used to ensure the search was comprehensive and a range of eligibility criteria were used to include studies in the systematic review. Scales were categorized by race/ethnicity, sexual orientation, and gender.

**Results:** Initial search results yielded 283 relevant articles of which 127 met inclusion criteria. Within these, 105 scales or items were identified that measured at least one form of stigma (e.g., intrapersonal, interpersonal, structural). As related to stigma, 20 measures focused on gender, 26 focused on race/ethnicity, and 34 focused on sexual orientation. Stigma measures related to multiple minority

identities included 11 on race/ethnicity and sexual orientation, 8 on sexual orientation and gender, 3 on race/ethnicity and gender, and 3 on all three categories.

**Conclusion:** Measuring YSMM's experiences of stigma has been critical in advancing their psychosocial and physical well-being. However, of the measures identified, most focused on experiences of stigma directed at a singular identity (e.g., sexual orientation). While some attempted to address the effects of stigma on individuals with multiple stigmatized identities, very few were designed through an intersectionality framework. This speaks to the need for creating psychometrically-sound, empirically-validated instruments that take into consideration the intersecting identities YSMM may hold in order to address the unique effects of stigma these individuals experience.

## Barriers and Facilitators to Latino Men Who Have Sex with Men Engaging in HIV-Prevention and Behavioral Health Services



Audrey Harkness, Rosana Smith-Alvarez, Daniel Mayo, Steven A. Safren

**Background:** Latino gay, bisexual, and other men who have sex with men (MSM) experience disproportionate rates of new HIV infections across the U.S. In Miami, the U.S. city with the highest rate of HIV infections in the U.S., Latino MSM also lead in HIV incidence, while uptake of HIV-prevention (e.g., pre-exposure prophylaxis [PrEP]) and behavioral health services is lacking. The current study characterizes barriers and facilitators to Latino MSM engaging in HIV-prevention and behavioral health services.

**Method:** Participants include 26 Latino MSM (61.5% U.S. born) and 10 key informants who work in HIV-prevention and/or behavioral health services with Latino MSM in the Miami, FL area. Latino MSM were recruited from a pool of participants who were eligible for our HIV-prevention and behavioral health clinical trials and participated ("engagers;" n = 15) or did not participate ("non-engagers;" n = 11). We conducted semi-structured interviews in English, Spanish, or both regarding Latino MSM's barriers and facilitators to engaging in HIV-prevention (regular HIV testing, PrEP) and behavioral health services. Interviews were recorded and transcribed for thematic analysis in NVivo 12. The first author reviewed 10 transcripts to develop an initial codebook, with iterative revisions to the codebook as new codes emerged from the data.

**Results:** The qualitative analysis identified 115 codes grouped into 10 categories that reflect Latino MSM's barriers and facilitators to engaging in HIV-prevention and behavioral

health services. The categories include: (1) degree of perceived need or relative importance, (2) anticipated emotional responses to engaging in services, (3) anticipated consequences of engaging in services, (4) degree of knowledge or awareness of health and related services, (5) views on the medical system and services, (6) influence of peers/social network, (7) influence of providers/staff/organizations, (8) cultural factors, (9) structural factors, and (10) relevance of public health/outreach messaging. Specific codes within each category will be further discussed in the presentation.

**Conclusions:** Findings highlight key factors that may need to be addressed by developing new implementation strategies to scale up and disseminate needed HIV-prevention and behavioral health services to Latino MSM. The findings also highlight the multilevel nature of these barriers and facilitators, implicating the need for coordinated individual, interpersonal, and structural/community level implementation strategies to achieve full engagement in needed services among Latino MSM.

## The relevance of venue in research: Comparing recruitment strategies for racial and ethnic minority YMSM in NYC



Jesse Bradford-Rogers, Jonathan López-Matos, Demetria Cain, Tyrel Starks, Jessica Adams-Skinner

**Background:** Overall, rates of new HIV diagnoses have decreased since 2010; however, rates among Latinx and Black/African American (AA) young (ages 25-34 years) men who have sex with men (YMSM) have increased. These racial and ethnic groups, however, are more difficult to engage in research and prevention services. Reasons could include the intergenerational impact of historically unethical research studies, frequent experiences of discrimination within the healthcare system, and greater rates of medical mistrust. Community outreach and field-based recruitment strategies have shown to be effective in recruiting ethnic and racial minority participants, yet few have compared community-based organizations (CBOs) to centralized, research-center-based screening for the same study. The current study compares recruitment strategies for racial and ethnic minority YMSM at high risk for HIV acquisition in NYC.

**Methods:** YMSM (ages 15-29 years) were recruited for a comparative effectiveness trial of a Motivational Interviewing (MI) based intervention to reduce substance use and sexual risk behavior. Two recruitment strategies were used: (1) field-based recruitment conducted by a local CBO delivering the intervention in the effectiveness trial and (2) online re-

recruitment via ads and phone screening coordinated by the academic research partner in the effectiveness trial. Differences in demographics, substance use, sexual risk, and research participation were examined.

**Results:** The final sample consisted of 454 YMSM, most of whom identified as male (92.7%) and as a racial or ethnic minority (79.2%). The average age was 23.9 years old (SD=3.3). Compared to the research center, the CBO screened a significantly larger proportion of AA (odds ratio (OR)=7.28, p=.000) and Latinx individuals (OR=2.7, p=.000). CBO outreach efforts were more likely to reach youth who use injection drugs (OR=3.55, p=.000) and youth recently diagnosed with syphilis (OR=4.67, p< .01). Those screened by the CBO were also more likely to enroll in the study (OR=1.75, p < .05).

**Conclusions:** Current findings were consistent with existing literature on effective recruitment of racial and ethnic minorities. CBO recruitment was more efficient in reaching the most vulnerable YMSM. This may be attributable to the CBO's presence in the community and utilization of outreach workers who are members of the target population. This underscores the importance of relationship-building and personal contact in program implementation. Implementation research should routinely engage community partners in the development and execution of study recruitment strategies in a manner that can inform outreach and marketing efforts. This synergy may not only enhance recruitment efficiency but inform strategic marketing efforts.

## Social Psychological Antecedents to Racial Homophily among Black Men who have Sex with Men



Andrew Cortopassi, Seth Kalichman

Black men who have sex with men (MSM) continue to bear the burden of new HIV infections in the United States. The racial disparity in HIV infection among MSM has been attributed, in part, to high rates of racial homophily within the sexual networks of Black MSM. Within homophilous, closed-off networks, disease propagates easily, increasing the odds of HIV exposure per act of sexual risk behavior. The cause of homophily is unknown, but it is posited that objectification based in race-based sexual stereotypes (e.g., large penis size) by non-Black MSM leads to homophily among Black MSM. In the current vignette-style experimental study with Black MSM recruited from Grindr, we tested the Objectification-Homophily Hypothesis. Specifically, in a 2 (stereotype exposure: racialized versus non-racialized penis size stereotype) x 2 (potential partner race: Black or White) between-subjects design, the interactive effect of stereotype exposure and partner race on

partner engagement via state self-objectification (SSO; feeling like a body versus a full self) was examined. Results showed that while stereotype exposure had no unique or interactive effects, White partner race reduced engagement through SSO, an indirect effect moderated by degree of past-year racial homophily, i.e., significant only among those who reported high past-year homophily.

In a second, follow-up study currently being conducted, a stronger contrast between levels of the stereotype exposure variable is used. Initial results are expected to replicate, but a 3-way interaction of stereotype exposure, potential partner race, as well as past-year racial homophily, is predicted instead—leading to decreased engagement via SSO. These projected results would indicate that exposure to race-based sexual stereotypes by non-Black MSM likely leads, in part, to the formation of racially homophilous sexual networks among Black MSM, because such stereotyping is experienced as objectifying. Of particular interest, however, would be the moderation of this indirect effect by past-year homophily. Indeed, results would indicate that such a mechanism is relevant only for those who demonstrate high levels of racially homophilous partnering already. As such, rather than acting as a fundamental cause, it may be that race-based sexual stereotyping and objectification serve to *maintain* racially homophilous sexual networks among Black MSM. Network-level HIV prevention interventions will need to consider the impact of such individual-level psychological processes that perpetuate increased risk for HIV infection among Black MSM.

## Initial Feasibility, Acceptability and User Experience of a Multi-Drug Pod-IVR: A Mixed Methods Study



Melissa Guillen, Sara Vargas, Rochelle K. Rosen, Lauren Dawson, Melissa L. Getz, Kelley A. Smith, Joseph L. Fava, Marc M. Baum, Kathleen L. Vincent, Kate M. Guthrie

**Background:** Delivering efficacious HIV/STI prevention for optimal effectiveness relies on user adherence. A dapivirine intravaginal ring (IVR) showed significant reductions in HIV incidence among adherent users. Sustained-release drug delivery devices (e.g., IVRs) are considered an important path forward to address long-term adherence.

**Methods:** In a pre-phase-1 trial, 10 women enrolled in serial cohorts to evaluate a pod-IVR delivering TDF-alone, TDF-FTC, and/or TDF-FTC-MVC. Six women used single and dual drug pod-IVRs; 4 used triple drug pod-IVRs – each for 7 days. Participants provided quantitative and qualitative data capturing

user sensory experiences as well as acceptability, perceptibility, and adherence behaviors. The user evaluation data for each pod-IVR included sexual and reproductive health history, daily diaries, final acceptability and willingness-to-use (WTU) surveys, and qualitative in-depth interviews.

**Results:** We enrolled 1 Hispanic (H), 2 H White, 4 non-H White, and 3 non-H Black females. Mean age = 27.8 years (range 21-41); mean BMI = 30.8. All 10 reported they would probably/definitely recommend the pod-IVR. The majority of participants (6) reported they would probably/definitely use the pod-IVR platform for HIV prevention. However, probable use decreased with anticipated longer use times (7, 28, 90, 180 days). Confidence to insert and remove the pod-IVR was high. Users' experiences did not differ as a function of the pod-IVR delivery system itself, regardless of drug(s) delivered. Participants reported sensory and behavioral experiences that impacted their use behaviors, including insertion and removal confidence, discharge, and expulsion concerns. While experiences were not significant enough to disrupt WTU, they should be considered in developing acceptability and adherence protocols in future trials.

**Conclusions:** Results provide evidence that the pod-IVR device itself is well-tolerated, despite different numbers of filled pods or active drug(s). This finding holds promise both for anti-HIV pod-IVRs and, potentially, multipurpose prevention pod-IVRs that could prevent sexually transmitted infections (STIs) including HIV, and/or pregnancy. Further acceptability, perceptibility, and adherence data should continue to be explored in the context of sexual activity and menses during longer use periods (e.g., 28-day, 90-day, or 365-day ring use).

## PrEP perceptions among providers and associations with formal transgender health training



Paul A. D'Avanzo, Sarah Bauerle Bass, Jesse A. Brajuha, Guitterez Luis, Jae Sevelius

**Background:** Access to pre-exposure prophylaxis (PrEP) continues to expand to high HIV risk populations, which includes transgender women. This expansion of services is reflected in the increasing number of healthcare providers who have sought out and/or received formal training for prescribing PrEP and monitoring patients currently prescribed PrEP. However, provider training may not adequately address specific treatment and other related concerns that arise in the context of providing PrEP to transgender women. Lack of transgender competent health care has been shown to contribute to medical mistrust, particularly among



transgender women, who may delay or forgo healthcare as a result.

**Methods:** To evaluate perceptions related to transgender women's healthcare and PrEP, we surveyed 102 healthcare providers who self-identified as prescribers of PrEP. Differences in healthcare and PrEP related perceptions were then assessed by self-reported level of transgender-specific training (1. *have not received training*, 2. *have sought out formal training*, 3. *have received formal training*).

**Results:** Training status did not differ by age of provider or number of years in practice. However, significant differences in perceptions related to transgender healthcare and PrEP were noted. Specifically, those who had neither sought out or received training reported more agreement with concerns regarding PrEP adherence among transgender women ( $F(2,99)=4.95$ ,  $p=.009$ ); concerns about PrEP leading to drug resistance ( $F(2,98)=7.04$ ,  $p=.001$ ); and discomfort with discussing sexual activity with transgender patients ( $F(2,98) = 18.8$ ,  $p < .001$ ).

**Conclusion:** These results indicate opportunities to enhance the scope and quality of training received by healthcare providers who may prescribe PrEP to transgender patients. Identifying both gaps in provider knowledge and existing concerns about how best to treat this population will help to ensure inclusive healthcare for trans women and more successful promotion of PrEP to patients.

## Stigma, Gender, and Social Ties: Viral Non-Suppression among Patients in HPTN 065 and Intervention Implications



Allysha C. Maragh-Bass, Theresa R. Gamble, Elizabeth Tolley

**Background:** The HIV Care Continuum includes progression from diagnosis to sustained viral suppression, although minority populations experience challenges in navigating this continuum. Barriers have included poor quality of care, particularly among women, African Americans, and men who have sex with men (MSM).

**Methods:** HPTN 065 evaluated the role of financial incentives in viral suppression among adults enrolled at HIV clinics in NY and DC; baseline data from the Prevention for Positives component were analyzed. The outcome of interest was viral non-suppression ( $>40$  copies/mL). Key variables included medication adherence attitudes, social support and stigma, which were selected based on insights from qualitative analyses with a sub-study of HPTN 065 exit interview participants. Descriptive statistics were calculated.

Logistic regression with robust standard errors was implemented and stratified by sex.

**Results:** Participants ( $N=745$ ) were predominantly male (68.8%), African American (61.9%), with 64.3% with under \$40,000 annual income. Men were more likely to identify same-sex partners (38.5% vs. 5.4%), and less likely to report yearly income  $< \$10,000$  (22.5% vs. 41.3%) than women. In adjusted analyses, MSM had 1.7 times odds of non-suppression as non-MSM (Adjusted Odds Ratio [AOR] = 1.71; 95% Confidence Interval [95% CI] = 1.00, 2.92;  $p < .05$ ;  $N=535$ ). Men with more positive medication adherence attitudes had 62% lower odds of non-suppression than men with less positive attitudes (AOR=0.37; 95% CI=0.13, 1.00;  $p < .05$ ). Women more open about their HIV status had greater odds of non-suppression than women less open ( $p < .08$ ). Finally, women with multiple barriers to medication adherence had over 3-fold the odds of non-suppression as women who identified no barriers (AOR: 3.31; 95% CI=1.13, 9.73;  $p < .05$ ).

**Discussion:** Associations between socio-demographics, medication adherence attitudes, and viral load non-suppression differed by sex. Irrespective of sex, presence of social support and less experiences of stigma did not appear protective against non-suppression. More research is needed to better understand and address barriers to achieving and maintaining viral suppression, particularly among MSM and women, who continue experiencing inequities in positive HIV health outcomes.

## Information Sharing and Targeted Content Drive Use of an Online Sexual Health Intervention for African American Young Adults



Alicia K. Williamson, Andrea Barbarin, Betina Campbell, Terrance R. Campbell, Marc A. Zimmerman, Tiffany Veinot

**Objective:** There is increasing interest in consumer health informatics (CHI) interventions for behavior change. However, they have varying rates of access, uptake, engagement, and effectiveness with African Americans. Therefore, we examined factors influencing uptake and engagement for a CHI intervention to prevent HIV/STIs among African American young adults. The HIV Outreach, Prevention, and Education (HOPE) eIntervention included a website, blog, Facebook, and Twitter accounts paired with face-to-face, group-based educational sessions called "HOPE Parties."

**Methods:** This community-based participatory research study included four waves of surveys ( $N=315$ ) in which participants reported their eIntervention usage after attend-

ing HOPE parties. We gathered data on usage of the eIntervention from server logs, friends/followers and user posts. Qualitative interviews were conducted with participants ( $N=19$ ) after initial surveys and website server logs indicated low uptake and engagement.

**Data Analysis:** We assessed uptake and engagement for each eIntervention component based on usage data and survey self-report. We then conducted a generalized linear mixed-effects model on survey data to identify predictors of eIntervention uptake. Interview transcripts were analyzed using line-by-line coding by two coders and memos were developed.

**Results:** Participants were majority African American, female, and in their early 20s. There were significant increases in self-reported eIntervention uptake over time (increasing from  $N=24$  users to  $N=44$  users), but demographic and HIV/STI-related behaviors were not significantly correlated. Instead, factors driving uptake were: desire to share HIV/STI prevention information with others, and trust in the community-based organization offering the HOPE parties. Factors driving non-uptake were: lack of time, forgetting about the eIntervention, and insufficient promotion. Factors driving initial engagement were targeted website aesthetics and content that appealed to users, but longer-term engagement was impeded by insufficiently frequent content updates.

**Discussion:** CHI interventions for African American young adults can leverage their desires to share information about HIV/STI prevention with others. Ensuring implementation through trusted organizations is also important, though there is a need for vigorous promotion. Visual appeal and targeted content foster initial engagement, but ongoing engagement may require continual content changes.

## Developing and Pretesting a PrEP Peer Navigation Intervention for Young Adult Latino Men who Have Sex with Men



Rosa A. Cobian Aguilar, Aaron J. Blashill, Claudia M. Carrizosa, Isaiah J. Jones, David Rivera, Nicholas C. Lucido, Kelsey A. Nogg, Kalina M. Lamb, Sarah A. Rojas, Christian B. Ramers, Janna R. Gordon, John P. Brady, Martin Fuentes, Kristen Wells

Pre-Exposure Prophylaxis (PrEP) is an effective medication taken daily to prevent HIV infection, especially when used with condoms. Latino men who have sex with men (MSM) are at high risk for new HIV diagnoses and are less likely to take PrEP compared with non-



Hispanic White MSM. Latino MSM also face numerous personal, interpersonal, and logistical barriers to obtaining PrEP. Patient navigation is a barrier-focused intervention model focused on assisting individuals in obtaining recommended healthcare in a timely manner. This study describes an iterative process of developing a peer patient navigation (PN) intervention to assist young adult Latino MSM access PrEP. In collaboration with a Participatory Planning Group and using Social Cognitive Theory, the project team developed both English and Spanish-language patient-focused materials along with a flexible manual for the peer navigator. Intervention development included the following steps: 1) developing initial program concepts (e.g., key phrases, visuals to portray main ideas) for comprehension and attractiveness; 2) developing draft PN modules for participants facing a particular barrier; and 3) producing finalized materials with the assistance of a graphic design team. Four rounds of pretesting interviews with 18 young adult Latino MSM (mean age: 24.4 years, 50% Spanish speaking) were conducted to modify intervention materials, starting with initial program concepts and moving into intervention execution. Data from audio-recorded pretesting interviews were summarized and used to modify the intervention, which was then reviewed by additional interview participants. This iterative process continued until participants expressed positive feedback about modules and materials and expressed understanding of the content. The final produced PN intervention includes an introductory module, five educational modules (HIV prevention, PrEP introduction, PrEP efficacy, PrEP side effects, and PrEP adherence), and a module focused on decision support. Patient education is facilitated using infographics, palm cards, and a decision support tool. The educational modules are designed to be delivered as needed in tandem with personalized strategies to improve access and decrease barriers to PrEP initiation and adherence. Future research will examine feasibility of delivering the PrEP PN intervention in a randomized controlled trial.

## Qualitative Exploration of Perceptions of Sexual Assault and Associated Consequences among LGBTQ+ College Students



Christine L. Hackman, Jay Bettergarcia, Emma Wedell, Adrianna Simmons

LGBTQ+ individuals face numerous challenges related to minority stress, among them prejudice, discrimination, family disapproval, and violence, including sexual assault victimization. Research on the consequences of sexual assault victimization in LGBTQ+ communities is limited. The purpose of this qualitative study was to better understand the negative consequences of sexual assault, as well

as to propose interpersonal recommendations and policy changes to improve mental and physical health support, and reporting procedures to better serve LGBTQ+ college student sexual assault survivors. Thematic analysis was utilized to identify six major themes and 20 related subthemes. The major themes included: (a) Sense of Community (b) Cisheteronormativity, (c) Consequences of Sexual Assault, (d) Conditional Disclosure of Sexual Assault, (e) Hesitance to Engage with Institutions Following Sexual Assault, and (f) Changes to Improve Institutional Support. The greater severity of sexual assault victimization consequences faced by this population, coupled with the widespread distrust of the institutions tasked with providing survivors mental and physical health treatment and criminal justice, corroborate previous research underscoring the imperative of increasing funding for, and tailoring reporting procedures and support services to the needs of LGBTQ+ college students.

## Assessing Knowledge, Behavior, and Sexual Decision-Making Skills Among Young Black College Students At Risk for HIV



Yarneckia D. Dyson, Samuella Ware

Black (or African American) men and women between the ages of 18 and 29, including college students, in North Carolina bear a disproportionate burden of sexually transmitted diseases (STD) (NCDHHS, 2015). Urban areas in the Piedmont Triad Area of Greensboro, North Carolina have large populations of college students with elevated risk of infection for STD, including HIV. The Centers for Disease Control and Prevention (CDC) advises that sexual risk behaviors associated with these outcomes include: having more than one sexual partner, changing sexual partners frequently, and having oral, vaginal or anal sex without a condom (CDC, 2016). The current triangulated mixed methods study explored the STD knowledge, attitudes, and behaviors, and sexual risk of Black college students enrolled at Historically Black Colleges and Universities (HBCU) and Minority Serving Institutions (MSI) (MSI). The data collection tools included a 70-item online confidential survey, individual interviews (Women Only), and focus groups. Further, this project implemented *Healthy Love*, a single session, CDC evidence-based behavioral and biomedical intervention that was designed to increase safer sex or protective behaviors for STD and HIV among Black women. The implementation of this intervention with our sample that included Black men is the first to deliver this critical programming to this under-researched population.

The sample comprised 4 HBCU's and one MSI, all located in the South, which bears the

greatest burden of HIV infection and transmission. Fifty one percent of the sample were women followed by 48% who identified as men and 1% who identified as other. Participants were given pre-and post-tests before the delivery of the intervention that measured STD knowledge, attitudes towards condom use, and sexual risk. The findings from the pre and post-test indicated that students' knowledge about sexually transmitted diseases increased (mean difference -2.89) and the endorsement of high-risk sexual behavior decreased (mean difference 4.66). The study participants endorsed high risk sexual behaviors including the use of an illicit substance at the time of intercourse, unprotected sexual encounters, and ambiguity as it relates to HIV testing and knowing their status. The overarching goal of this study was to test the efficacy of the *Healthy Love* prevention intervention when implemented in this population. The findings from this study indicate the need for culturally tailored and gender specific biomedical behavioral HIV prevention interventions that directly targets the unique sexual health needs of Black College Students.

## Sex differences in the psychological and environmental correlates of injection risk among people who inject drugs in Mexico



Jennifer P. Jain, Steffanie Strathdee, Brooke West, Patricia Gonzalez-Zuniga, Gudelia Rangel, Eileen Pitpitan

**Background:** HIV and HCV transmission among people who inject drugs (PWID) is often fueled by injection risk behaviors (e.g., injection equipment sharing), which are shaped by the dynamic interaction between personal and environmental-level factors.

**Purpose:** We utilized the social ecological model and studied PWID in Tijuana, Mexico to identify potential sex differences in the psychological and environmental correlates of injection risk, hypothesizing that females would face greater barriers to practicing injection risk reduction compared to males.

**Methods:** From 2011-2013, 734 PWID (female: 277, male: 457) were enrolled into a prospective cohort study in Tijuana. At baseline, participants completed interviews on injection and sexual risks. Utilizing baseline data, we conducted multiple generalized linear models stratified by sex to identify personal and environmental factors associated with injection risk scores. Injection risk scores ranging from 1-5 were calculated by averaging responses from five likert-scaled injection risk indicators (e.g., syringe sharing), with higher scores representing higher risk.

**Results:** For both sexes, difficult access to sterile syringes was associated with elevated

injection risk scores ( $b=1.24$ , 95% confidence interval [CI]=1.16-1.33), using syringes from a safe source (e.g., needle exchange program) was associated with lower injection risk scores ( $b=0.87$ , 95% CI=0.82-0.94), and for every one-unit increase in safe injection self-efficacy we observed a 20% decrease in injection risk scores ( $b=0.80$ , 95% CI=0.76-0.84). Females had a higher median safe injection self-efficacy score compared to males (median=2.8, Interquartile range [IQR] =2.2-3.0 vs. median=2.8, IQR=2.0-3.0,  $p=0.01$ ). Among females, incarceration ( $b=1.22$ , 95% CI=1.09-1.36), and police confiscation of syringes in the past six months ( $b=1.16$ , 95% CI=1.01-1.33), were associated with elevated injection risk scores. Among males, sex work ( $b=1.16$ , 95% CI=1.04-1.30), and polysubstance use in the past six months ( $b=1.22$ , 95% CI=1.13-1.31), were associated with elevated injection risk scores.

**Conclusions:** Interventions to reduce injection risk among PWID in Tijuana should be sex-specific, and address different levels of HIV and HCV risk. Prevention programs for females should address punitive policing practices and the criminalization of drug use. Interventions for males should consider the heterogeneity in drug use behaviors and promote safer sex work environments.

## Interpersonal and Community Influences on PrEP Initiation and Adherence among Young Adult Latino Men who Have Sex with Men



Nicholas C. Lucido, Kristen Wells, Janna R. Gordon, Claudia M. Carrizosa, Christian B. Ramers, Kalina M. Lamb, Kelsey A. Nogg, Rosa A. Cobian Aguilar, John P. Brady, Isaiah J. Jones, David Rivera, Martin Fuentes, Aaron J. Blashill

**Introduction:** Men who have sex with men (MSM) are the largest at-risk population for new HIV diagnoses, and HIV diagnoses are increasing among young Latino MSM. Pre-Exposure Prophylaxis (PrEP) is an effective medication taken daily to prevent HIV, especially when used with condoms. However, Latino MSM are less likely to take PrEP compared with non-Hispanic White MSM. The purpose of this study was to identify interpersonal- and community-level barriers and facilitators to PrEP initiation and adherence among young Latino MSM.

**Methods:** Using purposeful sampling, 27 Latino men, ages 18-29 years, participated in semi-structured in-depth interviews assessing barriers and facilitators to PrEP initiation and adherence and completed self-report demographic surveys. Interviews were audio recorded and transcribed verbatim. Content analysis was used to identify both *a priori* and

emerging themes. Two coders independently coded each transcript, then resolved discrepancies via consensus.

**Results and Discussion:** Community and interpersonal influences, PrEP stigma, and sexual orientation discrimination all contribute to PrEP initiation and adherence among Latino MSM. Participants described a complex interaction between the LGBTQ and Latino communities' perspectives on PrEP. Most mentioned the LGBTQ community as being supportive and described learning about PrEP from their community, LGBTQ social media, and support groups for MSM using PrEP. Participants also mentioned PrEP stigma within the Latino and LGBTQ communities and values placed on masculinity/*machismo*, within the Latino community, as barriers to PrEP uptake and adherence. Stigma and sexual orientation discrimination were both emerging themes as participants indicated LGBTQ and Latino communities, family, friends, and the healthcare system as sources of stigma and discrimination. Participants feared their healthcare provider would make it difficult to obtain a PrEP prescription, due to PrEP stigma and sexual orientation discrimination.

**Conclusions:** Although PrEP can significantly reduce HIV infections among at-risk populations, Latino MSM continue to access PrEP less than non-Hispanic White and Black MSM populations. Interactions between interpersonal- and community-level factors influence PrEP initiation and adherence among Latino MSM. Identified facilitators and barriers should be targeted by interventions to reduce HIV risk and increase PrEP initiation and adherence among Latino MSM.

## Barriers to HIV Care among People Living with HIV: Qualitative Comparisons Between Older and Younger Adults



Natalie M. Brousseau

According to the Centers for Disease Control and Prevention, older people living with HIV (PLWH,  $\geq 50$  years) are an important priority for HIV intervention efforts due to increased incidence rates and increased risk for rapid disease progression. The CDC suggests that older PLWH may have different care needs and barriers to care in comparison to younger PLWH. Yet, these differences have been understudied to date. The current qualitative study uses HIV patient narratives to highlight unique differences in barriers to care between older PLWH ( $\geq 50$  years,  $n=20$ ) and younger PLWH ( $< 50$  years,  $n=21$ ). Participants were asked to describe specific barriers to HIV care (e.g., What kind of things make it challenging or difficult for you to come in for your appointments?) and medication (e.g., What kind of things make it challenging or difficult for you to take your medication?), as well as specific

social interactions (e.g., How have your relationships with family and friends changed since you were diagnosed with HIV? Do you have friends living with HIV and what are these relationships like?). Results identify key differences in HIV patient experiences by age. Among older participants, primary barriers to care included problems with medications, comorbidities, problems with peer social support, and transportation issues. Among younger participants, primary barriers included active substance use, competing priorities, and privacy concerns. Tailored intervention efforts may be needed to address the unique barriers to care experienced by older versus younger people living with HIV.

## Improving Knowledge of Emerging Therapeutics for HIV Patients Through a Social-Constructivist Continuing Education Activity



James D. Morgante, Angie Ladas, Adelfo San Valentin, Krista Sierra

Antiretroviral therapy (ART) regimens are associated with fewer toxicities and better efficacy, yet, clinical challenges persist. Patients with HIV/AIDS may be on decades-long ART treatment regimens, so maximizing the safety and tolerability of therapy, while preventing the development of resistance, remains precariously imperative.

Current guidelines recommend ART regimens incorporating two nucleoside reverse transcriptase inhibitors (NRTIs) plus a third drug from either the boosted protease inhibitors, integrase strand transfer inhibitor, or the non-NRTI classes. While effective, NRTIs have been associated with long-term adverse effects. ART regimens using only two drugs may potentially limit drug exposure and reduce risks for adverse events, drug interactions, and long-term toxicities, while fostering adherence. Because these regimens may challenge current standards of care, clinicians must be aware of emerging clinical trial data and ready to incorporate them into practice. Clinicians must also be prepared to meet the clinical needs of patients classified heavily treatment-experienced (HTE), whom are often resistant to multiple classes of ART drugs, leaving few viable treatment options.

To address these clinical gaps, we developed, implemented, and evaluated the effectiveness of a live instructional webcast. It aimed to provide clinicians with in-depth perspectives on recent advances in HIV treatment and, specifically, therapeutic paradigms for both treatment-naïve and HTE patients that utilize two active drugs. Using a social-constructivist approach, the instructional design was an interactive, case-based program featuring real-world cases, discussed by national and inter-

national HIV thought leaders. Clinicians considered options for individualized treatment and chemoprophylaxis across patient types; in parallel, thought leaders provided evidence-based clinical trial results.

Participating clinicians mostly identify as pharmacists or physicians with infectious diseases or primary care specializations. Within-session learning was assessed for those who provided complete activity evaluations ( $n = 24$ ). Learning scores were calculated by: (1) totaling correct responses across five pre- and post-test questions, (2) dividing by the total number of questions in each condition, and (3) multiplying each resulting value to derive a total pre- and post-test score percentage (i.e., measure of clinician knowledge prior to and after the education). A paired-samples t-test was used to compare pre- and post-test scores, which revealed a significant increase in knowledge for assessed advances in HIV treatment (pre-test:  $M = 45.000$ ,  $SD = 25.876$ ; post-test:  $M = 80.830$ ,  $SD = 17.173$ ;  $t(23) = -6.659$ ,  $p < .001$ ). Results suggest that our webcast had an effect on knowledge of therapeutic paradigms for both treatment-naïve and HTE patients that utilize two active drugs.

## Stress and Levels of Disclosure: Differential Relationships by Gender through A Person-centered Longitudinal Perspective



Chengbo Zeng, Xiaoming Li, Shan Qiao, Xueying Yang, Zhiyong Shen, Yuejiao Zhou

**Background:** Previous studies have documented an inconsistent relationship between stress and HIV disclosure among people living with HIV (PLWH), and mostly used a cross-sectional design. Little is known about levels of HIV disclosure and their relationships with stress from longitudinal perspective. Therefore, this study explored different levels of HIV disclosure and examined whether stress could predict disclosure levels among PLWH. This study also investigated the potential gender difference in the relationship between stress and disclosure levels.

**Methods:** Data were derived from a prospective cohort study conducted from November 2016 to January 2018 in Guangxi, China. Four hundred forty-four PLWH were recruited. Participants were assessed on perceived stress at baseline, sociodemographic characteristics, and their numbers of HIV disclosure targets at baseline, 6-month, and 12-month follow-ups. Person-centered approach (i.e., growth mixture modeling) was used to characterize the levels of disclosure based on numbers of disclosure targets. Multinomial logistic regression was used to predict levels of disclosure

with baseline stress after adjusting for covariates. The interaction effect of stress by gender was examined.

**Results:** Three levels of HIV disclosure were characterized using mean number of disclosure targets at each time point. Level one (“low levels of disclosure”) contained 81.2% of the individuals while 6.4% for level two (“increased levels of disclosure”) and 12.4% for level three (“high levels of disclosure”). Compared to PLWH in level one, PLWH in level two with higher level of education ( $std.\beta = 0.34$ ,  $OR = 3.39$  [1.27~9.07]) are more likely to increase their levels of HIV disclosure over time. PLWH who were young ( $std.\beta = 0.19$ ,  $OR = 0.96$  [0.93~1.00]), married/cohabitated ( $std.\beta = -0.20$ ,  $OR = 0.40$  [0.20 ~ 0.79]), and perceived stress ( $std.\beta = 0.41$ ,  $OR = 1.13$  [1.00 ~ 1.28]) were inclined to have high levels of disclosure from baseline to follow-ups (“level three”). The interaction of baseline stress by gender was statistically significant in differentiating levels one from three ( $std.\beta = 0.17$ ,  $OR = 0.84$  [0.73~0.96]) while it was not significant between levels one and two ( $std.\beta = -0.02$ ,  $OR = 0.99$  [0.85~1.16]). Compared to male counterparts, female PLWH with high levels of baseline stress were more likely to have consistent high levels of HIV disclosure over time.

**Conclusions:** High levels of education was positively associated with increased levels of disclosure over time, and young, married/cohabited female with high levels of baseline stress have consistent high levels of disclosure over time. To increase disclosure, structural interventions are needed to promote health education of HIV and disclosure at both community and clinical settings, and tailored individual-based interventions are needed to improve disclosure skills and stress management among PLWH.

## Social support as a protective factor against daily dysregulated eating among sexual minority women with overweight and obesity



Emily A. Panza, David W. Pantalone, Laura D’Adamo, Edward Selby, Rena Wing

**Background.** Obesity and dysregulated eating behaviors (i.e., overeating, binge eating) disproportionately affect sexual minority women. Recent research suggests that experiencing stigma based on sexual orientation and weight (i.e., minority stress) may heighten risk for dysregulated eating among sexual minority women, yet little work has examined factors that protect against dysregulated eating in this group. Social support reduces risk for dysregulated eating in the general population and mitigates the negative effects of stigma among sexual minority adults. This secondary analysis assessed the potential

protective effects of social support among sexual minority women of higher body weight by testing: (1) whether social support predicted less overeating and binge eating in daily life in this group and (2) whether social support buffered the effects of weight stigma events on daily overeating and binge eating.

**Methods:** Participants in this ecological momentary assessment (EMA) study were 55 sexual minority women (62% bisexual; 55% white; mean age =  $25 \pm 9$ ; mean body mass index [BMI] =  $32 \pm 5$ ). General social support was assessed at baseline (Social Support Behaviors Scale; Vaux, Riedel, & Stewart, 1987). For the following five days, participants used a smartphone to report weight stigma and eating behaviors five times daily at random intervals. Generalized linear models were conducted adjusting for age, race, education, BMI, baseline disordered eating symptoms, and EMA assessment completion rate.

**Results:** Sexual minority women with greater social support at baseline reported 32% fewer overeating episodes ( $b = -0.02$ ,  $SE = 0.01$ ,  $p < .05$ ) and 61% fewer binge-eating episodes ( $b = -0.03$ ,  $SE = 0.01$ ,  $p < .05$ ) during the EMA period compared to women endorsing lower social support. Even among women who experienced weight stigma during the EMA period, women with high social support reported 58% fewer overeating episodes ( $b = -1.33$ ,  $SE = 0.41$ ,  $p < .05$ ) and 89% fewer binge eating episodes ( $b = -2.89$ ,  $SE = 1.11$ ,  $p < .05$ ) compared to women with low social support.

**Conclusion:** Social support may benefit sexual minority women of higher body weight by reducing risk for dysregulated eating and buffering against the negative effects of weight stigma. Future research should investigate whether social support interventions improve sexual minority women’s outcomes in treatments for obesity and dysregulated eating.

## Examining Rural/Urban Differences in Provider Perceptions of HPV Vaccination in Adolescent Boys and Girls



Monica L. Kasting, Katharine J. Head, Rivienne Shedd-Steele, Gregory Zimet

**Purpose:** HPV vaccination uptake is consistently lower in rural areas as compared to urban/suburban areas. It is important to assess if there are similar or different barriers and facilitators of vaccine uptake in these populations, in order to design effective interventions that target the specific needs of local populations.

**Methods:** We surveyed 94 clinic vaccine coordinators from 64 of Indiana’s 92 counties. The survey included open-ended questions regarding barriers they face to vaccinating girls



and boys in their communities as well as areas for improvement. Participants were excluded if they did not indicate a geographic location (n=4). Data were analyzed using thematic analysis and responses for participants were compared by the clinic geographic location: rural (n=45) and urban/suburban (n=45).

**Results:** All respondents were female, 82% were non-Hispanic White, and 58% reported being registered nurses. The most commonly reported barriers for vaccinating both boys and girls were a lack of education and misinformation on the internet. While 60% of stakeholders indicated the barriers for boys and girls were the same, there were geographic differences with 75% of rural stakeholders reporting little or no differences in barriers between sexes and 51% of urban/suburban stakeholders saying there were differences. One barrier that was different in vaccinating boys and girls was that parents (and some providers) were still unaware the vaccine is recommended for boys. Furthermore, 60% of respondents mentioned that a major barrier to vaccinating girls was either a concern about increased sexual activity or a belief that it was unnecessary because the patient was not currently sexually active; this belief was not mentioned frequently for boys and did not differ between geographic locations. Regardless of geographic location, the most commonly reported way to improve HPV vaccination was increasing education, followed by improving provider recommendation, and making it mandatory for school entry.

**Conclusions:** The reported barriers to HPV vaccination and ways to improve vaccination rates were similar between rural and urban/suburban stakeholders. The urban/suburban locations reported gender differences in barriers more frequently than rural providers. This may indicate that there needs to be different approaches to educating vaccination providers on making high quality HPV vaccine recommendations depending on whether the provider works in a rural or urban/suburban area.

## Sometimes you gotta choose: Indepth qualitative analysis on barriers and facilitators to PrEP use in women who inject drugs



Sarah Bauerle Bass, Jesse A. Brajuha, Patrick J. Kelly, D'Avanzo A. D'Avanzo, Jennie Coleman, Jose A. Benitez

**Background:** Women who inject drugs (WWIDs) are at risk for HIV as they may engage in needle sharing and survival sex work. Pre-exposure prophylaxis (PrEP) reduces the risk of HIV acquisition yet little is known about the barriers this population may have to use this prevention medication.

**Objective:** To understand WWID's conceptualization of barriers and facilitators to PrEP use to inform the development of a targeted PrEP intervention that would be carried out in a syringe exchange program that also offers social services.

**Methods:** Four focus groups (n= 24) with WWID clients of a large urban syringe exchange were audiorecorded and transcripts were analyzed by content analysis; codes were derived deductively from the moderator's guide and inductively through emergence until thematic saturation and refinement was achieved.

**Results:** All participants were HIV negative; 58% were white; average age 35.3. Over half had income of \$500 or less in the past month, 62.5% said they were homeless "most of the time". Of the total, 66% had heard of PrEP and 41.6% had tried it. Most participants indicated an interest in PrEP but noted that seeing a doctor was a significant barrier. Other barriers included homelessness and potential theft of medication. Plans to dispense PrEP on site at the syringe exchange was encouraged, as well as providing it on a daily basis and in pill packs because prescription bottles can be sold on the street or to small pharmacies, a disincentive to adhere to PrEP. An intervention embedded in the syringe exchange was noted as an important strategy to decrease medical mistrust.

**Conclusions:** Barriers to PrEP use are significant in vulnerable WWID populations. Interventions must decrease perceptual, informational, and structural barriers for WWIDs, including how best to integrate services in existing, trusted community locations.

## Perceived Self-Efficacy in Latina Immigrant Mothers with HPV Vaccination in Their 9-12-Year-Old Daughters



Alexandra B. Khodadadi, Young-il Kim, Isabel C. Scarinci

**Introduction:** Human Papillomavirus (HPV) vaccination uptake remains low in the United States. The Health Belief Model (HBM) postulates that an individual's perceived risk and self-efficacy (judgement of one's self to complete an action) influence the decision to execute a preventive health behavior. Many studies have investigated factors associated with perceived risk in preventable and early detected cancers. Fewer studies have investigated the factors associated with self-efficacy.

**Objectives:** We examined factors associated with Latina immigrant mothers perceived self-efficacy to have their 9-12-year-old daughters vaccinated against HPV.

**Methods:** As part of a group-randomized trial to promote HPV vaccination, a baseline interviewer-administered survey assessing socio-demographics, knowledge and perceived risk of cervical cancer/HPV infection, self-efficacy, and intention to vaccinate their unvaccinated daughters was administered to mothers. A logistic regression was conducted to determine if self-efficacy was associated with vaccine intention when controlling for other variables. In addition, a multivariable linear regression was conducted to determine factors associated with increased self-efficacy scores.

**Results:** Of 316 participants, 62.9% indicated hesitancy (an answer of "don't know/not sure") to vaccinate their daughters against HPV. Mothers intending to vaccinate had higher average self-efficacy scores than those hesitant to do so (7.29 ± 1.53 v. 5.54 ± 1.42 points respectively; p < 0.001). Self-efficacy was strongly associated with vaccine intention when controlling for other variables (p < 0.001). The only significant predictor of changes in self-efficacy scores was mothers reporting "yes" or "no" to HPV awareness compared to "don't know/not sure" (B=0.756, p < 0.001; B=0.594, p=0.04).

**Conclusion:** Further efforts should focus on increasing awareness regarding HPV and cervical cancer to facilitate heightening perceived self-efficacy in mothers to vaccinate their daughters against HPV.

## Effective training and quality assurance strategies associated with high-fidelity EBI implementation in practice settings



M. Margaret Dolcini, Melissa Davey-Rothwell, Ryan R. Singh, Joseph Catania, Alice A. Gandelman, Vasudha Narayanan, Justin H. Harris, Virginia Mckay

**Background.** High quality implementation of evidence-based interventions (EBIs) is important for program effectiveness and is influenced by training and quality assurance (QA). However, gaps in the literature contribute to a lack of guidance on training and supervision in practice settings, particularly when significant program adaptations occur.

**Purpose.** We examined training and QA in relation to program fidelity among organizations delivering a widely disseminated HIV counseling and testing EBI in which significant adaptations occurred due to new testing technology.

**Methods.** Using a maximum variation case study approach, we examined training and QA in organizations delivering the program with high and low fidelity (Agencies: 3 = high

fidelity; 3 = low fidelity (total number of personnel interviewed = 25; clients interviewed = 194).

**Results.** We identified themes that distinguished high- and low-fidelity agencies. For example, high-fidelity agencies more often employed a team approach to training; demonstrated use of effective QA strategies; leveraged training and QA to identify and adjust for fit problems, including challenges related to adaptations; and understood the distinctions between the primary EBI and other testing programs. The associations between QA and fidelity were strong and straightforward, whereas the relationship between training and fidelity was more complex.

**Conclusions.** The implementation of behavioral interventions in public settings requires high quality training and QA approaches that can address program fit and program adaptations. The study findings reinforced the value of using effective QA strategies. Future work should address methods of increasing program fit through training and QA, identify a set of QA strategies that maximize program fidelity and is feasible to implement, and identify low-cost supplemental training options.

## The Interactive Effects of Depression and Substance Use among Older Adults Living with HIV



Laurel A. Weaver, H. Jonathon Rendina

**Background:** HIV-positive individuals are living longer, healthier lives, but neurocognitive impairment (NCI) remains a prevalent health burden among older adults living with HIV (OALWH). At present, the precipitating and perpetuating factors of HIV-associated NCI in OALWH are largely unknown, although accumulating evidence indicates that overlapping psychosocial issues may play a primary role in cognitive health outcomes. The current study aimed to explore the association between depression, substance use, and NCI in OALWH.

**Method:** A sample of New York City-based OALWH (N=99) with chronic and current substance use issues completed a series of neurocognitive assessments and self-report surveys. The majority of the sample was Black (74.4%), male (66.7%), and reported post-secondary education (53%). On average, the sample was 54.6 years old ( $SD = 4.0$ ) and had been living with HIV for 16.7 years ( $SD = 7.0$ ). HIV disease characteristics, race, sex, and education were included as covariates in subsequent general linear models.

**Results:** Results indicated that approximately half (49%) of the overall sample demonstrated global NCI, and the majority ex-

hibited mild impairment in the domains of verbal learning (60%), verbal memory (70%), and motor speed (67%). Nearly half (48.5%) of participants reported significant depressive symptoms. Multivariate analyses revealed a main effect of depression on NCI – specifically in the domains of executive function and motor speed. While there was no main effect of substance use, a significant interaction between depression and substance use emerged. Participants who reported depressive symptoms and either stimulant or marijuana use yielded lower global and cognitive domain-specific scores than participants who used these substances but were not depressed.

**Conclusion:** These results suggest that depression is directly associated with NCI and furthermore, that depression interacts with specific substances of abuse to exacerbate cognitive impairment in OALWH. Further research is needed to improve understanding of these associations to facilitate improved prevention and treatment strategies for HIV-associated NCI.

## Self Esteem Moderates the Relationship between Adverse Life Events and Mental Health Diagnoses for Black Women Living with HIV



Sannisha K. Dale, Sherene Saunders

**Background:** Black women in the U.S. are more likely to be living with HIV compared to women of other racial/ethnic groups and people living with HIV are more likely to experience adverse life events (ALE) such as physical and sexual assault. High self-esteem has proven to be a protective factor and low self-esteem has been linked to mental health diagnoses such as depressive symptoms, suicidality, and posttraumatic stress disorder (PTSD). However, the existing literature is limited in the examination of how self-esteem may buffer the relationships between ALE and mental health diagnoses among Black women living with HIV (BWLWH). Among BWLWH, we investigated whether ALE predicted mental health diagnoses and whether self-esteem was a moderating/protective factor.

**Method:** 119 BWLWH in an HIV epicenter in the Southeastern U.S. completed self-report assessments on self-esteem (Rosenberg Self-Esteem Scale) and ALE (Life Events Checklist for DSM-5) (e.g. rape, sexual assault, physical assault, accidents, natural disaster). Women also completed a clinical interview (via Mini-International Neuropsychiatric Inventory) to diagnose current depressive disorder, PTSD, and suicidality.

**Results:** SPSS was used to conduct descriptive statistics and logistic regressions. Over

85% of women experienced one or more ALE and 50.4% experienced five or more ALE. There were high rates of current PTSD (54%) and current depression (28%), but a lower rate of current suicidality (10%). Higher self-esteem predicted lower likelihood of current depression ( $OR = .894, p = .006$ ), PTSD ( $OR = .838, p = .000$ ), and suicidality ( $OR = .889, p = .019$ ). Total ALE did not predict mental health diagnoses. However, interactions between self-esteem and total ALE significantly predicted current depression ( $OR = .000003, p = .011$ ) and PTSD ( $OR = 2.7182 \times 10^{-9}, p = .000$ ) and tended to predict suicidality ( $OR = 2.3261 \times 10^{-11}, p = .078$ ). Further analyses indicated that higher ALE total related to higher likelihood of current PTSD only among women reporting lower self-esteem ( $OR = 1.21, p = .04$ ).

**Conclusion:** Among BWLWH, we found that self-esteem related to lower diagnoses of depression, PTSD, and suicidality, and was a protective factor between ALE and the diagnosis of PTSD. Total ALE did not directly predict diagnoses perhaps due to a ceiling effect from the high numbers of ALE among the BWLWH. Intervention efforts addressing mental health diagnoses among BWLWH should incorporate strategies to enhance self-esteem.

## Social Media Use and Well-Being in Sexual and Gender Minority Young Adults



Erin A. Vogel, Danielle Ramo, Judith Prochaska, Meredith Meacham, John F. Layton, Gary Humfleet

**Introduction:** Social media can provide connection with others and access to social support. The relationships between social media use and facets of well-being among sexual and gender minority (SGM) young adults are not well-studied.

**Methods:** Participants were SGM young adults (N=302, M age = 21.9, 72.2% assigned female at birth) enrolled in Facebook smoking cessation interventions. Sexual identity was 17.2% gay, 16.9% lesbian, 59.3% bisexual and/or pansexual, and 6.6% other; gender identity was 61.3% cisgender, 14.6% transgender, and 24.2% other. Participants reported on maladaptive Facebook use (e.g., distress when unable to access social media, social media use that interferes with other obligations), hours of social media use per week, perceived social support, internalized SGM stigma, depressive symptoms, and smoking behaviors (i.e., cigarette dependence, number of cigarettes smoked in the past-week). Significant bivariate associations with maladaptive Facebook use were entered in an adjusted multiple linear regression analysis.

**Results:** Adjusting for demographic covariates, maladaptive Facebook use was significantly associated with greater internalized stigma ( $r=.22, p<.001$ ) and depressive symptoms ( $r=.19, p=.001$ ) and with less social support ( $r=-.14, p=.017$ ). Greater use of social media was significantly associated with greater depressive symptoms ( $r=.15, p=.01$ ). Maladaptive Facebook use remained significantly associated with internalized SGM stigma ( $\beta=.22, p=.001$ ) when adjusting for other correlates.

**Conclusions:** Taken together, results suggest that maladaptive Facebook use among SGM young adults is associated with psychological stressors, including internalized stigma, low social support, and depressive symptoms. Social online communities, while accessible, may not provide a simple solution to addressing isolation, experienced stigma, and depression in SGM young adults.

## A Pilot Study to Examine Nurses' Perceptions of Sexually Transmitted Disease (STD) Education in Long-term Care Facilities



Lauren Maziarz, Nikki Sorgi, Nicole Bowsher, Courtney Wagner

**Background:** Many older adults (40%) in the US aged 65-80 are sexually active (American Association of Retired People [AARP], 2018) yet report less condom use, fewer STD screenings, and lower risk perceptions of STDs than their younger counterparts (Syme, Cohn, & Barnack-Tavalaris, 2017). Since more than 1.5 million nurse employees work in LTCFs in the US (CDC, 2013), examining perceptions of STD education from the nurses' perspective allows for insight into why STD education in long-term care facilities (LTCFs) remains rare among this vulnerable population.

**Methods:** As a pilot study to examine both current STD education practices and perceptions of STD education, a four-page mailed survey was sent to all LTCF Directors of Nursing (DONs) in Northwest Ohio ( $n=99$ ) with a response rate of 29% ( $n=29$ ). DON's were the target population as they are the most likely employee to hold Registered Nurse licensure. The Health Belief Model formed the basis for the 21-item survey.

**Results:** Respondents were predominately female (97%), Caucasian/White (83%), over 40 years of age (76%), with an Associate degree as their highest level of education (52%). Only 2 nurses stated their LTCF provides STD education to their residents while 4 nurses stated their LTCF provides condoms. Almost all nurses were supportive of STD education at their facility (97%) but previous education on how to address STDs among residents

was rare, with 86% of nurses having had no formal training. Overwhelmingly, nurses did not see STDs or human immunodeficiency virus (HIV) as problems among their residents (100% and 96%, respectively) yet support for sex in LTCFs was high. All (100%) agreed sex among married residents should be supported while 75% agreed sex among non-married residents should be supported. Furthermore, 89% believed LTCFs should provide private spaces for intimate partner visits. Most nurses stated they were comfortable discussing HIV risk (86%), STD risk (86%), erectile dysfunction (76%), sexual desire and intimacy (68%), and correct condom use (66%). The most commonly perceived barriers to providing STD education were family opposition (62%), resident embarrassment (52%), limited time (48%), and lack of education on STD prevalence among older adults (48%). The most commonly perceived benefits were being seen as a leading LTCF within the community (66%), promotion of healthy sexual relationships (55%), improved health of residents (45%), and improved knowledge of STDs among residents (45%).

**Conclusions:** There is a clear disconnect between what the evidence says in terms of STD risk among older adults and what nurses are perceiving as problems among their residents. There was strong support for STD education among nurses in our study though implementation remains rare. Addressing the most commonly perceived barriers and benefits may prove beneficial in increasing the number of LTCFs that provide STD education to residents.

## A Mixed-Methods Exploration of Faith, Spirituality, and Health Program Interest among Older African Americans with HIV



Allysha C. Maragh-Bass, Danetta E. Hendricks Sloan, Amy Knowlton

**Background:** African Americans and persons living with HIV (PLWH) are living into older age with more complex care needs than non-PLWH. Evidence is needed to inform programs to promote quality of life and advance care planning (ACP) health literacy in caregiving relationships of the populations. We explored faith/spirituality-related correlates of interest in participating in a potential program on ACP and stress management among African American PLWH and their main caregivers.

**Methods:** Data were from the AFFIRM Care study. Participants were recruited from an HIV clinic and completed surveys, interviews, and focus groups. Quantitative analyses included logistic regression. Qualitative data were coded using grounded theory.

**Results:** Nearly half of participants had less than a high school education (47.9%), and roughly 90% of participants had heard of at least one ACP-related topic although most had only heard of advance directives (86.6%;  $N=315$ ). Qualitative themes related to quality of life emphasized faith/spirituality, specifically: (1) Coping with life challenges; (2) Motivation to improve health for loved ones; and (3) Support programs for people living with HIV ( $N=39$ ). Regarding interest in future quality of life programs, roughly half of participants expressed great interest (53.0%). Statistically-significant positive correlates included: satisfaction with religion/spirituality ( $p<.05$ ), pain intensity ( $p<.01$ ), and less comfort accepting care from social network members ( $p<.10$ ;  $N=288$ ). Negative correlates included greater HIV-related stigma ( $p<.10$ ), and preference for initiating discussions of ACP with healthcare providers prior to major illness (as compared to other disease stages) ( $p<.05$ ).

**Conclusions:** Results suggest the importance of addressing faith/spirituality in programs to promote ACP health literacy and engagement and quality of life among African Americans PLWH and their main caregivers. Prioritizing skill-building and grounding in community- and faith-based settings with input from faith leaders may reduce inequities in quality of life and improve ACP outcomes among African Americans with HIV.

## A Longitudinal Analysis of Childhood Sexual Abuse and Risk for Intimate Partner Violence Revictimization in Gay and Bisexual Men



Danielle S. Berke, Raymond L. Moody, Christian Grov, H. Jonathon Rendina

**Objective:** Childhood sexual abuse (CSA) has been associated with serious adverse health consequences across the life course including increased risk of exposure to intimate partner violence victimization (IPV) in adulthood. Although gay and bisexual men (GBM) may experience elevated rates of both CSA and IPV victimization, little research has examined risk factors for revictimization in this high-need population. This study examined the impact of general (i.e., emotion regulation difficulties) and sexual minority specific (i.e., internalized homophobia) risk factors on the association between CSA and IPV among GBM.

**Method:** We collected longitudinal data from 943 participants as part of the *One Thousand Strong* cohort, a study of HIV-negative GBM from across the United States. Measurements included history of CSA reported at baseline, 24-month internalized homophobia and emotion regulation difficulties, and baseline and 36-month IPV. We analyzed data using longitudinal structural equation models.



**Results:** For GBM who reported experiencing at least one act of IPV victimization at the 36-month assessment, CSA was significantly associated with frequency of IPV victimization for those with high, but not low levels of internalized homophobia. In contrast, CSA was only associated with frequency of IPV victimization for those with low levels of emotion regulation difficulties.

**Conclusion:** These results indicate that activation of internalized homophobia following childhood sexual abuse may exacerbate risk for revictimization experiences in adulthood. Future work is needed to investigate how mitigation of this modifiable risk factor may be targeted to inform violence prevention interventions for GBM.

## Associations between potential predictors and willingness to take PrEP in men who have sex with men



Jennifer S. Seidman, Lynne Klasko-Foster, Caroline Rusch, Kelseanna Hollis-Hansen

**Background:** Pre Exposure Prophylaxis (PrEP), a daily medication to reduce the risk of HIV, is biologically efficacious in men who have sex with men (MSM). Delay discounting (DD) the decision to take a smaller reward immediately over a larger reward later and probability discounting (PD) the decision to take a larger uncertain reward over a smaller assured reward are distinct measures of impulsivity associated with risky behaviors. Previous research has found that a general increasing awareness of PrEP has not influenced willingness to take the medication. In the present study, we explored associations between discounting behavior (DD and PD) and willingness to take PrEP.

**Methods:** MSM (N = 59, ages 18-44, 72.9% white) completed an online questionnaire including demographic variables, the perceived stress scale (PSS), DD, PD, PrEP use, willingness to take PrEP, PrEP knowledge, and risky sexual behaviors. No significant correlations were found between relevant demographic variables and the independent and dependent variables of interest, and hence those variables were not included in the model. A simultaneous linear regression was used to look at multiple hypothesized predictors of PrEP willingness, specifically PSS scores, area-under-curve (AUC) for PD and DD, the HIV Sexual Risk Behavior Scale score, and accurate PrEP knowledge.

**Results:** The simultaneous linear regression accounted for 27% of the variance in mean PrEP interest ( $\Delta R^2 = 0.27$ ,  $F(5,53) = 3.97$ ,  $p < 0.01$ ). Probability discounting ( $B = 0.37$ ,  $t = 2.99$ ,  $p < 0.01$ ) and HIV Sexual Risk Behavior scores ( $B = 0.27$ ,  $t = 2.30$ ,  $p = 0.03$ ) were sta-

tistically significant predictors, while delay discounting ( $B = -0.01$ ,  $t = -0.06$ ,  $p = 0.95$ ), accurate PrEP knowledge ( $B = 0.11$ ,  $t = 0.94$ ,  $p = 0.35$ ), and perceived stress ( $B = 0.17$ ,  $t = 1.42$ ,  $p = 0.16$ ) were not statistically significant predictors.

**Conclusions:** In our small cross-sectional study, those who favored the larger uncertain reward were more likely to engage in risky sexual behavior, but were also more willing to take PrEP. Thus, to the extent that PD is associated with sexual risk taking, it might hold value for both identifying individuals at risk for HIV and serve as a potential intervention target. Additionally, future studies should aim to replicate findings in a larger heterogeneous sample and to understand how impulsivity might encourage PrEP initiation and benefit MSM at increased HIV risk.

## Results from a Systematic Scoping Review of the Literature on Parent-Adolescent Sexual Health Communication in the U.S.



Frances M. Nguyen, Christine M. Markham, Christina J. Sun, Ross Shegog, Lauren B. Frank, J. Michael Wilkerson, William E. Lambert

**Background:** Effective parent communication about sexual health, including messages, messaging, and delivery, can lead to positive adolescent sexual health outcomes. This study reviewed the academic literature on parent-adolescent sexual health communication and characterized its effectiveness in promoting abstinence, condom use, and sexually transmitted infection (STI)/ HIV testing.

**Methods:** A systematic scoping review was conducted by searching four electronic databases (Embase, Scopus, Pubmed, Psychinfo) and relevant journals for peer-reviewed articles published January 1, 2000 to February 15, 2018. The search strategy, which included terms for sexual health messaging, adolescents, and communication, resulted in 6,665 articles. Initial abstract and subsequent full article screening were conducted by trained reviewers. Inclusion criteria, determined a priori, included those articles which: 1) were published in English; 2) were conducted in the United States; 3) had a majority of participants aged 13-18; 4) had abstinence, condom use, or STI/ HIV testing as outcomes; and 5) were related to an aspect of sexual health messaging/ communication. Of the total 381 resulting articles included in the final review, the research team reviewed 68 articles specific to parent-adolescent communication.

**Results:** Articles were grouped into three categories: sexual health topics discussed and

their impact on adolescent behavior, characteristics and context of sexual health communication, and parent-based/ focused interventions. The most informative studies used dyadic designs and captured the perspectives of both parent and youth. Parents were a more valued source of sexual health information for younger adolescents than older ones. Abstinence was a more common topic than condom use and STI/ HIV testing. Effective communication was facilitated by a positive parent-child relationship grounded in trust and openness; embarrassment and lack of knowledge were barriers. Adolescent race, gender, and sexual orientation also shaped parent communication, influencing topics discussed and level of comfort with discussions.

**Discussion:** While articles on parent-adolescent communication were more numerous than for other messengers, few looked specifically at certain sexual and gender minority and racial/ ethnic groups, such as American Indian/ Alaskan Natives. Further research is needed on how to increase and improve parent-adolescent sexual health communication, especially around condom use and STI/ HIV testing and for certain minority groups.

## Minority stressors and poor mental health are associated with increased risk of binge eating behaviors in sexual minority women



Billy A. Carceres, Kristin E. Heron, April J. Ancheta, Cindy B. Veldhuis, Tonda L. Hughes

Despite evidence suggesting that sexual minority women (SMW; e.g., lesbian, bisexual) have higher rates of binge eating behaviors than heterosexual women, factors that contribute to this disparity are still not well understood. It is theorized that minority stress – or the unique stressors associated with being a member of a stigmatized group – may contribute to health disparities and to higher rates of some unhealthy behaviors. Therefore, we used data from the Chicago Health and Life Experiences of Women (CHLEW) study to examine binge eating in a community sample of SMW.

We tested the cross-sectional associations of minority stressors (stigma consciousness, perceived discrimination, and internalized homophobia) and symptoms of poor mental health (depressive and posttraumatic stress [PTSD]) on any/no reports of past-three-month overeating episodes and binge eating episodes (overeating with loss of control). We used multiple logistic regression adjusted for demographics and social support to investigate the association of minority stressors with binge eating behaviors. Logistic regression models examining the associations of mental

health symptoms with binge eating behaviors also adjusted for minority stressors.

The analytic sample included 662 SMW: mean age 39.8 years, 245 (37.0%) were White, 239 (36.1%) were Black, 156 (23.6%) were Latina and 22 (3.3%) were "other race", and 610 (92.2%) had a high school education or greater. A total of 114 (17.9%) reported overeating and 60 (9.1%) reported binge eating in the past 3 months. After covariate adjustment, higher levels of stigma consciousness (adjusted odds ratio [AOR] 1.44, 95% CI = 1.15-1.79) and perceived discrimination (AOR 1.28, 95% CI = 1.10-1.50) were associated with higher odds of overeating. There was no significant association between internalized homophobia and overeating (AOR 1.02, 95% CI = 0.98-1.07). Minority stressors were not associated with binge eating. Higher levels of depressive (AOR 1.07, 95% CI = 1.02-1.12), but not PTSD (AOR 1.09, 95% CI = 0.99-1.20) symptoms, were associated with higher odds of overeating. However, both depressive (AOR 1.14, 95% CI = 1.08-1.21) and PTSD (AOR 1.17, 95% CI = 1.03-1.33) symptoms were associated with higher odds of binge eating.

It appears that minority stressors may increase the likelihood of overeating, whereas mental health symptoms were associated with higher likelihood of binge eating. Given the association of binge eating behaviors with chronic conditions (e.g., obesity and cardiovascular disease), these findings suggest that interventions targeting both minority stressors and mental health symptoms are needed to reduce risk of binge eating behaviors among SMW.

## Non-monosexuality as a factor in increased prevalence of sexual risk behavior

SM

Nicola F. Tavella, Brian Salfas, Jesse Bradford-Rogers, Ali Talan, H. Jonathon Rendina

**Background:** As researchers explore the complexities of human sexuality, a lack of behavioral sexual health research persists concerning differences between monosexual and non-monosexual men and the conflation of these groups as "men who have sex with men" (MSM). Researchers have begun investigating these differences, finding that men who have sex with men and women (MSMW) report higher rates of sex work, more sex with partners of different or unknown HIV status, and more male sexual partners. We sought to determine whether non-monosexuality influenced engagement in greater sexual risk among a national cohort of sexual and gender minority (SGM) men.

**Methods:** Cross-sectional data were collected from a national sample of 10,663 SGM

men in the United States. Participants estimated not only numbers of male and female casual sex partners, but also the kinds of sexual behavior including insertive and/or receptive sex, anal and/or vaginal sex, and the HIV statuses of both male and female casual sex partners. Data were analyzed using Pearson Chi-Square and independent-samples t-tests.

**Results:** The average ages for MSM ( $M = 32.48$ ) and MSMW ( $M = 34.83$ ) were significantly different ( $t = -5.12, p = 0.000$ ). Among MSM, 24.3% identified as Hispanic/Latino, 10.7% as Black/African American, and 51.5% as White. Among MSMW, 23.2% identified as Hispanic/Latino, 14.0% as Black/African American, and 51.2% as White. MSMW reported significantly more male casual partners compared to MSM ( $M_{MSMW} = 10.16, M_{MSM} = 6.89, t = -8.34, p = 0.000$ ). MSMW also reported significantly more condomless anal sex with male partners of different/unknown HIV status compared to MSM ( $M_{MSMW} = 3.32, M_{MSM} = 2.20, t = -2.84, p = 0.000$ ). Finally, MSMW were significantly more likely to engage in sex work, with 27.7% of MSMW exchanging sex for goods compared to 19.4% MSM ( $X^2 = 13.44, p = 0.000$ ).

**Conclusions:** While much research conflates MSM and MSMW under monikers like "MSM" and "LGBT samples," data suggest this overlooks key differences between groups based on one's monosexuality. Analysis of these data support the hypothesis that people who engage in non-monosexual sex are more likely to engage in riskier health behaviors. These groups would benefit from research informed by a more nuanced understanding of sexuality not defined by the presence of male sex partners. Non-monosexual people engage with health behaviors in different ways, and therefore deserve research that acknowledges these differences.

## Sexual orientation and identity disclosure: Implications for prep experiences among black men who have sex with men



Ryan Watson

**Background:** The HIV epidemic in the United States has disproportionately burdened Black men who have sex with men (BMSM), particularly in the South. While pre-exposure prophylaxis (PrEP) has high demonstrated efficacy, uptake is low among BMSM. While we understand that stigma and health care access impacts PrEP use, health-relevant demographic characteristics have not been linked to differential uptake of PrEP. Additionally, despite great efforts in the past 5 years to make BMSM aware of and uptake PrEP, we are unsure whether or not any progress has been made.

**Method:** To further explore which factors are related to the abysmal uptake of PrEP among BMSM, a sample of 345 HIV-negative or unknown HIV status BMSM from Atlanta was utilized. Bivariate and multivariable logistic regression models examined the effects of sexual orientation and disclosure on PrEP awareness and use.

**Results:** Despite the majority of the sample reporting PrEP awareness (91%), few BMSM in our sample had ever used PrEP (10%). Bisexual BMSM experienced 0.34 (or 64% lower, 95% confidence intervals (95% CI): 0.13, 0.60) the odds of having heard of PrEP compared to their same gender loving/gay counterparts. Among all Black MSM, those who had disclosed their sexual orientations to some or all of the individuals in their networks experienced 6.7 times (95% CI: 2.28, 19.74 for out to some, 2.57, 17.42 for out to all) the odds of having heard of PrEP compared to their counterparts who had not disclosed their sexual orientation. Overall, BMSM who had disclosed their sexual orientation to some or all of the members of their networks were more aware of PrEP compared to their counterparts who reported lower levels of disclosure, but were not more likely to actually use PrEP.

**Conclusions:** This gap is alarming—compared to one previous 2014 study that found about 1 in 8 PrEP-aware Black MSM had used PrEP, we found with more recent data that only 1 in 9 PrEP-aware Black MSM had used PrEP. That is, we are unable to document this large gap between PrEP awareness and use has changed over the span of 5 years. This is despite concerted efforts to connect Black MSM, one of the highest risk groups for HIV acquisition, to PrEP. These findings suggest that disclosure may be a relevant characteristic to consider for PrEP awareness, but there may be more to consider in closing the awareness-uptake gap among Black MSM.

## The Social Context of Cancer for Sexual Minority Women: A Systematic Review



Tess Thompson, Katie Heiden-Rootes, Miriam Joseph, Linda A. Gilmore, LaShaune P. Johnson, Emily L. Albright, Maria Brown, Jane A. McElroy, Christine M. Proulx

Intimate partners and other informal caregivers often provide unpaid tangible, emotional, and decision-making support for cancer patients. Less is known about the social context for sexual minority women (SMW; e.g., lesbian, gay, bisexual, queer, same-gender partnered) with cancer.

This systematic review followed Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines and was designed

to examine peer-reviewed, empirical research in English about the cancer experiences of SMW and their partners/informal caregivers. The review centered on 4 questions: 1) What social support do SMW with cancer receive from partners/caregivers? 2) What effect does cancer have on the informal caregiving relationships or intimate partnerships of SMW with cancer? 3) What effects does cancer have on partners/caregivers of SMW with cancer? 4) What interventions exist to support partners/caregivers of SMW or to strengthen the patient-caregiver relationship.

After removing duplicates, 336 abstracts were each screened by teams of 2 coders; 32 full-text articles were assessed for eligibility, and 17 were included in a qualitative synthesis. Most studies were U.S.-based, involved breast cancer, included intimate partners, had primarily white/Caucasian samples, were cross-sectional, and did not ground research questions in theory. Participants reported that partners/caregivers often provide important social support for sexual minority women with cancer, including emotional support, decision-making support, and tangible support (e.g., housework). Effects of cancer on relationships with partners/caregivers were mixed, with some studies finding relationships remained stable and that cancer increased closeness, and others suggesting relationships were often disrupted. Participants reported that partners/caregivers often experience distress and may be affected by factors such as discrimination, discomfort disclosing sexual orientation, and a lack of sexual minority-friendly services. No study involved an intervention aimed at partners/caregivers or the dyadic relationship.

More work is needed to understand SMW with cancers other than breast cancer; samples that are racially, ethnically, or economically diverse; and samples outside the U.S. Longitudinal research will allow examination of the evolution of relationships and patterns of mutual influence over time. These next steps are necessary to develop interventions to support SMW with cancer and the people close to them.

## Body Image and Disordered Eating Differences Among Racial and Sexual Minority Women



Cassidy M. Sandoval, Lindsay Howard, Kristin E. Heron

Research suggests White women have more body image concerns and dissatisfaction than Black women, and there are limited studies examining racial differences in eating pathology with mixed findings. Findings are also equivocal regarding body image concerns and disordered eating behaviors among sex-

ual minority women (SMW), with some studies detecting differences between SMW and heterosexual women and others finding none. However, there is limited research in this area investigating the intersectionality of race and sexual minority status. Thus, the aim of the present study was to explore differences in body image and disordered eating behaviors among Black and White heterosexual, lesbian, and bisexual women. Participants were 990 college women (471 Black, 519 White) identifying as heterosexual ( $n=885$ ), lesbian ( $n=53$ ), or bisexual ( $n=52$ ). Participants completed surveys about body dissatisfaction (Body Shape Questionnaire [BSQ-16]) and body checking (Body Checking Questionnaire-Shortened [BCQ]). Disordered eating thoughts and behaviors were measured using the Eating Disorders Examination-Questionnaire (EDE-Q) and dichotomous (yes/no) items asking about past month overeating and loss of control of eating. Consistent with previous literature, results of a 2 (Race: Black, White) x 3 (Sexual Orientation: Heterosexual, Lesbian, Bisexual) factorial ANOVA indicated a small main effect for race on the BSQ ( $p=.034$ ), suggesting White women reported more body dissatisfaction than Black women. No other main effects or interaction effects were found for the BCQ or EDE-Q. Chi-square analyses were conducted for the dichotomous overeating and loss of control of eating variables. Results indicated a significant effect for loss of control ( $p=.019$ ), and follow-up analyses revealed White bisexual women have higher rates of loss of control of eating than Black bisexual women (42.3% vs. 7.7%). The present study provides initial evidence that differing patterns in body image and disordered eating may exist for those belonging to multiple minority groups. Future research considering intersecting identities for body image and disordered eating behaviors with larger samples and more diverse participants (e.g., Latina women, other sexual identities) is warranted. Such research is critically important because it may inform the need for culturally tailored interventions for eating disorders or related conditions (e.g., obesity) for minority groups.

## “A Target on Our Backs”: Experiences of PrEP Decision-Making at an LGBTQ Youth Center



Michael Hotlzman, Samantha L. Klein, Sam Marcus

The conversation around HIV prevention underwent a dramatic shift following the FDA’s 2012 approval of the prescription drug Truvada as a pre-exposure prophylactic (PrEP) for HIV infection. Early trials demonstrated that adherence to a daily dosage of the drug may effectively reduce the risk of HIV-1 infection by more than 90% (CDC, 2014). Despite these findings, the decision to

begin a PrEP regimen is a complicated process, involving frank discussions of sexual practices with medical providers, healthcare costs associated with the prescription, a mandated quarterly HIV/STI evaluation, and personal beliefs on medicalization (Biello et al. 2016; Strauss et al., 2016). For young people, this complex decision may be one of their first interactions as legal adults within the healthcare system. Published research on PrEP has focused on factors before and after the decision-making process, including various populations’ knowledge about the drug, cultural perspectives and stigmas around PrEP users, issues of adherence, and changes in sexual practices following uptake (Blumenthal et al., 2015; Dolezal et al., 2015; Rucinski et al., 2013; Strauss et al., 2016; Thrun, 2013). Little attention, however, has been paid to the actual experiences of individuals labeled “high-risk” as they make the decision whether or not to begin a PrEP regimen. This qualitative study examined the PrEP decision-making experience of visitors at a Long Island-based non-profit dedicated to serving LGBTQ youth in the New York Metro area. Three semi-structured focus groups were run with a total of 14 participants, the data from which was developed into themes using Braun and Clarke’s guide for thematic analysis (Braun and Clarke, 2013). Participants were aged 19-26, and self-identified as African American ( $n=6$ ), Latinx ( $n=4$ ), or Caucasian/White ( $n=4$ ). All participants identified as men who have sex with other men. The following four themes were developed from the research: The Impact of Being Targeted; Feeling Protected; Moving through Ambivalence; Communal Responsibility versus Personal Choices. This research was undertaken with the aim of developing recommendations for advocacy organizations and medical providers on how to best guide young, diverse populations towards healthy and confident medical decision-making, despite a political and sociocultural climate that frequently threatens their personal agency.

## “Walking in Faith” - Positive Religious Coping Associated with Resilience for Black Women Living with HIV and Histories of Trauma



Sannisha K. Dale

**Background:** Black women in the U.S. account for over 60% of women living with HIV, a disproportionate burden linked to both structural (e.g. poverty) and psychosocial factors (e.g. stigma, trauma) that place Black women at increased risk. The HIV literature has historically focused on factors that place women with HIV at risk and less on factors that place them “at promise” for good psychological and physical outcomes. Religious coping has been noted as a particularly relevant and culturally congruent coping strategy within the



Black community, and is therefore important to understand in relation to resilience factors, especially among Black women living with HIV (BWLWH). In the present study we investigated the cross-sectional associations between positive religious coping and resilience, post-traumatic growth, social support, generalized self-efficacy, and self-esteem among BWLWH and histories of trauma.

**Methods:** One hundred and nineteen BWLWH were enrolled and completed baseline assessment self-report measures for an intervention development study in the Southeastern U.S. Women completed measures on positive religious coping (Positive Religious Coping Subscale of the of the Brief RCOPE), resilience (i.e. Connor Davidson Resilience Scale), post-traumatic growth (i.e. Post-traumatic Growth Inventory), social support (i.e. Multidimensional Scale of Perceived Social Support), self-efficacy (i.e. Generalized Self-Efficacy Scale), and self-esteem (Rosenberg Self-Esteem Scale).

**Results:** Multivariate linear regressions controlling for age, education, and income showed that positive religious coping was significantly associated with higher resilience ( $\beta=.663$ ,  $p<.001$ ), post-traumatic growth ( $\beta=.62$ ,  $p<.001$ ), perceived social support overall score ( $\beta=.21$ ,  $p<.05$ ) and all three subscales ( someone [ $\beta=.34$ ,  $p<.001$ ], family [ $\beta=.65$ ,  $p<.001$ ], friend [ $\beta=.67$ ,  $p<.001$ ]), generalized self-efficacy ( $\beta=.77$ ,  $p<.001$ ), and self-esteem ( $\beta=.77$ ,  $p<.001$ ).

**Conclusion:** For Black women living with HIV and histories of trauma it is essential to enhance our understanding of factors that may place this community at “promise” for good outcomes. Our findings highlight that positive religious coping is significantly associated with a wide-range of resilience factors. Therefore both research and interventions aimed at increasing resilience among Black women living with HIV need to consider and integrate positive religious coping.

## Social Support Moderates the Relationship between Substance Use and Medication Adherence among Black Women Living with HIV



Rachelle A. Reid , Sannisha K. Dale

**Background:** Black Women Living with HIV (BWLWH) bear the disproportionate burden of HIV as well as lower rates of antiretroviral therapy (ART) adherence and viral suppression compared to other racial/ethnic groups. This is linked to health disparities, structural inequities and psychosocial factors faced by BWLWH, which affect both access to and retention in care. However, the relationships between substance use, social support, and

HIV-related health outcomes (i.e. viral suppression, ART adherence) have not been adequately explored among BWLWH. The present study seeks to add to existing literature by assessing how perceived social support (PSS) moderates the relationship between substance use and HIV viral load as well as medication adherence.

**Methods:** 119 BWLWH in the Southeastern United States completed self-report measures on PSS (the Multidimensional Scale of Perceived Social Support), substance use disorder (SUD), alcohol use disorder (AUD) via the Mini-International Neuropsychiatric Inventory and adherence. The Wisepill, an electronic monitoring device, also measured adherence in the past two weeks. HIV viral load was assessed via blood specimen.

**Results:** Linear regressions were conducted to examine the effects of PSS on adherence and viral load log. Higher PSS from friends ( $\beta= -.263$ ,  $p=.008$ ) and significant others ( $\beta= -.219$ ,  $p=.025$ ) predicted lower viral load. Furthermore, there were three trends, as PSS from family predicted lower viral load ( $\beta= -.191$ ,  $p=.061$ ) and both PSS from friends ( $\beta=.162$ ,  $p=.089$ ) and PSS from significant others ( $\beta=.170$ ,  $p=.070$ ) predicted self-report adherence in the past week. PSS did not predict SUD or AUD in the past 12 months. However, moderational analyses indicated that SUD predicted lower Wisepill adherence in the past week ( $\beta= -.273$ ,  $p=.035$ ) and past two weeks ( $\beta= -.273$ ,  $p=.033$ ) only for women low in PSS from friends. SUD also predicted lower Wisepill adherence in the past two weeks only for women who were low in PSS generally ( $\beta= -.294$ ,  $p=.024$ ). Interestingly, for women who were high in general PSS, SUD predicted higher Wisepill adherence in the past four weeks only ( $\beta=.360$ ,  $p=.006$ ).

**Conclusion:** Our findings indicate that adherence and viral load may be more easily bolstered by understanding the role of various forms of social support and SUDs among BWLWH. Social support interventions for BWLWH with SUDs may improve medication adherence, the corollary of which is viral suppression.

## Tobacco Cessation Services in LGBT-Serving Mental Health Facilities in the U.S.



Alexandra R. Budenz, Yvonne A. Prutzman

**Background:** LGBT populations have higher rates of both tobacco use and mental health conditions than heterosexuals, suggesting a need for integrated mental health and tobacco cessation services specific to these populations. However, the extent to which LGBT-serving mental health treatment facilities offer integrated tobacco cessation resources is unknown. Furthermore, the prevalence of

smoke-free policies in these facilities (smoking prohibited on the premises) has yet to be examined.

**Methods:** We used the 2017 National Mental Health Services Survey of 11,582 mental health treatment facilities in the U.S. to describe the characteristics of LGBT-serving mental health facilities that provide tobacco cessation services. We also assessed the prevalence of smoke-free policies in these facilities.

**Results:** Approximately 16% of mental health treatment centers provided LGBT-focused services. Of these LGBT-serving facilities, 63% provided any tobacco cessation service. The state with the most LGBT-serving facilities providing cessation services was New York (88% of New York LGBT-serving facilities). The most common cessation services provided across facilities were tobacco screening (87%) and cessation counseling (77%). The least common services were non-nicotine cessation medications (54% did not provide) and nicotine replacement therapy (NRT) (55% did not provide). Only half of LGBT-serving facilities had smoke-free policies.

**Conclusions:** A large proportion of U.S. LGBT-serving mental health treatment facilities provide tobacco cessation services. However, the provision of these services is not ubiquitous, and not all facilities provide comprehensive services. Specifically, non-nicotine cessation medications and NRT may be provided less frequently, despite demonstrated efficacy. Increased provision of comprehensive tobacco cessation services and implementation of smoke-free policies in all mental health facilities can improve both tobacco cessation and mental health outcomes in LGBT populations.

## Assessing healthcare setting stigma in clinics in the US South using a mixed methods approach



Kaylee B. Crockett,\* Samantha Whitfield,\* Emma Sophia Kay,\* Murray S. Ladner, III, Joshua Sewell, Kris Hauenstein, Matt Fifolt, Pamela Payne-Foster, Laura Nyblade, Henna Budhwani, Bulent Turan, D. Scott Batey, Janet M. Turan; \*Equal contribution

**Background:** Stigma in healthcare settings is a continuing barrier to HIV prevention and treatment in the United States (US) and is particularly urgent to address in the US South. We aimed to assess HIV-related and intersectional stigma, as well as effects of stigma on health outcomes, at HIV clinics in this priority region.

**Methods:** We conducted a mixed methods study with a convergent parallel design at seven HIV clinics in rural and urban settings

in Alabama and Tennessee during 2018. For qualitative research, we conducted 14 focus groups, including a total of 56 healthcare workers and 44 people living with HIV (PLWH). Quantitative surveys were also completed by 192 healthcare workers and 762 PLWH at these sites. Qualitative data were analyzed using a thematic analysis approach, while quantitative analyses utilized ANOVA and logistic regression methods.

**Results:** Primary themes emerging from qualitative data around healthcare setting stigma related to understanding and changing stigma, coping with stigma, and intersecting stigmas (e.g., stigma due to sex, gender identity, Southern culture). Clients described experiencing stigma in healthcare settings, particularly negative interactions with healthcare workers. They also discussed anticipated stigma from other community members who may frequent the same healthcare settings, and described how this stigma negatively affected their engagement in HIV care. Quantitative analyses revealed that clinic workers differed significantly on a measure of observations of discrimination in their healthcare setting by occupation, with administrative and support staff reporting significantly higher discrimination than allied health and prevention staff ( $F(3, 188)=3.91, p=.01$ ). Clients reported higher perceptions of discrimination in healthcare settings relative to that reported by healthcare workers, and higher perceptions of discrimination were related to greater likelihood of suboptimal antiretroviral adherence among clients (standardized  $b=1.66, 95\% \text{ CI: } [1.09, 2.54]$ ).

**Conclusions:** Our qualitative and quantitative findings indicate that stigma in healthcare settings is a continuing problem in HIV clinic settings in the US South, and may contribute to sub-optimal HIV outcomes. Interventions are needed to address stigma, even in HIV clinics where health workers are assumed to be more knowledgeable and empathic, but may not be aware of their stigmatizing attitudes and behaviors related to the various identities of PLWH.

## Cigarette Brand Use and Sexual Orientation: Results from the National Survey on Drug Use and Health (NSDUH)



Alexandra R. Budenz, Yvonne A. Prutzman

**Background:** Gay, lesbian, and bisexual populations have a higher prevalence of cigarette smoking than heterosexuals, resulting in increased mortality from tobacco-related illness. There is extensive evidence that tobacco companies have targeted marketing towards these populations, which can influence tobacco-related perceptions and brand preference. The purpose of this study was to

measure differences in cigarette brand use by sexual orientation.

**Methods:** Using the 2015-2017 cycles of the National Survey on Drug Use and Health (Sample  $N=24,310$ ), we conducted survey weighted univariate and bivariate analyses of the most commonly-used cigarette brands ( $N=5$ ) among adult smokers by sexual orientation. We then conducted survey weighted logistic regression analyses for each cigarette brand to test relationships between sexual orientation and brand use while controlling for sociodemographic characteristics.

**Results:** Adult smokers who identified as bisexual or gay/lesbian (vs. heterosexual) had higher odds of American Spirit (AOR=3.22, 2.86, respectively) and Camel cigarette use (AOR=1.78, 1.70, respectively). Identifying as gay/lesbian was associated with significantly increased odds of Marlboro use (AOR=1.23), while identifying as bisexual was associated with increased odds of Newport (menthol) use (AOR=1.71). Prevalence of American Spirit use was particularly pronounced in bisexual (17.6%) and gay (12.7%) men (vs. 5.71% heterosexual men), and Newport use was most prevalent among bisexual (29.3%) and gay/lesbian women (26.2%, vs. 21.4% heterosexual women).

**Conclusions:** Adult smokers who identify as bisexual or gay/lesbian may be more likely to prefer certain popular cigarette brands compared to heterosexuals. Specifically, identifying as bisexual or gay/lesbian was associated with approximately three times the odds of American Spirit use, and gay/lesbian and bisexual women also had elevated prevalence of Newport use. Health claims and other characteristics of these cigarette brands may influence risk perceptions and tobacco-related health outcomes in this population. Therefore, marketing and promotion practices of these brands must be examined to improve tobacco-related public education and targeted risk communication.

## “I feel comfortable because she is not my family”: Young Women’s Experiences Undergoing Proxy Parental Consent in South Africa



Courtney Peasant Bonner, Celia Fisher, Tara Carney, Jacequeline Ndirangu, Felicia Browne, Brittni Howard, Leslie Turner, Wendee Wechsberg

South Africa has one of the highest incidence of HIV among adolescent girls and young women (AGYW) ages 15-24 in the world. Research is needed to reduce HIV risk among AGYW, but laws state that the age of consent for research purposes is 18 years of age. This poses challenges to research and may limit the impact of HIV prevention strategies

among AGYW. This study explored the experiences of AGYW who were under 18 years old at the time of consent and who engaged in a parental proxy consent procedure called In Loco Parentis (in place of parent) to enroll in a behavioral HIV prevention trial. Older women identified by the participant or community leaders identified by research staff consented for the AGYW, in place of their parent, to participate in the trial. In Loco Parentis was approved by the U.S. and South African-based IRBs. Participants were Black African ( $n = 13$ ) and Coloured ( $n = 18$ ) AGYW who were ages 18 or older at the time of the focus group discussion (FGD), were younger than 18 during enrollment into the trial, and had completed the trial. Following consent, FGDs (2 with Black African and 2 with Coloured AGYW) were conducted. FGDs were audio-recorded, notes taken, and translations done. Transcriptions were coded by two independent coders using open coding methods. Results identified four main themes related to the In Loco Parentis consent procedure: (1) comfort and confidentiality related to the In Loco Parentis, (2) clarity and respect related to how the procedure was explained and implemented, (3) maternal figures who served as the In Loco Parentis, and (4) the potential influence of parental consent on participation. The In Loco Parentis consent process was experienced as respectful. Participants were comfortable with community leaders, aunts, or older sisters as parental consent proxies. Many participants reported that if parental consent was required that they would not participate, while others reported that they would still participate in the study. AGYW reported that they were concerned that their parents would try to breach their confidentiality regarding their HIV status, pregnancy, and positive drug test results if parental consent was required. Our findings suggest that the experiences of AGYW who enrolled in this HIV prevention trial using In Loco Parentis consent were positive. In Loco Parentis consent methods may be a viable alternative or supplement to parental consent in HIV-related studies among AGYW.

## Anodyspareunia in gay and bisexual prostate cancer survivors



Christopher W. Wheldon, Elizabeth J. Potter, B. R. Simon Rosser

**Introduction:** The incidence of sexual dysfunction resulting from prostate cancer treatments is well established; however, sexual functioning is almost always operationalized as erectile function or as erections sufficient for vaginal intercourse. For many gay and bisexual men (GBM), receptive anal intercourse (RAI) is a common sexual behavior, but the effects of treatment have not been studied. Anodyspareunia is recurrent or persistent clinically significant pain experienced during receptive anal intercourse. It is estimated that

10-14% of GBM experience anodyspareunia and the majority of these cases describe the problem as lifelong. As the first study of anodyspareunia in this population, our objectives were: (1) to describe the prevalence of anodyspareunia in a sample of GBM prostate cancer survivors and, (2) to evaluate the degree to which anodyspareunia is associated with health-related quality of life.

**Methods:** Data were from the Restore-1 study, a cross-sectional online survey of 193 GBM in the U.S. or Canada who were treated for prostate cancer. For treatment, 53% had received surgery, 19% radiation, and 29% a combination of treatments. Average age and time since diagnosis were 63.4 (SD=8.2) and 5.63 (SD=4.6), respectively. Simple linear regression was used to evaluate associations between anodyspareunia, treatment type, past behavior, and the SF-12 Physical/Mental scales.

**Results:** There were 55 (28.5%) men who attempted RAI in the previous month. Approximately 29.1% reported severe anal pain (i.e., anodyspareunia) sufficient to stop intercourse. There was a significant association between anodyspareunia, pre- and post-treatment ( $b=16.7, p=.01$ ). Of the 110 men who reported pleasurable RAI in the year prior to their prostate cancer diagnosis, 47 (42.7%) reported attempting RAI in the past month. Of these, 10 (21.3%) also reported anodyspareunia, which was negatively associated with the SF-12 Mental Component Score ( $b=-8.8, p=.02$ ). Anodyspareunia did not differ by treatment received.

**Conclusions:** RAI was a common sexual behavior among a subset of GBM prostate cancer survivors. Anodyspareunia was higher among this group than in other populations, although not associated with treatment type. Culturally responsive cancer care for GBM should consider changes to RAI and its potential association with quality of life.

## High reproductive concerns associated with fertility counseling: A cross-sectional study of young adult male cancer survivors



Julia H. Drizin, Brian Whitcomb, Tung Chin Hsieh, Jessica R. Gorman

**Background:** Reproductive concerns are common among young adult cancer survivors. Fertility consultation (FC) has been proposed as a possible intervention strategy, but the relationship between FC and reproductive concerns among young adult (YA) male survivors has not been established.

**Purpose:** This study examined the association between FC and multiple dimensions of

reproductive concerns among YA male cancer survivors.

**Methods:** One hundred and seventy YA male cancer survivors (age 18 to 35) across the United States completed a cross-sectional, online survey between 2016 and 2018. Participants reported demographics, receipt of FC, and reproductive concerns. Reproductive concerns were measured multidimensionally using the Reproductive Concerns after Cancer-Male scale. We used log binomial regression to examine the association between FC and high reproductive concerns across multiple domains.

**Results:** In multivariate analyses adjusting for desire for children, FC was associated with higher likelihood of having at least one high reproductive concern (RR 1.4, 95% CI 1.2-1.7,  $p < .001$ ). Across subscales, FC was associated with greater likelihood of having high concerns about fertility potential (RR 1.7, 95% CI 1.0-3.0,  $p = .06$ ), achieving pregnancy (RR 3.5, 95% CI 1.3-9.5,  $p = .01$ ), their (potential) child's health (RR 1.5, 95% CI 1.1-2.2,  $p = .02$ ), and disclosing infertility to a partner (RR 2.7, 95% CI 1.8-4.1,  $p < .001$ ). In contrast, associations were not observed between fertility consultation and likelihood of high concerns about personal health (RR 1.4, 95% CI 0.5-3.8,  $p = .48$ ) or acceptance of infertility (RR 1.8, 95% CI 0.8-3.9,  $p = .14$ ).

**Conclusions:** YA male cancer survivors who received FC were more likely to have high reproductive concerns than those who did not receive FC. Men who seek out FC after cancer diagnosis may need additional continued support for their reproductive concerns. Research is needed to identify strategies to alleviate these concerns among this population.

## The Association between Herpesvirus Reactivation and Executive Functioning among Healthy Middle-Aged Adults



Hannah B. Short, Kyle W. Murdock

For many years, herpesviruses have been hypothesized to be associated with cognitive decline because they create life-long infections within neuronal cells in areas that are typically altered among those with Alzheimer's disease (AD). Previous work has demonstrated that those with AD and mild cognitive impairment (MCI) have greater herpesvirus reactivation (i.e., antibody titers) than healthy controls (Mancuso et al, 2014). Such findings suggest that poor immune control of the herpesvirus may contribute to cognitive decline; however, little is known about how herpesviruses may be associated with cognitive performance among healthy individuals. This is an important gap in the literature given that other forms of immune dysregulation (e.g., inflammation) are known to be associated with

executive functioning (e.g., Wersching et al., 2010). In the present study, we examined the association between Epstein - Barr virus (EBV) antibody titers and performance on measures of executive functioning among a sample of 60 healthy and middle-aged adults ( $M_{age} = 61.08, SD = 5.96$ ; 78.3% female) living in or near State College, PA. Each participant visit began at 8:00 am. After establishing informed consent, a phlebotomist engaged in a blood draw prior to participants completing a battery of neuropsychological tests. Measures of executive functioning included the Color-Word Interference Test to measure Inhibition (Delis, Kaplan, & Kramer, 2001), the Digit Span task to measure Updating/Monitoring (Wechsler, 2008), and the Wisconsin Card Sorting Test to measure Cognitive Flexibility (Heaton & PAR Staff, 2003). EBV antibody titers were measured by Microgen Laboratories via a standard protocol (Stowe, Ruiz, Fagundes, Stowe, Min, & Glaser, 2014). Results indicated that greater EBV antibody titers were associated with poorer inhibition ( $r = -.38, p < .01$ ) and cognitive flexibility ( $r = -.39, p < .01$ ). The association between EBV antibody titers and updating/monitoring was not significant ( $r = .16, p = .21$ ). These findings suggest that EBV reactivation may be associated with cognitive performance, even among healthy individuals. Therefore, herpesviruses may impact cognitive performance prior to the presentation symptoms of AD or MCI. Findings may also suggest that EBV reactivation could be an early indicator of AD/MCI risk, and thereby provide opportunities for early intervention; however, longitudinal research is clearly needed to test this possibility.

## Piloting an expressive writing intervention to address sexual health and substance use in emerging adult gay and bisexual men



Steven Samrock, Tyrel Starks, Brooke Wells

**Background:** Emerging adult (EA) gay and bisexual men (GBM) are consistently among those facing the highest HIV prevalence. Expressive Writing (EW) interventions have demonstrated efficacy to reduce drinking and improve psychosocial functioning. The hypothesized mechanism of EW is exposure. Writing provides an opportunity to experience emotions that might otherwise be avoided, allowing one to re-organize these experiences more adaptively. The learning objectives of this study were (a) to evaluate the feasibility and effectiveness of Express Yourself (EY); an EW intervention addressing condomless anal sex (CAS) and substance use (SU) related problems in EA GBM; and (b) to examine linguistic mechanisms by which EW may exert effects of CAS and SU among EA GBM.



**Methods:** EA GBM ( $n=78$ ) from New York City were enrolled into a pilot randomized controlled trial. Eligible participants age 18-29 had at least one incident of SU (e.g. cocaine, crack, ecstasy, methamphetamine, heroin) in the past 60 days; and at least one incident of CAS with a casual male partner in the past 60 days.

Participants completed a baseline survey and interview before random assignment to one of two conditions. Both conditions involved three 15-minute writing sessions with breaks between each session. Those in EY ( $n=39$ ) were instructed to write about their deepest emotions and thoughts about sexuality and sex life. Control participants ( $n=39$ ) wrote about their day. Using Linguistic Inquiry and Word Count (LIWC) software, writing content was analyzed to calculate degree to which various categories of words were used. Outcome variables were assessed using a count outcome of CAS and the Comprehensive International Diagnostic Instrument – Substance Abuse Module (CIDI-SAM).

**Results:** The direct effect of condition on CIDI scores and CAS was non-significant for both outcomes. Significant indirect effects through the linguistic content of writing samples were detected. PATH models indicated the participants in the EY condition used significantly more positive and negative emotion words. Indirect effect tests indicated Treatment condition accounted for significant reductions in CIDI scores through increases in positive emotion words. Similarly, results of indirect effects testing indicated treatment accounted for significant decreases in CAS through its association with positive emotion words and significant increases in CAS through its association with negative emotion words.

**Conclusions:** These findings reinforce the premise that EW operates, in part, through mechanisms related to emotional exposure. They further suggest that EW may constitute a low-cost and scalable intervention to reduce SU and CAS among EA GBM. Benefits appear to be associated with the presence of positive emotion words. Future studies might benefit from the experimental manipulation of writing prompts to maximize writing content for therapeutic benefits.

## Assessing women’s sexual minority stressors in daily life: Does the way we ask the question matter?



Kristin E. Heron, Charlotte A Dawson, Cassidy M Sandoval, Lauren Butler, Jazmine Craig, Abby L Braitman, Robin J. Lewis

Researchers are often interested in using ecological momentary assessment (EMA) to

assess real-world, naturally occurring experiences. However, there are few well-validated measures to assess constructs via EMA, and thus, researchers are often left to create items for individual studies. One area lacking well-validated EMA measures is the daily assessment of sexual minority stressors (SMS), or the unique stressors sexual minority individuals (e.g., lesbian, gay, bisexual) experience due to their marginalized status. Previous research suggests the way researchers ask EMA questions about general stressors is important. Therefore, the aim of this study was to describe rates of reported SMS using different question formats. As part of a study of same-sex female couples, 321 sexual minority women ages 18-35 completed daily surveys for 14 consecutive days regarding their experiences and health behaviors. To assess daily SMS, two question types used in previous research were asked each morning. Participants were first asked a general question about if any negative events related to being a sexual minority occurred the previous day (yes/no). Then, a published 8-item daily SMS measure that inquired about specific experiences (e.g., hearing anti-LGBT talk, being made fun of) was administered. In total, participants provided data on 4,008 days. Results indicated that in response to the general dichotomous question, participants reported experiencing negative events on 5.2% of days (209 days). In contrast, in response to the 8 specific experiences, participants reported at least one on 19.5% of days (788 days). Specific experiences ranged in occurrence from 1.2% of days (49 days; being explicitly threatened) to 10.2% of days (411 days; hearing anti-LGBT talk). Instances when participants denied a negative event in the general item but subsequently endorsed a specific experience were explored. Given the discrepant reports among the two question types, these data suggest sexual minority women will report more SMS experiences in response to questions about specific events or experiences as compared to a single general question inquiring about negative events or stressors. These findings have methodological implications for future studies that assess daily SMS. Given that SMS may contribute to health disparities, accurate assessment of real-world experiences of SMS is essential to further our understanding of health disparities among sexual minority individuals.

## Navigating Sexual Health in Cancer Survivorship from a Dyadic Perspective



Jessica R. Gorman, Ellie Smith, Julia H. Drizin, Karen S. Lyons, Marie Harvey

**Objective:** Young adult (YA) breast cancer survivors experience myriad and persistent sexual health difficulties following cancer treatment. Strategies for managing these difficulties often focus on individual cancer survivors, but couples navigate life after cancer

as a dyad. Using the Theory of Dyadic Illness Management as a guiding framework, this qualitative study examined how YA couples appraise, communicate about, and manage their sexual health and intimate relationships after cancer.

**Methods:** We conducted concurrent, individual telephone interviews with 25 YA female breast cancer survivors and their male partners. We utilized a thematic, inductive analysis to examine individual interviews, followed by analysis within- and across-couples to identify dyadic themes. We explored how themes mapped on to the Theory of Dyadic Illness Management to build a conceptual framework specific to the sexual health challenges of YA couples living with cancer.

**Results:** Our analysis revealed five themes: 1) Shared understanding of physical and psychological challenges of sexual health after cancer; 2) Navigating role shifts and changes to sexual relationship; 3) Getting through it as a team; 4) Maintaining open communication; and 5) Wanting services and support for partners/caregivers and couples. Both survivor and their partners articulated physical (e.g., painful sex, decreased libido) and psychological (e.g., guilt, self-consciousness) challenges to their sexual health in survivorship. Gender differences emerged, where women more often described a sense of “duty” to engage sexually than men did. Couples described a shift in roles throughout survivorship that either strengthened relationships or created a “wedge.” Couples identified “open communication” and strategies for “working as a team” as critical in order to navigate these challenges, but perceived a need for more support and resources. Most participants advocated for couple-focused and online services.

**Conclusion:** Many YA couples experience complex sexual health challenges after cancer. There is no “one size fits all” solution, as individuals and couples cope with and manage these challenges in different ways. Study results can inform couple-focused strategies to improve the experience for both survivors and their partners, such as creating shared understanding of sexual health after cancer and improving communication skills.

## Effect of intimate partner violence exposure on HIV viral loads in a perinatal cohort in South Africa



Abigail M Hatcher, Kirsty Brittain, Tamsin Phillips, Allison Buba, Elaine Abrams, Landon Myer

**Introduction:** While antiretroviral therapy (ART) in pregnancy can ensure infant and maternal health, ART adherence postpartum is often poor. One-third of HIV-positive

women who achieved viral control during pregnancy virally rebound in the first year after giving birth. Intimate partner violence (IPV) worsens ART adherence and viral suppression among non-pregnant women in cross-sectional studies. However, less is known about how IPV alters viral response longitudinally or around the time of pregnancy.

**Methods:** We conducted secondary analysis of a prospective cohort of women in a public sector antenatal clinic in Gugulethu, a township near Cape Town, South Africa. Viral loads assessed at each of ten clinic visits (Abbott RealTime HIV-1) indicated viral suppression (< 50 copies/mL) and were assessed continuously as log copies/mL. IPV was measured at three time points using behaviorally-specific items on physical, sexual, and psychological violence (WHO instrument). Covariates were maternal age, gestation at enrolment, socio-economic status, timing of HIV diagnosis and ART initiation, relationship status, depressive symptoms (Edinburgh Postnatal Depression Scale), and alcohol use (AUDIT). We used dynamic panel modeling to estimate the longitudinal impact of IPV on viral loads.

**Results:** Of 471 women followed for a median of 23 months, a majority (84%) achieved viral suppression by 6 weeks postpartum, but only two-thirds (62%) were virally suppressed by 18 months postpartum. Nearly one in three women (29%) reported some form of IPV in pregnancy or during the study period. IPV victimization at any time point was associated with 64% reduced odds of achieving viral suppression 12 months postpartum (aOR=0.36, 95%CI 0.22-0.60). In longitudinal models, lagged IPV exposure was associated with higher viral loads after controlling for fixed effects, past viral control, and duration on ART. Model fit was improved by adding depressive symptoms and alcohol use, as these partially mediate the effect of IPV on viral suppression. In the final model, each standardized increase in IPV was associated with higher viral loads (coef=0.09, 95%CI 0.02-0.17). The effect of IPV was greater in magnitude than depressive symptoms (coef=0.05, 95%CI -0.03-0.12) or alcohol (coef=0.05, 95%CI -0.01-0.11). Model fit was acceptable (RMSEA=0.058, CFI=0.930).

**Discussion:** These findings from a perinatal South African cohort suggest exposure to IPV leads to higher viral loads postpartum. Compared with other comorbidities commonly addressed in the health setting (depression, alcohol use), IPV demonstrates a robust association with later viremia. Perinatal programs to address IPV may have positive outcomes for HIV-related health, and will be crucial for ensuring wellbeing of mothers and infants.

## Does Sexual Disruption Mediate Associations between Perceived Coping and Quality

## of Life in Breast & Prostate Cancer Survivors?



Emily Walsh, Molly Ream, Chloe Taub, Eric R. Nahin, Hannah M. Fisher, Jason Dahn, Lara Traeger, Bruce R. Kava, Frank Penedo, Michael H. Antoni

**Background:** Men with prostate cancer (PC) and women with breast cancer (BC) experience relationship challenges as a result of their treatment. Decrements in sexual functioning and quality of life (QOL) are well documented; however, limited work has evaluated whether illness-related sexual and intimacy disruption mediates the relationship between perceived coping and QOL in a relatively large and well characterized sample of PC and BC survivors.

**Methods:** PC (n=260) and BC (n=179; stages 1-2) survivors who were enrolled in stress management RCTs were assessed prior to randomization. The Psychosocial Adjustment to Illness Scale-Sexual Relationship subscale (PAIS) measured illness-related sexual and intimacy disruption, the Functional Assessment of Cancer Therapy-General (FACT-G) assessed QOL, and the Measure of Current Status (MOCS) captured perceived coping abilities. Differences between cancer groups were tested and followed by a Sobel test within each group to examine if illness-related sexual and intimacy dysfunction explains to association between perceived coping and QOL.

**Results:** PC survivors were older (PC M=65.4, SD=7.6; BC M=50.2, SD=9.2), further from diagnosis (PC M=15.6 mos, SD=6.9; BC M=1.8 mos, SD=7.7) and treatment (PC M=10.3 mos, SD=4.5; BC M=0.8 mos, SD=0.8), and reported greater QOL (PC M=86.3, SD=14.2; BC M=80.2 SD=14.4). BC survivors had greater annual income (MPC M=51.0, SD=50.2; BC M=85.9, SD=74.2), education (PC M=13.8 yrs, SD=3.3; BC M=15.6 yrs, SD=2.5), illness-related sexual/intimacy disruption (PC M=13.5, SD=3.6; BC M=14.6, SD=1.6) and coping ability (PC M=62.9, SD=11.3; BC M=94.8, SD=12.9). All p's < .05. Greater perceived coping ability for BC and PC predicted greater QOL (F(1,178)=46.9, p< 0.001; F(1, 259)=18.6, p< .001). Illness-related sexual and intimacy disruption mediated the relationship between perceived coping and QOL for PC (Sobel test statistic=1.97, SE=0.034, p=0.049) but not for BC survivors (Sobel test statistic=.622, SE=.01, p=0.53).

**Conclusions:** Although women presented with greater sexual and intimacy disruption, this characteristic did not mediate the effects of perceived coping on QOL. For men, sexual and intimacy disruption did mediate the effects of coping on QOL. These differences could suggest that illness-related disruption applies differently within PC and BC. Interventions targeting the role of coping on sexual function and QOL may be more relevant in PC,

and perceived coping may protect QOL through different pathways in BC.

## Development, Production, and Acceptability of a Theory-based Comic Book for HPV Vaccine Promotion for East African Adolescents



Isabelle Celentano, Rachel L. Winer, Sou Hyun Jang, Anisa M. Ibrahim, Farah B. Mohamed, Fanaye Gebeyaw, John Lin, Ahmed A. Ali, Victoria Taylor, Linda K. Ko

**Background:** HPV vaccine uptake is low among East African adolescents in the US. Adolescents' preferences influence vaccine decisions, yet few interventions exist that address adolescents' beliefs about HPV vaccines. Comic books are promising tools for communicating HPV vaccine information because it can both educate and entertain. We describe a multi-step process on how to create and evaluate a theory-based comic book among East African adolescents.

**Methods:** The comic book development was a multi-step process that included formative research with focus groups, creation of theory-based messages, and assessment of the comic book acceptability. First, we convened three separate focus groups in Somali, Amharic and Tigrinya (n=30) with East African mothers in Washington State to identify themes to inform the production of the comic book. Second, we conducted message mapping to operationalize the themes into theory-based messages. Third, we assessed the acceptability of the comic book, appeal, and message relevance among East African adolescents aged 14-17 years (n=134) using open-ended questions.

**Results:** The comic book incorporated socio-cultural themes, information needs, and suggestions for information flow that emerged from the focus groups. The comic book story followed a plot that focused on an adolescent main character and consisted of three scenes: 1) adolescent HPV vaccine education by a health professional in a classroom setting; 2) discussion of HPV vaccine beliefs and experiences among adolescent peers; and 3) communication with parents about HPV vaccine and intent for vaccination. Five themes emerged on comic book acceptability: overall appeal, structure, characters, story and content, and messages. The comic book appealed positively to most adolescents (92/111 comments; 82.9%). Comments about comic book structure noted liking the graphics (17/57; 29.8%) and ease of comprehension (22/57; 38.6%). Adolescents responded positively to ethnic representation (24/51; 47.1%), diversity of the characters (7/51; 13.7%), the story's educational focus (92/96; 97.9%), the use of humor (34/96; 35.4), and flow of infor-

mation among peers (31/96; 32.3%). The importance of HPV vaccines (82/98; 83.7%), seeking social support (43/98; 43.9%), and information about HPV and cancer (33/98; 33.7%) were messages noted as most important.

**Conclusion:** We used a multi-step process to create a culturally-tailored comic book on HPV vaccines that East African adolescents found to be both educational and entertaining. Further evaluation will focus on the impact of the comic book on HPV vaccination knowledge and intentions.

## “Take Charge, Get Cured”: Testing a mHealth HCV treatment decision tool for methadone patients for acceptability and efficacy



Sarah Bauerle Bass, Amy Jessop, Muhammed Gashat, Jesse A. Brajuha, Mohammed Alhajji, Monika Burke, Carine Wellington, Nicole Ventriglia

**Background:** Hepatitis C (HCV) is a highly prevalent infection in current and former IV drug users. Current estimates indicate that over 70% of those in methadone maintenance treatment programs (MMTs) have HCV, but only 11% have initiated treatments despite availability of new treatments that are easily tolerated and can cure infection in about 8 weeks.

**Methods:** We conducted a pilot randomized equivalency trial at four Philadelphia, PA MMTs to test acceptability, feasibility and promise of efficacy of our “Take Charge, Get Cured” mobile health (mHealth) treatment decision tool, developed through extensive formative work that included methadone patients’ input and targeted directly to concerns of methadone patients with Hepatitis C (HCV). We compared its impact on perceptions and knowledge about HCV and HCV treatment, decisional conflict, intention to and actual initiation of HCV care to a web-based Cochrane-reviewed, non-targeted HCV decision tool. Subjects (n=122) were randomized, administered baseline questionnaires, interacted with the targeted or non-targeted decision tool on an electronic tablet, and answered post-test questions. After 3-months subjects (n=93; 76%) were surveyed for follow up.

**Results:** “Take Charge, Get Cured” users were more likely to report the tool helped with decision making and demonstrated greater improvement in knowledge, decisional conflict, and intention to be treated for their HCV infections than users of the non-targeted decision tool. They were significantly more likely to say the targeted tool was helpful, that they would recommend it to others, and was helpful. At

three month follow up, targeted group participants were more likely to say the tool helped them make a better decision about treatment and prepared them to talk to their doctor about what matters most to them about treatment. No differences were seen in actions to initiate HCV care, but more targeted group participants reported talking to their doctors about HCV treatment.

**Conclusions:** Results indicate a highly targeted mHealth decision tool is an important strategy to affect perceptions and knowledge of HCV treatment that lowers decisional conflict about initiating treatment, key components in decision making. We believe this highly acceptable and feasible intervention could be utilized in clinical settings to address the important barriers to initiating HCV treatment in a vulnerable population.

## Psychometric evaluation of the Personal Feelings Questionnaire-2 (PFQ-2) shame subscale among female sex workers in Mexico



Cristina Espinosa da Silva, Heather Pines, Thomas Patterson, Shirley Semple, Alicia Harvey-Vera, Steffanie Strathdee, Gustavo Martinez, Eileen Pitpitan, Laramie R. Smith

**Background.** The Personal Feelings Questionnaire-2 (PFQ-2) was developed as a measure of shame among college students but has not been validated within stigmatized populations for whom shame may increase risk for HIV and other sexually transmitted infections. We examined the psychometric properties of the Spanish-translated 10-item PFQ-2 shame subscale in a sample of female sex workers (FSWs) in two U.S.-Mexico border cities.

**Methods.** From 2016-2017, 602 HIV-negative FSWs were recruited through time-location sampling in Tijuana (n=302) and Ciudad Juarez (n=300) to participate in an efficacy trial evaluating a 24-month theory-based text messaging behavior change maintenance intervention. Interviewer-administered surveys collected information on shame (10-item PFQ-2 subscale with 5-point Likert-type responses), socio-demographics, and psychosocial factors. Exploratory factor analysis (EFA), item performance, internal consistency, differential item functioning (DIF) by city, and convergent validity were assessed for the shame subscale.

**Results.** One misfit item was removed during EFA due to a low factor loading (< 0.30). The option characteristic curves for the 5-point responses indicated that item performance could be improved by collapsing to 3-point responses. EFA on the remaining 9-item subscale with 3-point responses supported a single construct underlying shame in this sample

and indicated good internal consistency (McDonald’s Hierarchical Omega=0.69; Total Omega=0.88). Mean shame scores were 6.9 (SD=4.2) and 4.4 (SD=3.3) in Tijuana and Ciudad Juarez (range= 0-27), respectively. Analysis of DIF indicated that FSWs in Tijuana and Ciudad Juarez differed systematically in their responses to four items, although the opposing directions of the item-level differences resulted in a negligible effect on overall scores. Correlations between the 9-item shame subscale and the PFQ-2 guilt subscale (r= 0.79, p< 0.01), Beck Depression Inventory (r= 0.69, p< 0.01), and Pearlin Emotional Support scale (r= -0.28, p< 0.01) were in the expected directions and demonstrated convergent validity.

**Conclusions.** The Spanish-translated 9-item PFQ-2 shame subscale showed good reliability and convergent validity in a sample of FSWs in Mexico, suggesting that it may be a useful measure of shame among FSWs and should be explored in other stigmatized populations. The significant DIF detected by city indicates that future analyses using the 9-item shame subscale should consider potential regional differential functioning.

## Concordance of objective and subjective medication adherence measures in an HIV pilot trial



Eugene M Dunne, Salmoirago-Blotcher, Michael Carey

**Objective:** Antiretroviral therapy (ART) adherence and viral suppression are critical to the “90-90-90” plan to end the HIV epidemic. That is, 90% of persons living with HIV (PLWH) knowing their status, 90% of PLWH in care and receiving antiretroviral medications, and 90% of PLWH on ART achieving viral suppression. Given the importance of medication adherence, this study examined rates of concordance among three measures: self-reported adherence, staff-directed unannounced pill counts, and laboratory-confirmed viral load.

**Methods:** Participants were 42 PLWH (M age = 47.5 years; 50% female; 33% black; 26% Hispanic/Latino) enrolled in a pilot trial examining the feasibility and acceptability of a mindfulness intervention to improve medication adherence and reduce risky sexual behavior. Data for the present analyses were collected at the three-month follow-up assessment. Self-reported adherence included three items regarding the past 30 days: number of days participant missed a dose; how often did participant take medication as instructed; and “how good of a job” participants did taking their medication as instructed. Pill counts were conducted by telephone by trained study staff. Participants were provided counting trays and instructed on how to count



medication during initial in-person visit. Viral load suppression was defined as HIV-1 RNA fewer than 500 copies/mL. Bivariate correlations evaluated concordance rates among adherence and viral load measures.

**Results:** Over the previous month, participants reported missing at least one medication dose on two days (SD = 2.9), which is equivalent to a 93% adherence rate. Using a 5-point scale, participants described taking their medication as prescribed as “almost always” (M = 3.9, SD = 1.4) and rated their ability to take medication as prescribed as “very good” (M = 3.9, SD = 1.2). Based on pill counts, participants were adherent to 84% (SD = 21%) of their ART medication doses. HIV viral load data showed that 83% (SD = 38%) of patients were virally suppressed. Self-reported medication adherence (i.e., number of days missed) was significantly and negatively correlated with pill count data ( $r = -.62, p < .001$ ) and suppressed viral load ( $r = -.44, p = .003$ ). Pill count data and suppressed viral load were also significantly correlated ( $r = .45, p = .009$ ).

**Conclusion:** Estimates of ART adherence differed slightly based on self-report (93%) and telephone-conducted pill counts (84%). Both methods demonstrated moderate concordance with biologically measured viral load. Although self-reported and pill count measures of medication adherence introduce human error, they appear to be good indicators of viral suppression for PLWH. With new methods to monitor medication adherence on the horizon (e.g., “smart” pills), future studies should continue to evaluate concordance between subjective and objective adherence measures to optimize patient health.

## Different Types of Stigma and ART Adherence among People Living with HIV: The Mechanistic Roles of ART Knowledge and ART Self-efficacy



Chengbo Zeng, Xiaoming Li, Shan Qiao, Xueying Yang, Zhiyong Shen, Yuejiao Zhou

**Background:** Previous studies have demonstrated the negative relationship between HIV-related stigma and antiretroviral therapy (ART) adherence among people living with HIV (PLWH). Yet, there are few studies investigating the mechanisms of how different types of stigma affect ART adherence. Based on the information-motivation behavioral skills (IMB) theory, the current study proposed that different types of stigma could impair ART adherence through their negative influences on ART knowledge and ART self-efficacy. This study aimed to examine the mechanistic roles of ART knowledge and ART self-efficacy on

the relationships between different types of stigma and ART adherence.

**Method:** Data were derived from a baseline survey of a prospective cohort study. Data collection was conducted from November 2017 to February 2018 in Guangxi, China. Six hospitals/clinics in five cities with the largest number of HIV patients were selected, and 1,198 PLWH were recruited. Participants were assessed on their sociodemographic characteristics, ART adherence, different types of stigma (i.e., anticipated, internalized, and enacted stigma), ART knowledge, and ART self-efficacy. Path analysis was used to examine the indirect effects from different types of stigma to ART adherence through ART knowledge and ART self-efficacy.

**Results:** Among the 1,198 PLWH, 64.4% were male, and mean age was 39.4 years. The indirect paths from anticipated stigma (std.β=-0.018, 95%CI: -0.004~-0.001, p=0.013) and internalized stigma (std.β=-0.045, 95%CI: -0.013~-0.004, p<0.001) to ART adherence through ART self-efficacy were statistically significant while the indirect path from enacted stigma to ART adherence through ART self-efficacy was marginally significant (std.β=-0.013, 95%CI: -0.013~-0.001, p=0.056). All types of stigma could impair ART self-efficacy among PLWH, which in turn could compromise their ART adherence. None of the indirect paths from three stigma to ART adherence via ART knowledge was significant.

**Conclusion:** The mechanistic roles of ART knowledge and ART self-efficacy are different on the relationships between different types of stigma and ART adherence. To intervene the negative impact of HIV-related stigma on ART adherence among PLWH, multilevel interventions targeting different types of stigma and improving ART self-efficacy and knowledge are needed.

## Evaluating effectiveness of a tailored substance use intervention for people with HIV: Implementation of PLUS in NYC HIV clinics



Tyrel Starks, Stephen S. Jones, Sitaji Gurung, Christopher M. Ferraris, Ana Ventuneac, Jeffrey T. Parsons, Brett M. Millar, Martha A. Sparks

**Background:** People with HIV (PWH) use alcohol and drugs at rates higher than their HIV negative counterparts. This is particularly problematic because drug use is associated with difficulties with antiretroviral medication adherence. The Positive Living through Understanding and Support (PLUS) intervention previously demonstrated efficacy to reduce heavy drinking among PWH. The goal of the

current study was to evaluate the effectiveness of PLUS when delivered by mental health care providers in HIV care clinics.

**Methods:** The study utilized a quasi-experimental design to evaluate the effectiveness of the PLUS intervention to reduce problematic alcohol and drug use among PWH. The intervention was delivered at a 3-site consortium of outpatient clinics, with follow-up assessments completed at 3-, 6-, 9- and 12-months post-intervention. At Clinic 1 (n = 40) and Clinic 2 (n = 22), participants received the PLUS intervention immediately after baseline, as did 22 participants at Clinic 3. At Clinic 3, an additional 90 were assigned to a wait-list control condition, who received the intervention after their 12-month follow-up. Eligible PWH were 18 years or older, prescribed ART, had a detectable viral load within the past year, and reported problematic drinking or recent drug use. Problematic alcohol and drug use were assessed using the Alcohol Use Disorders Identification Test (AUDIT) and the Drug Abuse Screening Test (DAST-10).

**Results:** Results indicated that participants in the waitlist control group had stable AUDIT and DAST scores over the 12-month follow-up period. While some over-time trends in intervention groups were significant, their effect was small. As a result, there were no significant between-group difference in AUDIT or DAST scores across follow-up assessment time-points. Where present, small linear slope effects suggested that patients at lower-performing clinics with higher average baseline use benefited somewhat more from PLUS implementation.

**Conclusions:** The absence of intervention effects observed illustrates the importance of linking the goals of implementation research to clinic needs. New York City has achieved 90-90-90 goals and the 3 clinics involved in this trial had strong patient outcomes prior to implementation. Implementing an evidence based intervention at a high-performing clinic may not yield substantive changes in patient outcomes. Implementation researchers need to thoughtfully identify clinic needs in order to insure that intervention content addresses existing delivery challenges.

## Perspectives of Ghanaian Health Care Providers on HPV Vaccination: A Qualitative Study based on Multi-Theory Model



Cassandra Millan, Matthew Asare, Beth A. Lanning, Peter Agyei-Baffour

**Introduction:** Human Papillomavirus (HPV) vaccination is effective in preventing cervical cancer. However, HPV vaccination awareness and vaccination rates in Ghana are low and these factors have contributed to high

rates of cervical cancer in the country. Typically, healthcare providers (i.e. physicians and nurses) are responsible for counseling and/or educating adolescents and parents about the HPV vaccination but little is known about the Ghanaian health care providers' attitudes and beliefs concerning HPV vaccination.

**Purpose:** The purpose of this study was to examine Ghanaian healthcare providers' perceptions and attitudes towards HPV vaccination and their vaccination recommendation behaviors.

**Methods:** We conducted three, sixty-minute focus group discussions with health care providers in the second-largest government hospital in Ghana. Sixteen semi-structured open-ended questions were used to guide the focus group discussions with additional follow-up questions added for clarifications. We explored general knowledge about HPV, vaccination recommendation behavior, physical environment, and socio-cultural factors associated with the HPV vaccination among the providers.

**Results:** The sample (n=29) included physicians (n=9), nurses (n=8), immunization field officers (n=5), and other healthcare professionals (n=7). The participants consisted of male (n=15) and females (n=14) between the ages of 29 and 42 years. Our analyses showed that healthcare providers rarely offer HPV vaccination recommendations because (a) physicians attend to acute illness and have limited time to discuss preventive care, including vaccination, with patients; (b) vaccines are delivered as community medicine where mobile clinics are delivered to the communities to vaccinate children in those communities; and (c) the concepts of routine medical checkup and preventive medicine, such as HPV vaccination, are not well integrated into the Ghana health care system. Additionally, we found (a) low urgency for HPV vaccination education programs due to competing priorities such as malaria and HIV/AIDS; (b) lack of awareness about the mechanism, safety, and efficacy of HPV vaccination; (c) lack of HPV vaccine accessibility (i.e. availability and affordability); and (d) stigma, misconceptions and religious objections associated with the vaccine (primarily, that it promotes promiscuity).

**Conclusion:** The findings of our study underscore the need for a comprehensive HPV vaccination program in Ghana. The program should be designed to (a) equip health care providers and the community with knowledge about the efficacy of HPV vaccination to prevent cancer, (b) address transportation issues for both vaccination delivery and access, and (c) address HPV vaccination-related stigma to increase vaccination uptake.

## Substance Use and Experienced Violence among Female Sex Workers on both sides of the Haiti Dominican Republic Border



K. Ria Hearld, John Waters, Julia M. Hasbun, Macarena Martinez, Amber Altaf, Henna Budhwani

**Background:** Studies that examine behaviors of populations that live and work on a geographic border are scarce, studies that evaluate the behaviors of those who make a living at the border, such as sex workers and day laborers are even fewer. Border studies are scientifically valuable, as they can highlight the intersections of psychological factors, with sociological ones, along with the influences of public health and medical care. Considering the value of these studies, we explored experiences of violence, abuse, and substance use (a coping mechanism) in Haitian sex workers living and working on the border of the Dominican Republic (DR) and Haiti, two nations that share one island.

**Methods:** Data for this study was from the 2015 Baseline Study on Sex Workers (N=232). We used bivariate analyses to compare outcomes between sex workers of both sides of the border. Multivariable analyses applied location as a control; we reported associations across three measures of physical violence.

**Results:** We found significant differences between sex workers in our bivariate and multivariate analyses. Sex workers in the Haiti were less likely to experience violence from regular partners relative to sex workers in the DR (OR=0.37, p< 0.05); conversely sex workers in Haiti were more likely to experience violence from co-workers (OR=6.38, p< 0.001). When including controls, higher education was protective against certain violence (p< 0.001). Alcohol use and physical abuse in childhood were statistically predictive of experiencing violence regardless of work location (OR=6.40, p< 0.001; and 2.82, p< 0.01; respectively).

**Conclusions:** We find that sex workers on both sides of the DR-Haiti border are victimized, abused, and may cope through substance use. The DR is upper-middle income; Haiti is considered a low-income nation, and these classifications are often associated with population health. However, we find varying rates of violence and substance use, reflecting the possible influence of local culture. Further qualitative studies deconstructing these negative experiences could inform researchers and public health scholars interested in the intersection of psychological and sociological forces on behaviors of high-risk sex workers.

## Healthcare Provider Training on LGBTQIA+ Health: An Introductory Module



Brenda Cassidy, Betty J. Braxter, Andrea F. Fischl

**Background:** Stigmatization and discrimination associated within the LGBTQIA+ community result in a cascade of health inequities. The Institute of Medicine and Healthy People 2020 highlight reduction of barriers to care related to associated stigma and lack of training for health care providers (HCP) to address the unique health issues in LGBTQIA+ persons.

**Purpose:** This project aimed to promote cultural competence among nursing students through development of a learning module on best practices in LGBTQIA+ health.

**Methods:** An exploratory qualitative design utilized focus group methodology to obtain a variety of views from stakeholders. Convenience sample was recruited from the school of nursing and LGBTQIA+ collaborative partnerships to obtain qualitative data from both populations. Focus groups were comprised of nursing students and faculty, members of the LGBTQIA+ community and HCP's who care for LGBTQIA+ individuals. Groups were conducted at the University School of Nursing. Snowball sampling was utilized to recruit nursing students and faculty; purposive sampling recruited providers who care for LGBTQIA+ individuals and participants from University Affinity Groups: Queer Professionals, Student Rainbow Alliance, Pride Health. Participants provided feedback on learning module after development.

**Evaluation Plan:** Focus groups captured qualitative data; a note taker and panopto recording technology were utilized to record content of focus group discussion. Transcription of each group was verified by faculty for inter-rater reliability of content. Qualitative analysis identified themes from each of the Focus Groups through consensus agreement amongst PI and CIs. Themes were identified across groups and utilized to drive content of the learning module.

**Results** Major themes identified across focus groups included: *appropriate terminology, health disparities in LGBTQIA+ individuals, respectful communication about gender identity and sexual orientation.* Themes regarding learning module delivery platform included an emphasis on *interactive strategies and use of testimonials from LGBTQIA+ individuals.* An introductory learning module was developed using interactive strategies based on thematic analysis with assistance from the University Teaching and Learning Center staff. A case was constructed for students to practice learned concepts.

**Implications** This innovative strategy utilized content themes driven by nursing students

and faculty, LGBTQIA+ individuals and HCP who care for them to inform a learning module that supports culturally competent and gender-affirming care with LGBTQIA+ individuals. The module is currently being piloted with nursing students to assess changes in knowledge and attitudes with consideration for development of a simulation platform to apply learned concepts in a variety of health care settings.

## Stressors for Returning Citizens Living with HIV and Substance Use Problems: A Mixed Methods Analysis



Alexandra Wimberly, Orrin D. Ware, Alicia T. Bazell, Erica Sibinga

**Background:** People in reentry from prison or jail (returning citizens) experience high rates of substance use disorders and HIV. During reentry, a period known to be challenging, there are high rates of return to substance use and difficulties adhering to antiretroviral therapy (ART). To better understand this challenging period, this mixed methods analysis asks: What are the leading sources of stress among a sample of returning citizens living with HIV and substance use problems? Answering this question can inform stress-management interventions.

**Methods:** The 75 participants were largely male (68%), African American (78%), and had an average age of 44. Fifty-eight semi-structured qualitative interviews were completed. Interviews sought to identify stressors experienced during reentry. Transcribed interviews were analyzed in NVivo, guided by a qualitative descriptive methodology. Thematic analysis was used to identify themes. Analysis of demographics was conducted to provide a more complete picture of variables that impact stress. A multiple regression analysis assessed whether age, substance use, length of time since last incarceration, length of time living with HIV, length of previous incarceration, adherence to ART and substance use treatment involvement predicted self-reported stress on the Perceived Stress Scale.

**Results:** Qualitative analysis found that living with HIV was a stressor due to confronting one's mortality, carving out a new identity, and difficulties establishing relationships. Adhering to ART was an additional stressor because it was a reminder of one's status and could reveal one's status to others. While people realized the necessity of disclosing their HIV status in the context of intimate relationships, it was difficult to do, and some forewent initiating partnerships due to fear of rejection and public exposure. Quantitative analysis revealed a significant regression equation ( $R^2=0.23$ ,  $F(7, 60)=2.58$ ,  $p<.05$ ), with the longer a person had been in the community since release from prison or jail ( $b=-0.02$ ,

$P<.01$ ) and the longer a person had been living with HIV ( $b=-0.30$ ,  $p<.05$ ) each predicting less stress.

**Conclusions and Implications:** This sample of returning citizens living with HIV and substance use problems experienced stress related to living with HIV, which interfered with establishing relationships. While it was recognized that ART was important for survival, taking these medications was stressful because it was a reminder of one's status. It may be that participants had not had the time or support to accept and cope with their HIV status, an idea supported by the finding that people who had been in the community and/or were living with HIV longer had less stress. These findings highlight the need for supportive services in reentry regarding coping with living with HIV.

## Barriers to HPV Vaccine Series Completion in an Insured Population



Aruna Kamineni, Paula R. Blasi, Gabrielle Gundersen, Malia Oliver, John Dunn, Denise Galloway, Margaret Madeleine

Human papillomavirus (HPV) is the most common sexually transmitted infection in the United States. Infection with certain types of HPV can lead to cervical cancer as well as other cancers in both men and women. HPV vaccines are safe and efficacious for preventing certain types of HPV infection. However, individuals must receive either 2 doses (for ages 9-14) or 3 doses (for ages 15 and older) for complete immunization. The requirement for multiple doses may limit the effectiveness of the HPV vaccine for cancer prevention.

To better understand barriers to completing the multiple-dose HPV vaccine series, we conducted a pilot study among members of an integrated health care system (Kaiser Permanente Washington) who had clinical documentation of only one dose of HPV vaccine. We surveyed parents or legal guardians of 11-17-year-old girls ( $n=10$ ) and boys ( $n=18$ ), as well as 18-31-year-old women ( $n=20$ ) and men ( $n=9$ ), about their reasons for not completing the HPV vaccine series. Most participants (70.2%) were non-Hispanic white, and most (77.2%) reported the highest level of education attained by an immediate family member as a bachelor's degree or higher.

Among parents of children, commonly reported barriers to HPV vaccine series completion included a lack of awareness about the need for additional doses or a lack of clinician recommendation for additional doses (28.6%), as well as the inconvenience of returning for additional doses (17.9%). Concerns about the HPV vaccine or vaccines in general were more common among parents of girls (30.0%) compared with parents of boys (16.7%).

Among adult participants, barriers to HPV vaccine series completion included the inconvenience of returning for additional doses (31.0%), a lack of awareness or a lack of clinician recommendation for additional doses (10.3%) and forgetting (10.3%).

Our findings suggest opportunities for clinicians and health care systems to play a greater role in promoting HPV vaccine series completion. For example, clinicians could counsel patients about the cancer-prevention benefits of HPV vaccination and the need for multiple doses, while addressing parents' psychological barriers by listening to and addressing their concerns about the vaccine. Health care systems could provide cues to action through electronic health record prompts for clinicians and reminder letters, emails, phone calls, or text messages for patients. Finally, health care systems could address the inconvenience of obtaining multiple doses by offering HPV vaccination in school-based health centers, pharmacies, and mobile immunization clinics, while also encouraging opportunistic vaccinations. Future research could explore the effectiveness of these and other health promotion strategies to facilitate completion of the HPV vaccine series.

## Testing the generalizability of the drug use and condomless anal sex link among sexual minority men



Kory Kyre, Stephen S. Jones, Gabriel Robles, Demetria Cain, Ruben H. Jimenez, Brett M. Millar, Patrick Sullivan, Tyrel Starks

**Background:** The link between drug use – particularly “club drugs” (cocaine, methamphetamine, GHB, LSD, ecstasy, and ketamine) – and sexual HIV risk behavior is well-documented among sexual minority men (SMM). Less consideration has been given to marijuana. In addition, few studies have tested whether this association differs among single SMM vs. those in relationships. For many partnered SMM, sexual agreements place limits on sexual behavior with outside partners and expectations about HIV prevention, and monogamous SMM are less likely to use club drugs. Accordingly, we tested whether these factors may diminish the strength of associations between drug use and condomless anal sex (CAS) with casual partners.

**Methods:** Between 11/2017 and 9/2019, 60,108 cis-gender SMM were recruited through a mobile dating app ( $M_{age} = 36.2$  years) and completed an online survey. The majority were White (55.1%), in a relationship (84.3%), identified as gay (85.4%), and HIV-negative (79.6%; of whom 22.5% were on PrEP). Participants provided demographic



data and indicated whether they used marijuana and 6 club drugs (in the previous 90 days) as well as the number of times they had CAS with a casual partner. Partnered SMM indicated their sexual agreement. A hurdle model was calculated to predict the odds of any CAS and CAS frequency among those who reported it. Models included interaction terms between relationship status and drug use and controlled for race and ethnicity, age, HIV status, and PrEP uptake.

**Results:** Club drug use (OR = 2.64,  $p < .001$ ) was positively associated with the odds of CAS among single and non-monogamous men, but not monogamous men. Marijuana use (OR = 1.43,  $p < .001$ ) was positively associated with the odds of CAS among single and monogamous men, but not non-monogamous men. Club drug use (Rate Ratio = 2.10,  $p < .01$ ) was positively associated with CAS frequency among single and non-monogamous men who had at least some CAS, but not among monogamous men. Marijuana use was not associated with CAS frequency in any group.

**Conclusions:** These findings highlight the relevance of marijuana use to sexual risk-taking – for at least some groups of SMM. They also suggest that links between drug use and CAS generalize to at least some subgroups of partnered SMM. These findings point to the utility of incorporating a focus on marijuana use in intervention development and epidemiological research focused on sexual health and also of developing drug use interventions to reduce HIV transmission risk among partnered (as well as single) SMM.

## Relationship functioning as predictor of condomless sex among a sample of sexual minority adolescent males



Trey V Dellucci, Feldstein Ewing, Travis Lovejoy, Gabriel Robles, Demetria Cain, Ruben H. Jimenez, Sylvie Naar, Tyrel Starks

**Background:** In 2017, youth (aged 13 to 24) made up to 21% of the new HIV diagnoses in the United States and 87% of those occurred in male youth. Nearly 50% of sexual minority adolescent males (SMAM) do not routinely use condoms. Main relationship partners account for a substantial proportion (as many as 79%) of new HIV infections among sexual minority men. For partnered sexual minority men, positive relationship functioning (e.g. high satisfaction) may be associated with instances of condomless sex (CS), though no studies to date have examined this association in SMAM.

**Methods:** Adolescents aged 15 and 19 were recruited nationally via online social media advertisements and geo-networking applica-

tions, and completed a brief telephone interview as part of ATN156. Analyses utilized data from 85 SMAM who reported being sexually active and who were in a current relationship. Participants were on average 18.03 years old (SD = 1.04), majority Latinx (42.9%) or White (32.4%), and identified as gay (77.5%) or bisexual (22.5%). Two independent logistic regression analyses were conducted to examine the association between relationship functioning and CS in the past 90-days among 1) all sexually active SMAM and 2) sexually active SMAM with a history of CS ( $n = 70$ ). All analyses controlled for age, sexual identity, geographic region, and race and ethnicity.

**Results:** Relationship functioning was only associated condom use among those with a previous history of CS. Greater relationship satisfaction was associated with a lower likelihood of CS (OR = 0.56, 95%CI: 0.32, 0.98). Neither perceptions of seriousness or commitment to their relationship were associated with condomless sex.

**Discussion:** Consistent with the adult literature, the findings from the current study support that relationship functioning, specifically relationship satisfaction, is associated with sexual health risk among SMAM. This finding has important clinical and/or policy implications. Specifically, relationship skills training should be included in sexual health education programming as relationship functioning is inherently related to HIV prevention.

## Parent and Childhood Cancer Survivor Experiences with and Barriers to HPV Vaccination



Austin R. Waters, Karely Mann, Perla L. Vaca Lopez, Anne C. Kirchhoff, Deanna Kepka, Yelena P. Wu

**Background:** Childhood cancer survivors have lower HPV vaccination initiation rates than the general population (24% vs. 41%). HPV-associated cancers are 40% higher among female survivors of childhood cancer and 150% higher among male survivors compared to the general population. Improving HPV vaccination uptake among childhood cancer survivors is essential to improving their health outcomes. We conducted semi-structured interviews with adult survivors of childhood cancer and parents of younger survivors to evaluate their experiences with the HPV vaccine, barriers to HPV vaccination, and recommendations on how to promote survivor completion of the vaccine series.

**Methods:** Eligible survivors were ages 18-26 years, treated at Primary Children's Hospital (PCH) or Huntsman Cancer Institute between 2013-2018, had completed treatment, and were age eligible for the HPV vaccine. Eligible

parents were at least 18 years of age, and the parent of a survivor under age 18 years who received treatment at PCH between 2013-2018, were done with treatment, and were age eligible for the HPV vaccine. Interviews were recorded, transcribed, coded and qualitatively analyzed using thematic content analysis.

**Results:** Survivors ( $N=10$ ) were primarily female (60%), non-Hispanic white (90%), and on average 21.2 years of age (range 18-23). Half were HPV vaccinated (50%). Parents ( $N=10$ ) were female (90%), ages 30-59 years (60%), and non-Hispanic white (80%). Of parents, 30% reported their child with cancer had received the HPV vaccine. Among those vaccinated ( $n=8$ ), 100% reported that a healthcare provider recommended the vaccine, whereas among the  $n=12$  unvaccinated, only 1 (8.3%) reported receiving a provider recommendation. Four distinct themes emerged about experiences with and barriers to HPV vaccination. First, survivors and parents reported that they lacked adequate information on the vaccine, which limited their ability to decide whether to get it. Second, among those who had been vaccinated, this was due to high trust in their providers who recommended the vaccine. Third, unvaccinated survivors or their parents felt that receiving a recommendation for the HPV vaccine by their oncologist was essential, as oncologists understand complex medical histories due to cancer better than primary care providers. Fourth, participants generally felt that reminders about the vaccine via mechanisms like text and emails would be helpful and result in getting vaccinated.

**Conclusions:** HPV vaccination is an important opportunity to prevent second cancers in young cancer survivors. Our results demonstrate that oncologists play an essential role in recommending the vaccine and providing vaccine information to assist childhood cancer survivors and their families with decision-making about the vaccine. At the same time, reminder systems are necessary to help survivors to complete the multi-dose HPV vaccine series.

## Obesity and Eating Disorder Disparities among Sexual and Gender Minority Youth: Findings from the ABCD Study



Natasha A Schvey, Arielle Pearlman, Mikela A. Murphy, Joshua C. Gray

**Background:** Sexual and gender minority (SGM) youth may be at increased risk for eating and weight disorders compared to non-SGM youth. Though many youth identify as gay or gender non-conforming in childhood, the majority of studies assess older adolescents and rely on self-reported height and

weight. Determining whether health disparities emerge prior to adolescence may have important implications for prevention. The current study, therefore, utilized data from the Adolescent Brain and Cognitive Development (ABCD) study to compare the prevalence of obesity and eating disorders among SGM and non-SGM youth.

**Methods:** Children underwent an in-person assessment including measured height and weight and self-report questions about sexual orientation and gender identity. The KSADS was administered to assess both sub- and full-threshold eating disorders. Logistic regressions, adjusting for sex assigned at birth, age, race, and family income were conducted to test for differences in obesity status and eating disorder presence among SGM youth versus non-SGM youth.

**Results:** The study comprised 4,448 participants (*Age*: 10.0y; *MBMI*: 59.84; 47.3% female; 57.8% nonHispanic white), of whom 58 (1.3%) were probable sexual (*n* = 42) and/or gender (*n* = 23) minorities. The prevalence of obesity among SGM and non-SGM youth was 25.9% and 15.1%, respectively. Adjusting for covariates, SGM youth were significantly more likely to have obesity compared to their non-SGM peers (*OR*: 2.69, *p* = .002). More specifically, SGM females were 2.65 times more likely to have obesity compared to non-SGM females and SGM males were 2.87 times more likely to have obesity than non-SGM males (*ps* < .038). SGM youth were not significantly more likely to have an eating disorder as compared to non-SGM youth (12.1% and 10.3%, respectively). However, SGM males were significantly more likely to have an eating disorder compared to non-SGM males (*OR*: 5.23, *p* = .004).

**Conclusion:** Results indicate that SGM youth are significantly more likely to have obesity compared to their non-SGM peers, and that SGM males are significantly more likely to have an eating disorder as compared to non-SGM males. This study indicates that weight and eating disorder disparities in SGM youth may begin in childhood. Research is needed to elucidate the mechanisms that contribute to health disparities in this population.

## Association between Appearance-based Discrimination and Binge Eating Disorder among Sexual Minority Men



William R Grunewald, Alexandra D. Conventino, Steven A. Safren, Matthew J. Mimiaga, Aaron J. Blashill

Numerous studies have tied weight-based discrimination to binge eating and binge eating disorder (BED) in various samples. One group that encounters frequent discrimination

is sexual minority men (SMM). Minority stress theory posits that minority groups, like SMM, face excess stressors due to their stigmatized position in society. Given this elevated stress, SMM may be at increased risk of developing BED; however, this association is currently underexplored. Thus, the current study examined the association of various forms of discrimination, inclusive of appearance-based discrimination (which may be salient for SMM due to their endorsement of the mesomorphic ideal), and probable BED diagnosis in a sample of SMM. A sample of 189 SMM from the greater Boston area were recruited in order to pilot an at-home rapid HIV detection test. After recruitment, participants completed self-report questionnaires assessing frequency of different forms of perceived discrimination (appearance, race, sexual orientation, income, etc.) and probable BED diagnosis via the PHQ-ED. A hierarchical binary logistic regression model with three steps was used to examine the association of different forms of discrimination and probable BED diagnosis. These steps were 1.) physical appearance discrimination predicting probable BED diagnosis as the binary outcome variable, 2.) adding the remaining forms of discrimination as predictors, and 3.) including additional socio-demographic covariates. 4.2% of the sample screened positive for probable BED. Appearance-based discrimination was the most common form of discrimination reported (47.2%), followed closely by income (45.1%) and sexual orientation (44.0%). Appearance-based discrimination was significantly associated with probable BED diagnosis over and above all other forms of discrimination and socio-demographic variables, *OR* = 2.82, 95% *CI* = [1.52, 5.25], *p* = .001. Of note, appearance-based discrimination was the only form of discrimination that significantly predicted probable BED diagnosis. Findings suggest that appearance-based discrimination may be related to BED in SMM. Future research should examine these associations longitudinally in order to establish temporal ordering. Due to the reported frequencies of discrimination, clinicians may consider assessing appearance-based discrimination among SMM patients so as not to assume that sexual orientation discrimination is the most predictive form of discrimination for BED.

## Life Instability as a Predictor for Poor HIV-Related Health Outcomes Among a Clinic-Based Sample of Older Adults



Elliott R Weinstein, Noelle A. Mendez, Adam W. Carrico, Deborah L. Jones, Steven A. Safren

**Introduction:** People with uncontrolled HIV have greater life instability, higher depressive symptoms, worse medication adherence, more recent substance use, less housing se-

curity, and are more likely to have been incarcerated (e.g. Wong et al., 2007; Wawrzyniak et al., 2016). Miami is the U.S. city with the highest prevalence of HIV in the U.S., and, like other parts of the U.S., there are growing numbers of older adults with HIV. We sought to examine the degree to which life instability affects HIV-related health behaviors and outcomes among older adults (50+) with HIV in the Miami area. We hypothesized that greater additive levels of life instability are associated with worse adherence to antiretroviral therapy, greater odds of having a detectable viral load, and lower CD4-cell counts.

**Methods:** From Apr 2017- Nov 2019, 622 patients (50 years +) in the primary public HIV clinic in Miami completed an interviewer-administered assessment (English or Spanish). An additive life instability index was created by incorporating eight relevant psychosocial variables: relationship status, working status, housing stability, presence of comorbid health conditions, incarceration (past 12 months), length of time residing in the US, binge drinking, and drug use. Adherence was calculated based on responses to the Wilson's 3-item scale validated against electronic drug monitoring (Wilson et al., 2016). Viral load (cut at  $\geq$  200 copies/mL for unsuppressed) and CD4 were extracted from electronic medical records. Linear and logistic regression models were used to assess hypothesized relationships.

**Results:** Overall, the mean level of life instability in the sample was moderate (range 0-6, *M* = 2.81, *SD* = 1.08). Each additional indicator of life instability endorsed, controlling for depression, was associated with: approximately 1.52 greater odds of having unsuppressed viral load, (*OR* = 1.52, 95% *CI* 1.23, 1.88, *p* = .000); 4.36 percentage points lower ART adherence (out of 100%) (*B* = -4.36, 95% *CI* 2.99, 5.73, *p* = .000), and a decrease of 32 CD4 cells per cubic millimeter (*B* = -32.41, 95% *CI* 14.71, 50.10, *p* = .000).

**Conclusions:** Findings show life instability influences ART adherence, viral load, and CD4-cell count among older adult patients with HIV in a region of the U.S. with an out of control HIV epidemic. Assisting older adults reduce life instability may help various components of the care continuum for this population, and consequently work toward end the epidemic targets.

## Violence, Mental Health, and Sexual & Reproductive Health Risk among Gender Diverse Youth in the United States



Megan Sutter

Transgender and gender-diverse (TGD) individuals experience sexual and reproductive

health (SRH) disparities compared to their cisgender counterparts, including increased risk for sexually transmitted infections, impaired fertility, unintended pregnancy, and certain cancers. Increased SRH risk among TGD populations are in part due to lower rates of contraceptive use and misunderstandings of pregnancy risk while taking gender-affirming hormones. In the general population, a history of victimization is directly associated with an increased number of sexual partners, earlier sexual debut, greater likelihood of unprotected sex, and a history of sexually transmitted infections. SRH risk is also indirectly exacerbated by victimization through increased mental health problems and maladaptive coping strategies like substance abuse and number of sexual partners.

The current study examines the role of violence on SRH risk factors among a sample of gender-diverse youth using secondary data from the 2017 CDC District Youth Risk Behavior Surveillance System survey. The sample ( $n=12,503$ ) consisted of cisgender female (51%), male (47%), transgender (2%), primarily Hispanic (44%), Black/African American (20%), and heterosexual (78%) youth in 9-12 grade from the New York metro area, Broward County FL, and San Diego CA. Controlling for grade level, logistic regression analyses found that TGD youth were significantly more likely than cisgender youth to report ever having sex (OR=2.00, 95% CI: 1.25, 3.17). Among sexually-active youth ( $n=2,881$ ), TGD youth were more likely to report sexual debut before age 14 vs. 14+ (OR=.35, 95% CI: .19, .63), alcohol/drug use during their last sexual encounter (OR=2.34, 95% CI: 1.22, 4.46), and more than 1 sexual partners in the last 3 months (OR=2.37, 95% CI: 1.24, 4.53); and less likely to use a condom at their last encounter (OR=.50, 95% CI: .27, .92).

A series of path analyses were conducted to assess the association between gender and condom use through victimization (sexual dating violence and being threatened at school), suicidal ideation, alcohol/drug use during sex, and number of recent sex partners. There were significant indirect effects of gender on condom use through violence factors and suicidal ideation, but not alcohol/drug use or number of partners. Gender was also indirectly associated with alcohol/drug use through violence factors and suicidal ideation.

In conclusion, TGD youth had increased SRH risk compared to cisgender youth in part due to violence exposure and associated mental health problems. Future research and interventions should focus on violence prevention, positive coping and behavioral skills for TGD youth, and TGD-inclusive policies and sex education. Schools and healthcare providers should be aware of increased risk and be prepared to counsel youth on the link between victimization, mental health, and SRH risk behaviors.

## Incorporating mobile health to a Cognitive Behavior Therapy: Adapting an intervention for Latinx people living with HIV



Edda I Santiago-Rodriguez, Andres Maiorana, Catherine E. Rivas, John A. Saucedo

Latinx in the US are disproportionately affected by HIV. Poor access to health care, delays in HIV testing and engagement in HIV care, as well as untreated mental health issues are some of the structural barriers that influence this population. Depression has long been a barrier for engagement in care and viral suppression among people living with HIV (PLWH). Interventions using Cognitive Behavioral Therapy (CBT) have been effective in successfully treating depression among PLWHV. Little is known about the effectiveness of this therapy among Latinx PLWH. We explored the cultural and linguistic needs of Latinx PLWH to better develop a treatment intervention for depression using an adaptive and mobile health approach. Qualitative semi-structured in-depth interviews were conducted with participants who identified as Latinx, HIV positive, 18 years old, English or Spanish speakers receiving HIV care at the study site clinic. Participants were also assessed through a PHQ screening and received a severity score of moderate depression or higher. We asked participants about depression, HIV treatment access and acceptability of CBT adaptation. Interviews were audio-recorded and transcribed. Thematic analysis was used to analyze data. Seventeen participants, 16 men who have sex with men and one cisgender heterosexual woman, completed the interview. Participants had experienced depression for most of their lives and reported social isolation, sadness, poor concentration and difficulties with problem-solving and coping. Most previously had sought therapy and/or psychotropic treatment. Participants were receptive to the CBT intervention. Some expressed wanting a therapist that understands their background and social context and that ideally speaks their preferred language. Participants stated that they would welcome mobile health, even if they did not use it to communicate with their medical providers. They shared that receiving a text from their therapist would mean there is someone on the other end who cares about them and would reinforce the therapeutic process. Specific suggestions for texting were to use easy to read/understand messages tailored to each individual and with adaptable frequency. Concerns about confidentiality issues were few. Overall findings suggest high acceptability of CBT using a mobile health approach among interviewed Latinx PLWH. The use of texting could be a great tool to help with engagement and completion of therapy tasks.

## Formative Research and Evaluation of a Mobile Alcohol and HIV Preventive Intervention for Young Adult Men Who Have Sex with Men



Robert F Leeman, Bonnie Rowland, Neo Gebru, Maria Benvenuti, Robert Cook

**Background:** HIV incidence has declined in the past decade, but certain groups continue to suffer disproportionately, including men who have sex with men (MSM), young adults, and people of color. These rates are due in part to overlapping behaviors like alcohol use that negatively affect sexual health behavior. Pre-exposure prophylaxis (PrEP) can prevent HIV, but it is underused, and often with suboptimal adherence.

**Method:** Thus, we undertook a two-year project to develop a multi-component mobile intervention to reduce alcohol use and prevent HIV in young adult (18-30 yrs.) MSM. The intervention has 3 parts: web-based intervention providing personalized feedback; interactive voice response (IVR) system to enhance PrEP adherence via daily assessment and weekly feedback; and open-label PrEP. The intervention was developed in 3 phases: web-based survey of the Southeastern U.S. ( $N=682$ ) to provide normative data for the web-based intervention; focus groups/interviews to get input from the study population ( $N=17$ ); and a small usability test where participants engaged with the IVR for 30 days ( $N=4$ ).

**Results:** The web-based survey sample was diverse, with 49% college graduates and 47% non-White. HIV risk behavior and perceived HIV risk scale scores were high. Respondents also self-reported past-month averages of > 4 sexual partners; > 4 instances of condomless sex; and almost 3 instances of alcohol before/during sex. Past-month alcohol use was moderate, with means of 9 drinking days and just over 12 drinks per week. In the past 12-months, 70% had an HIV test. Participants were PrEP-naïve, but 89% had heard of it, with favorable attitudes, including 84% perceiving PrEP to be safe. Focus group/interview participants tended to have favorable views including a belief the intervention would enhance PrEP awareness. Participants provided feedback regarding the intervention's appearance, also noting some questions were repetitive and expressed concerns about an exercise that asks participants to write about a recent sexual encounter that may have increased HIV risk. Usability participants reported the IVR was easy to use and convenient, but had critiques about clarity. Participants had a favorable view of the continuity between feedback based on the web-based intervention and IVR.

**Conclusions:** Participants' feedback will be used to revise the intervention to enhance its



utility to reduce alcohol use and improve sexual health in groups disproportionately affected by HIV.

## Generativity as mediator in the relationship between gay community attachment and reduced depression among gay and bisexual men



Brian Salfas, Nicola F. Tavella, Ali Talan, H. Jonathon Rendina

**Background:** Generativity has been shown to positively impact mental health and overall well-being. This construct is often examined in the context of parenting and embeddedness in conventional family structures. Some qualitative research on sexual and gender minority populations has instead linked generativity to other forms of social and community attachment. We examined quantitative data on generativity, gay community attachment, and depression to test for significant associations among these factors in a population of sexual minority men (SMM).

**Methods:** We administered measures of demographics, the Loyola Generativity Scale (LGS), the Gay Community Attachment (GCA) Scale and the CES-D, a measure of depressive symptoms to 10,663 SMM. We ran a series of Pearson correlations to determine which demographic factors were significantly associated with the LGS and CES-D. We then ran a series of regressions adjusting for these potential confounding factors, to test a mediation model wherein generativity mediates the relationship between gay community attachment and scores on the CES-D.

**Results:** Age, race/ethnicity, employment, income, educational attainment, and sexual identity were correlated with CES-D scores. Being older, non-white, employed, having higher income, a college degree, and raising a child were associated with higher generativity. Higher GCA ( $\beta = -0.22, p < 0.00$ ) and generativity ( $\beta = -0.46, p < 0.00$ ) were independently associated with lower depression. GCA also predicted generativity ( $\beta = 0.30, p < 0.00$ ). In a combined model, both GCA ( $\beta = -0.09, p < 0.00$ ) and generativity ( $\beta = -0.44, p < 0.00$ ) predicted lower depression; however the effect of GCA decreased from the single-factor model. The model supports partial mediation of the relationship between GCA and depression through generativity.

**Conclusions:** Gay community attachment and generativity are important factors affecting mental health in GBM. Evidence of generativity mediating the relationship between GCA and depression supports the hypothesis that attachment to the community may be central to attainment of generativity among GBM and the connection between GCA and generativity partially accounts for the positive

effect of GCA on mental health in this population.

## Differences in resistance training and perceived barriers to physical activity among LGBTQ and non-LGBTQ college students



Ginny M Frederick, Isaura M Castillo-Hernández, Ewan R Williams, Anneliese A Singh, Ellen M Evans

**Purpose:** Health disparities in rates of chronic disease exist for adult members of the lesbian, gay, bisexual, transgender, and queer (LGBTQ) community across the lifespan. Lifestyle health behaviors, including engaging in sufficient physical activity (PA) and exercise (EX), are known to prevent chronic diseases, especially if adopted earlier in life; however, little is known about PA/EX behaviors in the LGBT population. Thus, the aim of this study was to compare PA/EX behaviors, and related perceived benefits and barriers, in LGBTQ and non-LGBTQ college student cohorts.

**Methods:** Self-identified LGBTQ ( $n = 54; 19.7 \pm 1.4$  yo) and non-LGBTQ college students ( $n = 286; 20.2 \pm 1.3$  yo) completed online surveys: a) Exercise Benefits and Barriers Scale (EBBS) and b) International Physical Activity Questionnaire (IPAQ) with subsequent MET-min/wk and days of resistance training (RT) scores being calculated. T-tests were used to compare PA levels and EBBS scores of LGBTQ and non-LGBTQ students.

**Results:** Regarding PA, there were no differences in MET-min/wk for LGBTQ and non-LGBTQ students ( $2376.5 \pm 1626.8$  vs.  $2722.8 \pm 1610.5$ ;  $p = 0.149$ ); however, LGBTQ students reported significantly fewer days of RT than non-LGBTQ students ( $1.5 \pm 1.9$  vs  $2.1 \pm 2.0$ , respectively;  $p = 0.047$ ). Total EBBS scores were 4.4% lower among LGBTQ students while Barriers scale scores were 12.8% higher than non-LGBTQ students ( $p = 0.005$  and  $p < 0.001$ , respectively), indicating less positive perceptions of, and higher perceived barriers to PA in this group. Further, compared to non-LGBTQ students, LGBTQ students reported higher perceived barriers scores on the Exercise Milieu, Time Expenditure, and Physical Exertion sub-scales of the EBBS ( $p < 0.001$ ;  $p = 0.012$ ; and  $p = 0.012$ , respectively), suggesting these as areas of particular concern.

**Conclusion:** College student members of the LGBTQ community report more barriers to PA/EX than their non-LGBTQ counterparts. This research highlights the presence of unique needs of college-aged LGBTQ individuals for promotion of PA/EX by addressing such barriers. Further research may be necessary to fully understand the context of these

barriers and inform program development toward the end of increased participation in PA/EX, specifically RT, among LGBTQ college students.

## The Moderating Role of Sexual Orientation in the Association between Religiosity and Sexual Health among College Students



Kalina M. Lamb, Carlee K. Conner, Sarah S. Dermody

**Objective:** Past research has shown that religiosity can impact sexual behaviors of youth. No known studies have examined the relationship between religiosity and sexual behavior in sexual minority (e.g., gay, lesbian, bisexual) youth. As many world religions promote doctrines that include negative views toward sexual minorities, it is unclear if religiosity would impact sexual minority sexual behaviors in the same way as heterosexual individuals.

**Methods:** College/university students across Oregon ( $N = 1213$ ) completed an online cross-sectional survey. The sample included four sexual orientation subgroups: straight (reference group;  $N = 992$ ); gay/lesbian ( $N = 29$ ); bi/pansexual ( $N = 153$ ); and unsure ( $N = 39$ ). Religiosity was assessed using the 15-item Centrality of Religiosity Scale ( $M = 2.44$ , range 1-5). Using logistic models in PROCES, sexual orientation was examined as a moderator of the relations between religiosity and the occurrence (yes vs no) of four sexual behaviors in the past 6 months: sexual activity, birth control use during sex, sexual activity under the influence, and testing positive for an STI. Covariates were age and natal sex.

**Results:** There was a significant association of religiosity will all outcomes for the straight subgroup: greater religiosity scores were associated with reduced odds of sexual activity ( $OR = .68, p < .001$ ), birth control use ( $OR = .65, p < .001$ ), sex under the influence ( $OR = .76, p < .001$ ), and testing positive for an STI ( $OR = .63, p = .02$ ). Gay/lesbian identity moderated the religiosity association ( $p < .05$ ) such that religiosity was even more protective for gay/lesbian identity for sex under the influence ( $OR = .68$ ). Bi/pansexual identity was also a moderator ( $p < .05$ ), such that religiosity was relatively less protective for sexual activity ( $OR = 1.38$ ) and sex under the influence ( $OR = 1.29$ ), but more protective for birth control use ( $OR = 1.13$ ).

**Conclusions:** Sexual orientation moderated the association between religiosity and sexual activity, birth control use, and sex under the influence, but not STI risk. Differences were found when comparing straight individuals to gay/lesbian and bi/pansexual individuals, but not unsure individuals. Also, the current study

confirms past research that identifies religiosity as a protective factor for a number of sexual health outcomes excluding birth control use, but suggests that this may be primarily among straight individuals.

## Utilizing a factorial experimental design in a randomized controlled trial to evaluate an online sexual health intervention



Jeffrey J. Milroy, Samuella Ware, Alicia M. Miller, Shemeka Thorpe, Amanda E. Tanner, David L. Wyrick, Kate Guastaferrro, Linda Collins

Alcohol use is often implicated in the sexual behaviors that increase college students' sexually transmitted infection (STI) risk. Accordingly, we developed and are currently evaluating a highly efficient online intervention, *itMatters*, to address the intersection of alcohol and sexual behaviors. *itMatters* was designed using the Multiphase Optimization Strategy (MOST), an engineering-inspired framework for creating optimized interventions in three phases: Preparation, Optimization, and Evaluation. Based on our conceptual model, we developed a 5-component intervention that was piloted and revised during two optimization trials. Based on these results, we moved forward with evaluating our optimized treatment package. A 2-arm randomized controlled trial (RCT) for intervention evaluation was originally proposed, however, one of the four participating institutions required students to complete sexual violence prevention education. Therefore, we adapted an existing sexual violence prevention module for inclusion in the RCT. This presented three challenges for RCT implementation: (1) evaluation of *itMatters* required a no-treatment control; (2) randomization at the individual (student) level with a no-treatment control arm posed contamination issues; and (3) potential interaction of sexual violence programming with *itMatters* sexual health.

To address some of these issues, our approach includes a two-by-two factorial RCT design with placebos (e.g., sleep and mental health) for control students. Other challenges will be addressed analytically at the conclusion of the RCT. The factorial design enables us to speak to the effectiveness of *itMatters*, effectiveness of the not-previously-evaluated sexual violence prevention module on its own, and the effectiveness of sexual violence prevention and *itMatters* together. Because *itMatters* takes a sex-positive approach, simply adding the sexual violence prevention module to the intervention introduced a concern that its inclusion could dilute sex-positive messaging. This process highlights the flexibility needed to implement online health promotion interventions that

meet students' needs, acknowledge institutional requirements, and are scientifically rigorous. This also highlights the benefits of utilizing a factorial design in an RCT for intervention development and evaluation.

## Exploratory Study on Alcohol Use and HIV Treatment Adherence Among Latinos Living with HIV in the San Diego-Tijuana Border Region



Nafisa Ferdous, María Luisa Zúñiga

Alcohol use among persons living with HIV has been linked to suboptimal adherence to antiretroviral therapy (ART) and poor health outcomes. At a population level, this may translate to HIV transmission risk if individual-level viral loads are not suppressed. Drinking behavior is often influenced by cultural norms surrounding alcohol drinking practices and may differ in the U.S.-Mexico border region where patterns of substance use may also differ from patterns in each respective country's interior. Research is lacking on alcohol use risk and health outcomes among persons living with HIV in the U.S.-Mexico border. We undertook the current study with HIV-positive Latinos in the San Diego, U.S. -Tijuana, Mexico border region to elucidate the association between recent alcohol use and HIV treatment adherence. We conducted secondary data analysis with data from a U.S.-Mexico binational parent study designed to explore barriers and facilitators to HIV care through interviewer-administered surveys. This cross-sectional study recruited a convenience sample of HIV-positive Latino adults ( $N=201$ ) from agencies in San Diego and Tijuana. **We hypothesize that participant's recent report of alcohol consumption history over the past three months would be associated with suboptimal ART adherence and differ by country of residence.** Associations between alcohol consumption and ART adherence were determined by logistic regression. Our analysis revealed that alcohol consumption in the prior 3 months was associated with lower adherence to ARV, after adjusting for country of residence and cross-border activity. Over all, 36% participants who used alcohol while maintaining primary residence in the US in the last 6 months reported missing ARV medication (in the last month). This was significantly higher ( $p \leq 0.001$ , 95% CI) than the 34% participants missing ART, who lived in Mexico and reported drinking. With regards to cross-border mobility, 26% who used alcohol and revealed round trip border crossings (in prior 6 months), reported missing ARV medications in the last month. This was significantly higher ( $p \leq 0.001$ , 95% CI) than the 14% participants missing ART, who crossed border but did not drink alcohol in the last 3 months. Findings indicate that alcohol use in this border population of HIV-positive Latinos

is of concern and merits further study to understand the role that alcohol consumption patterns may play in suboptimal ARV adherence in a U.S.-Mexico border context.

## An Analysis of Ghanaian Students' Perceptions of the HPV Vaccine and Cancer Prevention



Cassady Mecate, Beth A Lanning, Matthew Asare, Peter Agyei-Baffour, Margo Shanks

**Introduction:** Evidence shows an inverse relationship between an increase in the Human Papillomavirus (HPV) vaccination uptake and the prevalence of HPV related cancer. However, HPV vaccination rates in Ghana are low. Studies that examine Ghanaian adolescents' perceptions about HPV vaccination are limited. The purpose of this study was to assess the knowledge and attitudes of HPV vaccination of Ghanaian students.

**Methods:** We conducted four, thirty-minute focus group discussions with Ghanaian students. Sixteen open-ended questions were introduced to facilitate the focus group discussion among participants. The discussions were audio-recorded and transcribed verbatim.

**Results:** The sample ( $n=59$ ) included junior high school students ( $n=30$ ) and senior high school students ( $n=29$ ). The participants consisted of females ( $n=50$ ) and males ( $n=9$ ) between the ages of 13 and 17 years. Our findings showed that sexuality education and HPV related topics are rarely taught in schools leaving students with a limited understanding of general preventive care and a lack of knowledge about the HPV vaccine. Due to limited resources, not all the hospitals in Ghana have centers where patients can get vaccinated. Additionally, sociocultural factors such as religion and the stigma associated with HPV hinder people from having open conversations about HPV vaccination behavior. Finally, we found that Ghanaian students have restricted access to affordable primary care practices and there are no standard routine medical checkups, therefore adolescents and their parents have limited outlets to discuss HPV vaccination with their providers.

**Conclusion:** The findings of our study demonstrate the need for more educational programs in Ghana that emphasize the importance of the HPV vaccine. Future HPV vaccination educational programs should equip students with the knowledge and resources needed to understand the importance of preventive care and overcome HPV vaccination related stigma.

## Depression and inflammation among lesbian, gay, and heterosexual cancer survivors: Testing two exercise interventions



Charles Kamen, Karen M. Mustian, Luke J. Peppone, Michelle C. Janelains

**Background:** Our previous research shows that lesbian/gay (LG) cancer survivors experience higher rates of depression than their heterosexual counterparts, and that standardized aerobic and resistance exercise (EXCAP<sup>®</sup>, Exercise for Cancer Patients) is efficacious in improving depression and inflammation associated with depression in heterosexual survivors. We conducted a pilot cancer control trial testing whether the benefit of exercise on depression extended to both LG and heterosexual survivors, and whether inclusion of caregivers (CGs) enhanced effects on depression and inflammation.

**Methods:** In this pilot trial, 20 LG and 22 heterosexual survivors and their CGs were randomized as dyads to: Arm 1) dyadic exercise, involving both survivor and CG; or Arm 2) survivor-only EXCAP<sup>®</sup>. Depression symptoms (CES-D) and cytokines (serum IFN- $\gamma$ , IL-6, IL-8, IL-10) were measured at baseline and post-intervention (6 wks later). We used t-tests to assess baseline disparities, ANCOVA to assess the effect of dyadic vs. survivor-only exercise on depression and inflammation, and Pearson correlations to assess mechanistic associations between changes in depression and inflammation.

**Results:** At baseline, LG survivors reported higher depression ( $t=-2.23$ ,  $p=0.04$ ), higher IL-6 ( $t=-2.53$ ,  $p=0.02$ ), and higher IL-8 ( $t=2.37$ ,  $p=0.03$ ) than heterosexuals. Among both LG and heterosexual survivors, dyadic exercise significantly improved depression relative to survivor-only exercise ( $M=-5.17$ , vs.  $M=2.43$ ;  $p=0.02$ ). Decreases in depression were associated with decreases in IL-6 ( $r=0.40$ ,  $p=.03$ ) and IL-8 ( $r=0.39$ ,  $p=0.04$ ) in both exercise groups; in analyses by sexuality group and intervention, these associations were significant only among LG survivors in the dyadic exercise condition.

**Conclusions:** This study replicates previous research showing disparities between LG and heterosexual survivors and offers preliminary support for the use of exercise in general and dyadic exercise in specific for reducing depression among LG and heterosexual survivors. It suggests a biological mechanism by which this improvement occurs, namely by reducing systemic inflammation. Confirmatory research is needed to replicate these findings in larger samples of LG cancer survivors.

## Understanding Advanced Planning Practices in a Sample of Older Adults Living with HIV/AIDS in Newark, New Jersey



Kristen D Krause, Perry N. Halkitis, Allie N. Bullock

**Background:** By 2025, people aged 50 and older will constitute the majority of those living with HIV/AIDS (PLWHA) in the US. This aging population of PLWHA face different physical, mental, and psychosocial health challenges related to living with HIV/AIDS, the general aging process, and the long-term impact of being on antiretroviral treatment (ART). Many who were diagnosed prior to the implementation of ART in 1995 were effectively given a death sentence due to the short life expectancy of living with untreated HIV/AIDS. As such, individuals who did not expect to reach older adulthood now face the realities and obstacles around advanced care planning (e.g. life insurance/retirement funds, advanced directives/living wills, power of attorney, etc.) when living well past their diagnoses was something they expected to do. This qualitative interview sought to understand the experiences of older PLWHA in one of the 57 geographic areas that has been prioritized by the federal 'Ending the HIV Epidemic' plan.

**Methods:** Recruitment efforts occurred from March – June 2019 in the greater Newark, New Jersey metropolitan area. We conducted 40 qualitative interviews with older (50+) adults living with HIV/AIDS. Upon providing written consent, each interview lasted 45–90 minutes following a semi-structured interview guide. Three trained research assistants conducted the interviews. They were transcribed by research interns and independently verified by members of the research staff.

**Results:** The ranges of the participants' age were 51–69 years old (18 women and 22 men). 47 participants identified as Black non-Hispanic, with the remaining 3 identifying as White non-Hispanic or 'Other.' One of the main themes that emerged from the preliminary data analysis is a fear of not being financially stable to enter later adulthood (65+) with regard to life insurance policies, retirement funds, or medical savings accounts. Additionally, while some participants indicated they have close family members or friends to rely on for various types of assistance (housing, day-to-day, end-of-life, etc.) if their health declines, several indicated that they have not thought about advanced care planning because they are just trying to survive and live day-to-day.

**Conclusions:** As the population of PLWHA continues to age, it is imperative that healthcare professionals across disciplines incorporate advanced care planning into conversations during routine medical and social

support visits so that they feel more equipped and better prepared to reach that point.

## The Association between Sexual Dating Violence and Cyberbullying: Findings from the 2017 YRBSS



Abigail Post, Larissa Brunner Huber

**Background:** As technology use among U.S. students increases, cyberbullying is a growing concern in adolescent health research. Cyberbullying, known as bullying which takes place on electronic devices or internet platforms, is associated with many adverse health outcomes, such as suicide, poor mental health, and school absence. Youth who experience bullying in intimate partner relationships may also be disproportionately at risk for cyberbullying. The purpose of this study was to examine the relationship between adolescent sexual dating violence and cyberbullying among 9th to 12th grade youth.

**Methods:** Data were retrieved from the nationally representative 2017 Youth Risk Behavior Surveillance System (YRBSS) survey. The final analytic sample included 13,869 males and females between the ages of 14 and 18. Youth reported sexual dating violence and cyberbullying in a self-administered questionnaire. Multivariate logistic regression was used to calculate odds ratios (ORs) and 95% confidence intervals (CIs) of the relationship between the frequency of sexual dating violence and cyberbullying.

**Results:** Approximately 4% of youth reported sexual dating violence and 14% reported cyberbullying. In the unadjusted analysis, youth who reported sexual dating violence had statistically significant increased odds of cyberbullying (range of ORs: 4.15 to 6.34). After adjustment, youth who reported sexual dating violence 1 time had twice the odds of cyberbullying (OR=2.07, 95% CI: 1.39-3.07), as compared to those who reported 0 instances of sexual dating violence. Youth who reported sexual dating violence 2-3 times had 2.23 times the odds of cyberbullying (95% CI: 1.22-4.06) while youth who reported sexual dating violence 4 or more times had 1.49 times the odds of cyberbullying (95% CI: 0.69-3.22), as compared to youth who reported 0 instances of sexual dating violence.

**Conclusion:** These findings suggest a positive association between the frequency of sexual dating violence and cyberbullying and add to the current literature in adolescent health. Researchers should consider additional strategies to address intimate partner violence and cyberbullying in this vulnerable population.



## Theory-based, randomized controlled trials to improve Human Papilloma Virus vaccine uptake in the United States



Rowida Mohamed, Mona Nili, Kimberly M Kelly

**Background:** Human Papilloma Virus (HPV) vaccination presents a significant opportunity to decrease the incidence of genital warts, and HPV-attributable cancers, such as cervical and penile cancer. Despite the availability of the HPV vaccine in the US since 2006, uptake remains suboptimal. Recently, some interventions targeting parents have shown the potential to improve increase HPV vaccine uptake. These interventions may be more effective if they are grounded in an appropriate theory.

**Purpose:** This study aims to systematically review theory-based randomized controlled trials (RCTs) targeting parents to increase of HPV vaccine uptake and to assess the extent of theory application in development and evaluation of these interventions.

**Methods:** Intervention studies published from January 2006 to May 2019 were identified through a structured search in PubMed, EMBASE, SCOPUS, CINAHL, Medline, and PsycInfo. Studies were included if they explicitly utilized a behavioral theoretical model or framework, examined actual vaccine uptake rate based on objective data from patients' medical records, applied a randomized controlled research design, published as a full article in English, and sampled the US population. Selected studies were assessed for risk of bias using the Cochrane risk-of-bias tool for RCTs and theory-use using the Theory Coding Scheme developed by Michie and Prestwich in 2010.

**Results:** 4 studies were included for extraction and analysis. A tailored interactive educational video-based intervention had a significant result. The effect of reminders and educational brochures were mixed, which makes it challenging to draw a definitive conclusion. Brief Negotiated Interviewing did not have any significant effect. Interventions that utilize the Theory of Planned Behavior and Health Belief Model showed positive results. Although all the trials explicitly reported that the interventions used were based on a theory, none of them reported carrying out a mediational analysis of the theory constructs or discussed the results in relation to theory. None of the studies were assessed to be free of bias.

**Conclusions:** Although a very limited number of robust-designed theory-based interventions target parents for improving HPV vaccination uptake, using reminders and tailored interactive videos potentially can be beneficial. More well-designed RCT interventions based

on thoroughly applied health behavioral models/theories are needed to target parents for increasing the rate of HPV vaccination.

## The Association between LGBTQ+ Community Involvement and HIV Transmission Risk Behaviors among Sexual Minority Men



Chris A Albright, Aaron J. Blashill, Jamie-Lee Pennesi, Hee-jin Jun, Tiffany A. Brown

**Background:** Sexual minority men remain disproportionately burdened by HIV despite recent prevention efforts. Although involvement in the LGBTQ+ community has been found to be a protective factor against many adverse health outcomes, research examining the association between community involvement and HIV transmission risk behaviors has yielded conflicting results. This study aims to examine whether the importance one places on various aspects of community involvement is associated with HIV transmission risk behaviors.

**Method:** This study was conducted using baseline data from an ongoing eating disorder prevention randomized controlled trial, which includes 139 gay and bisexual men aged 18-35 living in San Diego, California. Community involvement was measured using the Importance of Gay/Bisexual Community Activities (IBGCA) scale, which was distilled into two factors: "community activism" and "partying" that emerged through exploratory factor analysis. We performed a zero-inflated poisson regression to examine the association between community activism, partying, and their interaction term, with HIV transmission risk behaviors, which was operationally defined as engaging in condomless anal sex while not taking PrEP. We also added number of sexual partners and frequency of community involvement as control variables in the model.

**Results:** A significant interaction term emerged ( $b = -.267$ ,  $SE = .133$ ,  $z = -2.24$ ,  $p = .025$ ). This interaction term was subsequently probed via simple slope analyses set at  $\pm 1$  SD of the importance of community activism. Results indicated that at low levels of community activism, partying was significantly positively associated with HIV transmission risk behaviors ( $b = .555$ ,  $SE = .135$ ,  $t = 4.11$ ,  $p < .001$ ), whereas at high levels of community activism, the association between partying on HIV risk was no longer significant ( $b = .127$ ,  $SE = .176$ ,  $t = .721$ ,  $p = .472$ ).

**Conclusion:** This study shows that the importance sexual minority men place on various aspects of community involvement is associated with HIV sexual risk behaviors, which has important public health implications. While valuing LGBTQ+ community activities

that often involve alcohol/substance use and hook ups is associated with increased HIV transmission risk behavior, simultaneously finding meaning in LGBTQ+ community activism could help protect against this association. Therefore, encouraging community activism could be a target for intervention.

## To tailor or not to tailor: That is the question when considering e-health readiness among people living with HIV



**Background:** The Technology Readiness Index 2.0 (TRI 2.0) may provide guidance in understanding people's willingness to adopt future technologies. Yet the measurement structure of the TRI 2.0 has not been confirmed among people living with HIV and prior work suggests for people living with HIV, disease-specific considerations are linked to willingness to uptake ehealth approaches. The study purpose was to: 1) assess the fit of the TRI 2.0 for people living with HIV, using confirmatory factor analysis; 2) assess the fit of an adapted version of the TRI 2.0 (referred to in text as the TRI-HIV) using confirmatory factor analysis; and 3) compare the fit of the TRI 2.0 with the TRI-HIV.

**Methods:**  $N=408$  people living with HIV residing in the state of Florida and engaged in Ryan White case management completed a telephone-based survey regarding technology use and willingness to use technology among people living with HIV. Technology readiness was measured with: 1) the TRI 2.0, as well as 2) an adapted version of the TRI 2.0 (henceforth TRI-HIV), which included some TRI 2.0 items as well as new items, similar to the TRI 2.0, that were tailored specifically to using technology for HIV-related ehealth. These items were created by adding something HIV-specific to the general TRI 2.0 items; changes were informed by findings from open-ended interviews conducted to inform survey development. For example, while the TRI 2.0 item said "If you provide information to a machine or over the Internet, you can never be sure if it really gets to the right place," the TRI-HIV item was "If you provide information about your HIV status over a computer or Internet, you can never be sure who will find out." Fit of the existing measurement structure was tested with confirmatory factor analysis for two models: 1) TRI 2.0 and 2) the TRI-HIV.

**Results:** When the original TRI 2.0 instrument was applied to our sample of people living with HIV, the data fit the existing measurement structure of the TRI 2.0 ( $CFI=0.967$ ;  $TLI=0.960$ ;  $RMSEA=0.035$  [0.022-0.046]). Tailoring items specifically for people living with HIV did not improve model fit ( $CFI=0.953$ ;  $TLI=0.943$ ;  $RMSEA=0.038$  [0.026-0.049]).

**Conclusions:** The TRI 2.0 measurement structure fit well with our population of people living with HIV. Tailoring questions specifically for our population did not significantly increase model fit, suggesting that tailoring TRI 2.0 items for HIV-specific ehealth concerns may unnecessary. Alternatively, it may be worth conducting exploratory factor analysis (EFA) on the TRI-HIV to determine if another factor structure would better fit. Future research should apply EFA to the TRI-HIV and also investigate how the TRI-HIV and the TRI 2.0 as well as factors outside of technology readiness constructs (optimism; discomfort; innovation; insecurity) that may affect willingness to take part in HIV-related ehealth interventions.

## Understanding Barriers and Facilitators to Prevention of Mother-to-Child Transmission of HIV Services in Western India



Kristen Wells, Cristian Garcia

**Introduction:** Most of the 0.14 million HIV-positive children living in India contracted the human immunodeficiency (HIV) virus from their mother while in the womb, during labor, or through breastfeeding. Mothers can significantly reduce the risk of HIV transmission by initiating and adhering to the prevention of mother-to-child transmission of HIV (PMTCT) services, but only 60% of pregnant women living with HIV in India used these services in 2017. Given the scarce literature on PMTCT utilization in India, the present qualitative study used the Social Ecological Model (SEM) to identify barriers and facilitators to seeking PMTCT services that mothers face in western India.

**Methods:** Through purposive sampling, 15 fathers and 16 mothers (age range 20 to 45 years; 51% had less than a 7<sup>th</sup> standard education; 75% had a baby delivered at a public hospital) were recruited to participate in semi-structured in-depth interviews assessing barriers and facilitators to PMTCT services. Interviews were audio recorded and transcribed verbatim. Direct content analysis was used to identify *a priori* and emerging themes based on the SEM. One author independently coded 31 interviews and then discussed coding with two more authors. Participants also completed a demographic survey, and these data were summarized using descriptive statistics.

**Results:** At the individual level, barriers to PMTCT services were lack of money for transportation, poor physical health, and feeling distressed/anxious, whereas facilitators were the hope they felt for the new baby and experiencing unusual health symptoms that caused them to seek medical services. At the interpersonal level, barriers to PMTCT ser-

vices were poor peer/family and partner support, whereas facilitators were positive partner support, peer/family support, and positive doctor/staff support. At the institutional level, availability of multiple services in one location, affordability of PMTCT services, and good quality of care were facilitators to PMTCT services, whereas obtaining prenatal care in the private sector was a barrier. At the community level, outreach workers facilitated PMTCT utilization, whereas HIV stigma was a salient barrier.

**Conclusions:** The present study was the first to examine barriers and facilitators to obtaining PMTCT services in western India, and it adds to our understanding of facilitators and barriers to PMTCT services. This study has important implication for health care institutions, as it recognized that health care providers have a significant role in facilitating PMTCT services. Findings from the present study can be used to enhance and develop locally relevant community-based strategies/interventions for improving PMTCT utilization in India. Future research should develop and test interventions to help India achieve optimal adherence to guidelines for the PMTCT of HIV.

## Violence, substance abuse, depression, and HIV/STI risk among Memphis-based MSM



Meredith Brantley, Jack Marr, Christopher I. Matthews, Jr., Randi Rosack, Sara E. Zellars, Latrice C. Pichon

**Background:** The syndemic impact of intimate partner violence (IPV), substance abuse (SA), and depression on HIV/STI risk is well established globally, particularly among women. Investigating psycho-social dynamics among individuals impacted by the US HIV/STI epidemic, including men who have sex with men (MSM), is critical to curbing transmission via evidence-based prevention and treatment interventions. In 2016, the Tennessee Department of Health joined the CDC National HIV Behavioral Surveillance network to better understand HIV/STI risk behaviors among MSM. The objective of this analysis was to understand the landscape of IPV, SA, and depression, and its association with HIV/STI risk behavior among Memphis-based MSM.

**Methods:** During August-December 2017, interviewer-administered surveys assessed IPV, SA, depression, and HIV/STI risk behavior among adult MSM recruited at popular venues. We estimated prevalence of recent (past 12 months) IPV, SA, and depressive symptoms and overlapping correlates (e.g., IPV/SA, IPV/SA/depression). Subsequently, bivariate associations between IPV, SA, and depression, and HIV/STI risk behavior (i.e., sex exchange) were examined.

**Results:** Of 356 participants, 17% reported recent IPV, 41% reported SA, and 16% reported at least sometimes experiencing depressive symptoms; 13% reported recent sex exchange. No significant differences in reported IPV, SA, or MH were observed across age or race/ethnicity categories. Sex exchange was reported more frequently by those who experienced IPV compared to those who did not (34% vs. 9%,  $p < 0.001$ ) and more so among participants who reported all three overlapping correlates (50%).

**Conclusion:** Our data suggest that MSM in Memphis are largely impacted by a syndemic of violence, SA, and depression, affecting all demographics. Moreover, while IPV alone may be a significant correlate of HIV/STI risk, the combination of IPV, SA, and depression may amplify risk. Findings will inform local partnership efforts in the development of biomedical and psycho-social programs to facilitate HIV/STI prevention efforts among multiple MSM communities.

## Breakfast intake influences feelings of energy but is not influenced by objective physical activity in LGBTQ college students



Isaura M. Castillo-Hernández, Ginny M. Frederick, Ewan R. Williams, Anneliese A. Singh, Ellen M. Evans

**Introduction:** Habitual breakfast (BF) consumption is associated with numerous health outcomes and feelings of well-being across the lifespan. The literature also suggests that regular BF behaviors may be a proxy for other modifiable health-related behaviors such as physical activity (PA). Emerging adulthood is a critical life stage for establishing positive behaviors, including both BF intake and adequate PA. Moreover, evidence suggests the existence of health behavior disparities among lesbian, gay, bisexual, transgender, and queer (LGBTQ) college students that may impact feelings of well-being. Thus, the aim of this study was to examine whether BF eating frequency impacts feelings of vigor and fatigue and objectively measured PA in LGBTQ college students.

**Methods:** Self-identified LGBTQ college students ( $n = 41$ ) were assessed for BF consumption patterns using a web-based 3-day food record tool (ASA24; 1-weekend (WKN), 2-weekdays (WKD)). BF was characterized as an eating occasion that occurred between 5-10AM on WKD and 5-11AM on WKN. Participants were classified as BF skippers (SKIP-BF, omitted BF on at least 1-d of the dietary recall) or BF consumers (EAT-BF, consumed BF on 3-d of the recall). Vigor and Fatigue were assessed using the Profile of Mood States 2-Brief (POMS2). Moderate-vig-

orous PA (MVPA) was obtained via accelerometer (GT3-X+ ActiLife; minimum of 4-valid d, 10-hr/d). Independent-groups t-tests and Pearson's  $r$  for overall bivariate relationships were utilized for data analysis.

**Results:** SKIP-BF ( $n = 20$ ) and EAT-BF ( $n = 21$ ) were similar in age and weight status ( $22.4 \pm 4.5$  vs  $22.9 \pm 6.0$  yo;  $24.6 \pm 3.5$  vs  $25.3 \pm 8.0$  kg/m<sup>2</sup>, respectively; all  $p > .05$ ). No differences were observed between groups in MVPA (EAT-BF =  $48:5.3 \pm 19:18.0$  vs SKIP-BF =  $51:25.8 \pm 24:48.6$  min/day;  $t = .38$ ,  $p = .71$ ). EAT-BF reported significantly higher Vigor scores compared to SKIP-BF ( $8.3 \pm 3.7$  vs  $5.7 \pm 4.3$ ;  $t = -2.1$ ,  $p = .04$ ) whereas no differences in Fatigue were detected ( $7.1 \pm 5.3$  vs  $8.4 \pm 5.4$ ,  $p = .46$ ). In the total group, MVPA was not correlated with Vigor or Fatigue ( $r = -.15$  and  $-.25$ , both  $p > .05$ ).

**Conclusion:** Feelings of vigor are greater in LGBTQ college students whom consume BF compared to those who do not irrespective of MVPA behaviors. Causal research designs are warranted to better elucidate the impact of BF intake on feelings of vigor and fatigue in emerging adults, especially in the LGBTQ population known to have health disparities in feelings of well-being.

## Validation of the Sexual Discounting Task for use in an Online Setting with Female Adolescents



Bethany L. Harris, Sneha Thamocharan, Sherecce Fields

**Objective:** The Sexual Discounting Task (SDT) was developed to evaluate the effects of delay on decision-making as it relates to sexual risk-taking behaviors. Though previously validated with other populations including adolescents and emerging adults, the current study seeks to examine the predictive validity of the SDT for use with adolescents specifically in an online setting.

**Methods:** A sample of 18-year-old female adolescents ( $N = 43$ ) were recruited to complete the Online SDT (involving choices between immediate unprotected sex and delayed sex with a condom with hypothetical sexual partners). Sexual discounting was assessed using area under the curve (AUC) analyses in that higher sexual discounting values indicate greater willingness to engage in immediate unprotected sex compared to delayed sex with a condom. Additionally, they completed several self-report measures assessing demographic, sexual behavior, and sexual history.

**Results:** Sexual discounting for partners deemed more desirable was positively correlated with frequency of use of protection dur-

ing both oral sex ( $r = 0.41$ ,  $p < 0.01$ ) and sexual intercourse ( $r = 0.42$ ,  $p < 0.01$ ). Results were similar for sexual discounting for partners described as having no chance of having a sexually transmitted infection (STI). Sexual discounting for desirable partners was negatively correlated with lifetime oral sexual ( $r = -0.32$ ,  $p < 0.05$ ) and sexual intercourse partners ( $r = -0.40$ ,  $p < 0.05$ ) as well as oral sexual partners within the past 3 months ( $r = -0.34$ ,  $p < 0.05$ ) and sexual intercourse partners within the past 3 months ( $r = -0.38$ ,  $p < 0.05$ ). Sexual discounting for desirable partners was positively correlated with whether they had ever been tested for an STI ( $r = 0.38$ ,  $p < 0.05$ ) as was that for partners described as having no chance of having an STI ( $r = 0.40$ ,  $p < 0.01$ ). Additional analyses are also discussed.

**Conclusion:** Findings from the current study suggest that the Online SDT is predictive of some adolescent sexual risk-taking behaviors. The Online SDT is shown to be clinically meaningful for female adolescents and is sensitive to factors that influence real-world decisions to use condoms. Future treatment and prevention should consider delay discounting as an important variable affecting sexual risk behavior.

## Testing substance use as a mediator of stigma-health linkages in a sample of lesbian/gay individuals.



Kelly Manser, Steve Du Bois

Compared to heterosexual individuals, lesbian women and gay men experience multi-level health and sociopolitical disparities. According to theories of minority stress and cognitive escape, structural stigma may distally predict health outcomes, and these associations may be mediated by more proximal health behaviors (McKirnan et al., 1996; Meyer, 2003). This study uses 2017 Behavioral Risk Factor Surveillance System data to test a specific example of this mediation model in a large lesbian/gay (LG) sample (total  $N = 3,057$ ). We operationalized structural stigma as the number of LG-protective laws in each of 27 U.S. states (more laws = less structural stigma) using the Movement Advancement Project's (MAP) objective ratings. We predicted these would relate to number of cardiovascular disease (CVD) diagnoses of gay/lesbian individuals in each state. We further predicted that alcohol and tobacco use frequency would each mediate stigma-CVD associations. This model is supported empirically, as evidence suggests LG individuals report relatively high rates of CVD and substance use compared to heterosexual individuals (Conron, Mimiaga, & Landers, 2010; Greenwood & Gruskin, 2007). We examined associations in an aggregated LG sample, and in L and G subsamples, given evidence

of differential patterns in health outcomes between L and G individuals (Cochran & Mays, 2017). Mediation models were tested via multinomial logistic regressions, and mediation criteria were based on the work of Baron and Kenny (1986) and Hayes (2009). Spearman correlations and predictor-mediator paths (i.e.,  $a$  paths) in multinomial logistic regressions revealed that, while structural stigma was associated with smoking in all three subsamples, stigma-alcohol linkages were only significant in females-only and LG-combined samples (versus the males-only sample). However, average binge drinking frequency was higher for males ( $p$ 's  $< .05$ ). In the LG sample, everyday-smoker status partially mediated the relationship between living in a state with zero or one LG-protective state laws and having multiple CVDs (Sobel's  $z = 2.72$  for zero laws,  $2.05$  for one law;  $p < .05$ ). Key findings are as follows: 1) structural stigma consistently predicts smoking frequency, consistent with prior work (e.g., Hatzenbuehler, Jun, Corliss, & Austin, 2013); 2) smoking frequency may at least somewhat mediate the stigma-CVD relationship; and 3) while binge drinking frequency may be higher on average among gay men, structural stigma may relate to binge drinking more-strongly in lesbian women. Of note, only 27 states collected sexual orientation/gender identity data via the BRFSS in 2017, limiting generalizability. Findings add to literature on stigma and health disparities experienced by LG individuals. Directions for future work include testing sex/gender as a moderator of LG stigma-alcohol linkages and tobacco use as a means of cognitive escape.

## The Intersection of HIV and Obesity: Examining How HIV Status Influences Weight Stigma among Adults with Obesity



Emily A. Panza, Deborah Good, Karen Tashima, Bianca Obiakor, Rena Wing

**Background.** Although the prevalence and negative health effects of HIV stigma have been extensively documented among people living with HIV (PLWH), other sources of stigma in this group are understudied. Obesity affects over 25% of PLWH, and while research in the general population identifies weight stigma as a pervasive and harmful form of bias, little research has examined weight stigma or its effects among PLWH and obesity. This study examined how HIV status influences weight stigma in adults with obesity by comparing the prevalence of weight stigma among PLWH and obesity versus adults with obesity only.

**Methods:** Weight stigma was assessed in PLWH and obesity ( $n = 45$ ; 60% male; 53% white; mean [ $M$ ] age =  $48 \pm 12$ ;  $M$  body mass



index [BMI] =  $36 \pm 7$ ) versus adults with obesity only ( $n = 43$ ; 47% male; 72% white;  $M$  age =  $44 \pm 12$ ;  $M$  BMI =  $37 \pm 7$ ). Participants completed electronic self-report surveys assessing internalized weight bias (Weight Bias Internalization Scale; 1 – 7 scale) and lifetime experiences of weight stigma (Distressing Interpersonal Interactions Scale [DIIS]; 1 – 4 scale). Lower scores indicate less stigma. The DIIS was also used to assess lifetime experiences of HIV stigma among PLWH.

**Results:** Models controlled for the effects of age, BMI, gender, race, and socio-economic status. PLWH and obesity reported significantly fewer lifetime weight stigma experiences ( $M = 1.5 \pm 0.6$ ) relative to adults with obesity only ( $M = 1.9 \pm 0.8$ ;  $p < 0.05$ ,  $\eta_p^2 = 0.07$ ). Lifetime weight stigma was reported by 84% of adults with obesity only compared to 56% of PLWH and obesity. Levels of weight stigma reported by PLWH were similar to levels of HIV stigma endorsed in this group, with 58% of PLWH reporting lifetime HIV stigma ( $M = 1.6 \pm 0.8$ ). Although PLWH reported fewer overt weight stigma events, mean levels of internalized weight bias did not differ between PLWH ( $M = 3.9 \pm 1.6$ ) and adults without HIV ( $M = 4.5 \pm 1.5$ ;  $p > 0.05$ ).

**Conclusion:** PLWH and obesity report experiencing less frequent weight stigma than adults with obesity only. Given historical associations between HIV and “wasting,” having a heavier body weight may be perceived as a protective factor against HIV progression/disclosure and may reduce perceptions of weight stigma. Alternatively, PLWH internalize similar levels of weight bias despite fewer weight stigma experiences, suggesting that weight stigma events may have more potent negative effects on internalization in PLWH. Future studies with larger sample sizes are needed to clarify how HIV and obesity intersect to influence weight stigma among PLWH and obesity.

## Sociodemographic, Psychosocial, and Behavioral Correlates of Medical Mistrust in Latino Sexual Minority Men



Isaiah J. Jones, Devon Kimball, Aaron J. Blashill

Medical mistrust (MM) has been studied in the context of various minority populations, including the Latino community and sexual minority men; however, little research has focused on MM among Latino sexual minority men (LSMM). This study explored the associations of demographic, psychosocial, and behavioral factors with MM among LSMM. 136 LSMM participants, between the ages of 18 to 29, were recruited through Grindr to complete an online survey concerning sexual, psychosocial, and identity topics. Among other

measures, participants reported sociodemographic, behavioral, and psychosocial variables. Binary variables were created for sexual orientation (gay vs. bisexual), education (some college vs. below), housing (stable vs. unstable), cigarette use (none vs any) and other substance use (none vs. at least once). A two step hierarchical multiple regression was performed. Sociodemographic variables comprised Step one, including age, ethnicity, citizenship, sexual orientation, education, income, housing stability, and insurance status. Step two included the behavioral and psychosocial variables of machismo and caballerismo traits, depression, alcohol use, cigarette use, and other general substance use. The analyses revealed that in Step one, sexual orientation and unstable housing contributed significantly to the model,  $F(8,127) = 4.52$ ,  $p < .001$ , and accounted for 17.3% of the variance in MM when adjusted. Introducing the behavior/psychosocial variables in Step two explained an additional 18.4% of variation in MM ( $F(6,121) = 7.01$ ,  $p < .001$ ). Within Step two, unstable housing was no longer significant, but sexual orientation did remain significant. The behavior/psychosocial variables of machismo, caballerismo, depression, and substance use significantly contributed to the overall model also,  $F(14,121) = 6.36$ ,  $p < .001$ , and explained 35.7% of the variance when adjusted. Among this sample of LSMM, behavioral and psychosocial factors, including machismo and caballerismo, depression, and substance use, were found to account for significantly more variance in MM than commonly used demographic variables. This evidence may further support the notion that cultural factors and personal beliefs play a key role in determining levels of MM, rather than background or demographic characteristics.

## The Role of Perceived Heterosexism in Posttraumatic Stress Disorder Severity Among Trauma Exposed Sexual Minority Individuals



Natalie M. Cereseto, Madalyn M. Liautaud, Corinne E. Zachry, Madeleine D. Tuten, Danielle S. Berke

Sexual minority (SM) (i.e., gay, bisexual, lesbian, pansexual, queer) individuals have a significantly greater lifetime risk of developing posttraumatic stress disorder (PTSD) than do heterosexual individuals. Explanatory theories of PTSD provide limited insight into the uneven distribution of PTSD across social groups, nor do they account for contexts in which ongoing exposure to identity-based threats may influence PTSD symptoms. Minority stress theory proposes that SM individuals' disproportionate exposure to stigma-related SM stress contributes to health disparities, including elevated PTSD risk. Yet, important questions remain about the role of SM stress in PTSD etiology and persistence, as

well as risk mechanisms accounting for inter-individual differences. This ongoing study employs structured PTSD assessments and a micro-longitudinal 30-day daily diary assessment to investigate the unique and interactive effects of traumatic stress and SM stress on PTSD symptoms in a diverse sample of trauma-exposed SM individuals. Specifically, we will test the following hypotheses: 1) Exposure to daily SM stress will be positively associated with greater weekly PTSD symptom severity; and 2) Baseline exposure to sexual identity-based stressful and/or potentially traumatic life events will moderate the relationship between daily SM stress and PTSD symptom severity. Recruitment and data collection is ongoing. Currently, 39 eligible participants (61.5% cisgender female,  $M_{age} = 23.4$  [ $SD = 10.4$ ] years, 48.7% White, 41% bisexual) have completed the baseline assessment; 87.2% ( $n = 34$ ) of enrolled participants have completed the daily diary portion of the study (30-day survey completion rate: 77.5%). Among enrolled participants, 33.3% ( $n = 13$ ) met DSM-5 criteria for PTSD, 46.2% ( $n = 18$ ) reported a Criterion A event related to their SM identity, and 84.6% ( $n = 33$ ) reported lifetime exposure to a SM identity-related stressful life event at baseline. Hypotheses will be tested with multilevel models that control for comorbid psychiatric disorders and other baseline characteristics. Full sample descriptives and main analyses will be presented. Final results from the study will have implications for the development of clinical and community-based interventions for trauma-exposed SM individuals.

## Minority Stress and Social Support among Sexual Minority Women: Associations with Psychological Distress



Laura D'Adamo, Emily A. Panza, Edward Selby

Sexual minority women are at heightened risk for psychological distress and poor health outcomes. Experiencing social stigma based on sexuality, or minority stress, may lead to elevated distress and contribute to these outcomes, necessitating research on protective factors for sexual minority women. Social support promotes well-being in this population, but little research has examined it as a buffer against minority stress in daily life. This secondary analysis of an Ecological Momentary Assessment (EMA) study examined 1) whether sexual minority stressors predicted greater distress in daily life, 2) whether social support predicted less distress in daily life, and 3) whether social support buffered the impact of experiencing heterosexist stigma on distress. Participants were sexual minority women with overweight or obese BMIs ( $n = 55$ ; 55% Caucasian; 62% bisexual; mean age =  $25 \pm 9$ ). Lifetime experiences of heterosexist stigma (e.g., discrimination), internalized

stigma (i.e., internalized homophobia, sexuality concealment), perceived stress, depression symptoms, general social support, and sexuality-specific social support were self-reported at baseline. Current levels of stress and negative emotion were then self-reported via a smartphone application five times daily over a five-day monitoring period. Lifetime experiences of heterosexist stigma predicted greater mean stress ( $p < .05$ ) and negative emotion ( $p < .05$ ) over the course of the EMA period. Internalized stigma was unrelated to

distress outcomes. High levels of general social support predicted lower levels of daily stress ( $p < .05$ ) and negative emotion ( $p < .05$ ) during the EMA period, but sexuality-specific social support did not. Social support did not interact with experiencing heterosexist stigma to predict distress levels in daily life. Models controlled for demographics, baseline stress and depression, and EMA completion rate. Exposure to sexual minority stress over time may be related to heightened psychological distress in daily life among sexual minority

women. In line with prior research, general social support strongly predicted lower distress. Future studies should examine additional factors and processes that may buffer the negative psychological effects of stigma in sexual minority women, as social support did not interact with stigma to predict distress outcomes.