



Women & HIV Symposium: Considerations from Across the Lifespan

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EXECUTIVE SUMMARY

Despite immense scientific advances, women and girls, including transgender and gender-diverse people, remain disproportionately affected by HIV (1). The National Institutes of Health (NIH) Office of AIDS Research (OAR) and Office of Research on Women's Health (ORWH) co-sponsored a one-hour symposium at the [13th International Workshop on HIV and Women](#) (Seattle, WA; February 17–18, 2023) to explicate key issues affecting women across the lifespan. The symposium aimed to identify priorities related to women, HIV, aging, and multimorbidity and inform a future research agenda. The symposium panel was structured with pairs of early career and established investigators in selected topical areas to (1) highlight fundamental gaps, opportunities, and issues for women with and affected by HIV, and (2) enable collaborative relationships to strengthen research networks dedicated to these important topics. Early career investigators presented results from their studies in each topical area, and the established investigators provided reflections on this work in the larger context of HIV and women's health.

Topic I: Aging and Women's Multimorbidity Burden

Presenter: Lauren Collins, M.D., M.Sc., Emory University School of Medicine, and the Grady Ponce de Leon Center

Bearing the burden of non-AIDS comorbidities: How HIV, sex, and gender interact to inform strategies for healthy aging

More than half of people with HIV are at least 50 years of age (2), largely because highly effective antiretroviral therapy (ART) has led to increased life expectancy. However, additional years of life are not comorbidity-free (3). People with HIV have increased risk of aging-related comorbidities (e.g., hypertension, dyslipidemia, diabetes, non-AIDS cancer, psychiatric illness, and cardiovascular, lung, liver, bone, and kidney diseases) compared with HIV-negative counterparts (4) and live a mean of 16.3 fewer healthy years than those without HIV (5). Dr. Collins shared research findings from an assessment of the Multicenter AIDS Cohort/Women's Interagency HIV Study Combined Cohort Study (MWCCS) participants to measure incident non-AIDS comorbidities (NACMs) and to evaluate the effects age, sex, and HIV serostatus on NACMs over time. NACM burden is higher, and their onset occurs earlier in life in people with HIV than in people without HIV. NACM burden was higher among cisgender women compared with cisgender men, and the distribution of specific NACM prevalence differed by sex (6). Across age groups younger women (<25 years) experience the greatest difference in NACM burden compared to their seronegative counterparts, which is likely due to a lack of prioritization of screening for comorbidities among younger women (6,7,8). Biological sex and gender differences in development of NACM in people with HIV is multifactorial and related to the interplay between psychosocial and biological factors. Shared risk factors for comorbidities, including traditional and HIV-related factors, and/or common underlying mechanisms likely contribute to the development of multimorbidity. Innovative tools and strategies are needed (e.g., viremia copy-years [VCY]), potentially tailored by sex and gender, to optimally and precisely screen and prevent NACM in people with HIV, as existing tools developed in the general population are insensitive to HIV (9).

Reflections from Catherine Godfrey, M.D., FRACP, President's Emergency Plan for AIDS Relief (PEPFAR) at the U.S. Department of State, Office of the U.S. Global AIDS Coordinator and Global Health Diplomacy

Dr. Godfrey provided reflections on multimorbidity burden among people with HIV globally, informed by the latest results from the U.S. President's Emergency Plan for AIDS Relief (PEPFAR), in December 2022 (10). People with HIV are aging globally, and 21% percent of people with HIV on ART supported by PEPFAR are older than age 50 years. Among the 21 million people with HIV on ART supported by PEPFAR, the largest group is women aged 40–49 years. Multimorbidity, chronic immune activation, and inflammation associated with uncontrolled HIV infection will be important considerations in planning for how to deliver care in the future for all women aging with HIV, and particularly for those progressing beyond this age group. It will be important to think critically about how to address these issues both in high-resourced and resource-limited settings. Questions arise, such as: how to deliver care across

settings, including different health care systems and areas with differences in constellations of comorbidities (e.g., tuberculosis in Africa). Dr. Godfrey highlighted that consideration of cumulative viral exposure over the lifespan will be important, and called for incorporation of innovative concepts like VCY, as proposed by Dr. Collins.

Topic II: Social and Structural Considerations for Women

Presenter: Noelle St. Vil, Ph.D., M.S.W. LMSW, University at Buffalo School of Social Work

An exploration of geographic access to substance use treatment programs, violence against women, and HIV risk behaviors

Violence against women (VAW) is a factor associated with higher likelihood of engaging in behaviors, including substance use (SU), that increase risk for HIV acquisition. Dr. St. Vil discussed her secondary data analysis of [HIV Prevention Trials Network \(HPTN\) 064: The Women's HIV Seroincidence Study](#), which explored geographic access to SU treatment programs, VAW, and HIV risk behaviors (11) and was completed as part of the [HPTN Scholars Program](#). HPTN 064 aimed to estimate the overall HIV incidence for women living in 10 communities in six distinct geographical areas in the northeast and southeast regions of the United States: Atlanta, GA; Raleigh-Durham, NC; Washington D.C.; Baltimore, MD; Newark, NJ; and New York, NY. Longitudinal multilevel analysis found that access to SU treatment centers for people affected by HIV within their own communities was associated with VAW and HIV health outcomes; however, there are limited studies evaluating the role of access to SU treatment for VAW. SU is associated with vulnerability to VAW and HIV acquisition among women, and participation in SU treatment is associated with reduction in both VAW and behavior associated with increased risk for HIV acquisition. However, limited geographic access to treatment for SU is a significant barrier to HIV treatment uptake and adherence. Future studies should evaluate the receipt, frequency, and/or participation in SU programs among women facing violence and other risk factors related to HIV transmission. The work demonstrates the importance of exploring policies to increase geographic access to SU treatment centers in underserved communities as a mechanism to decrease VAW and HIV.

Reflections from Jamila Stockman, Ph.D., M.P.H., University of California, San Diego, School of Medicine

Dr. Stockman stressed that although there are many evidence-based HIV interventions that address factors at the individual and interpersonal level, few interventions target factors like VAW and SU at the structural level. She noted that Dr. St. Vil's research demonstrates the need to address structural- and community-level barriers that limit access to evidence-based interventions. Such interventions, which are typically found in SU treatment centers, could mitigate increased risk factors for HIV acquisition, including violence, criminalization of drug use or sex work, geography, and poverty. These programs must consider and address the relevance of interventions to priority populations at a community level, including issues of neighborhood disadvantage, such as segregation and poverty. Status-neutral approaches are essential when considering the design and implementation of interventions in real world settings; interventions that address overlapping social and structural factors can maximize benefit. Importantly, different types of violence experienced by different populations may require tailored interventions. Resources are needed to integrate the interventions in clinical settings and community-based service delivery, as well as for implementation research approaches to evaluate the efficacy, scale up, and cost effectiveness of these interventions.

Topic III: Adolescent Girls and Young Women

Dvora Joseph Davey, M.P.H., Ph.D., University of California, Los Angeles, David Geffen School of Medicine and Fielding School of Public Health

PrEP for pregnant and postpartum women: Lessons learned from South Africa – Cape Town

HIV acquisition remains an important complication in sub-Saharan Africa for pregnant and lactating

people and their infants. In 2017, the World Health Organization recommended pre-exposure prophylaxis (PrEP) for pregnant women at substantial risk for HIV. Despite these guidelines, there has been limited integration of PrEP into ante- and postnatal care in South Africa (SA) and across the region. Looking forward, the UNAIDS Thembisa Model predicts >90,000 new infant infections in SA in the next decade in the absence of increased PrEP uptake (12). Importantly, one-third of all infant HIV infections are attributed to acute maternal HIV seroconversion during pregnancy/postpartum. Susceptibility to HIV includes a complex interplay between behavioral (e.g., condomless sex during/after pregnancy, substance use, intimate partner violence, and stigma) and biological factors (e.g., hormonal changes in genital mucosa, distribution of target cells, and increased genital inflammation). Dr. Joseph Davey shared research findings from the observational cohort study PrEP-PP: PrEP in Pregnancy and Postpartum aimed at improving access to PrEP during the pregnancy/postpartum period among women in Cape Town, South Africa (13). PrEP-PP demonstrated the feasibility of PrEP integration into ante- and postnatal care for pregnant and breast-feeding women who experience increased probability of HIV acquisition. Pregnant and postpartum women were able to self-select to start, continue or discontinue PrEP, and high uptake and safety of PrEP were observed among pregnant women with no effect on birth outcomes (14). PrEP continuation/persistence in the postpartum period was a challenge, highlighting the need for community linkages and counseling/support. Guidelines that simplify and allow for differentiated PrEP delivery by all professional nurses/midwives are needed, and training/mentorship of antenatal and delivery staff to promote PrEP and family planning services in antenatal care is critical.

Reflections from Krista Dong, M.D., Ragon Institute of Mass General, MIT, and Harvard KwaZulu Natal

Multiple cohorts from across the provinces in SA have demonstrated that pregnant and postpartum people, specifically adolescent girls and young women, can be engaged in discussion and decision-making regarding HIV prevention. However, women have explained their nonadherence to oral PrEP by indicating that it is not a modality that addresses the needs and/or preferences of all women. Dr. Dong acknowledged, “As investigators, we’re hardwired to look at biological endpoints; we’re not hardwired to think in a holistic manner about what the women want. Too often, we don’t ask what they want and need.” Behavioral change is difficult, especially for healthy people in settings where the prevalence of sexual violence can exceed literacy among women and girls (15). Importantly, in contexts where VAW, femicide, and food insecurity are highly prevalent, HIV prevention is not a top priority for women. Dr. Dong called on the research community to listen closely to the people they serve and consider HIV prevention products and interventions that are behaviorally congruent and acceptable in different populations. In SA, injectable contraception is common and acceptable for women; therefore, there should be consideration of combining PrEP with these types of delivery systems. Dr. Dong proposed that the time to determine if women in SA want injectable PrEP is now, before it is available in SA, as well as effective mechanisms to provide access to women in ways that fits into their lives.

The Symposium concluded with closing remarks from Dr. Maureen M. Goodenow, Director of the NIH OAR. Dr. Goodenow thanked the speakers for sharing their important work and invited all workshop participants to provide feedback on the following questions to the NIH OAR-ORWH HIV & Women mailbox at womenandHIV@od.nih.gov:

- From your perspective, what are the 1-2 highest research priorities for women & HIV?
- From your perspective, what would be the most impactful way that NIH can advance women-centered HIV research? Are there specific initiatives, funding opportunities, activities or policies that have been successful?

As OAR and ORWH considers future efforts to catalyze research on HIV and women’s health, engagement with partners across the federal government, community groups, academia, and the private sector is essential to ensure the NIH HIV research program is responsive to emerging challenges and needs. Collaboration between OAR, ORWH, and the communities we serve is crucial to enhance research at the intersection of HIV and women’s health. Policies, resources for investigators, and targeted research funding continues as the foundation of NIH efforts to ensure that every woman or girl with or affected by HIV benefits from cutting-edge research.

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