Resilience During an Inflection Point: HIV Opportunities and Challenges

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Abstract

World AIDS Day 2025 arrives at a critical inflection point for the global HIV response. Four decades of scientific progress have transformed HIV into a manageable chronic condition, yet funding contractions, widening inequities, and persistent stigma threaten progress towards epidemic control. This Special Collection highlights emerging challenges and opportunities across prevention, care, and social contexts, with a focus on resilience. Digital innovation, accelerated by COVID-19, is reshaping HIV service delivery through telehealth, remote engagement, and online research platforms. Studies of PrEP use across the Asia–Pacific region reveal cyclical patterns of prevention, varying preferences for long-acting and oral formulations, and the centrality of person-centred approaches. Other papers examine sexual satisfaction among people living with HIV, showing the ongoing influence of stigma even in the era of U=U. Several contributions highlight enduring social and gendered inequities, including stigma among healthcare workers and gaps in menopause, reproductive health, and psychosocial care for women living with HIV. Evidence from humanitarian settings demonstrates how climate-related crises heighten HIV vulnerabilities, while peer-led navigation models illustrate community resilience. These papers underscore the need to integrate scientific innovation with equity, community leadership, and sustained solidarity as the global HIV movement adapts to a rapidly changing landscape.

World AIDS Day 2025 comes at a major inflection point in global health. After four decades of exciting progress, the global HIV response faces both impressive achievement and unprecedented uncertainty. Antiretroviral therapy and biomedical HIV prevention have transformed HIV from a death sentence at the start of the epidemic into a chronic disease today.[1] However, the goal of ending HIV by 2030 is slipping out of reach.[2] On the heels of decreased American funding for global HIV services,[3] many other donor nations have followed suit to decrease support for international HIV prevention and care. This dramatic contraction has ushered in critical questions and much fresh thinking in the HIV world. How can we sustain our HIV gains and continue to progress in an era of finite resources? What are ways to expand game-changing HIV innovations, such as long-acting injectables, in the current environment? How can we work more better in partnership with communities to sustain essential HIV services and drive local innovation?

This year's *Sexual Health* World AIDS Day virtual collection celebrates resilience at this point of inflection in the global HIV response. Several important transitions are underway: from siloed HIV programs to integrated ones; from foreign to domestic funding; from expert-driven, top-down approaches to grounds-up, community driven ones. COVID-19 has accelerated digital tools that can now be pivoted to sexual health services. Long-acting PrEP and biomedical innovations provide great hope, but substantial implementation gaps and cost barriers persist. The human realities of HIV – sexual wellbeing, stigma, and the gendered experience of care – remain important determinants of who benefits from these advances and who is left behind. Across the studies in this Collection, *resilience* is key.

Digital interventions

The COVID-19 pandemic accelerated digital health innovation,[4] including innovations focused on HIV prevention and control. Martinez-Andres *et al*. used an online survey to evaluate the use of telehealth for people living with HIV (PLHIV) in Australia.[5] Whilst uncommon before the COVID-19 pandemic, most participants (77.5%) had used telehealth since the start of the pandemic, and overall experiences were positive. The key advantages were convenience, reduced travel time, and the ability to avoid unnecessary contact. Yet, limitations were also evident: telehealth restricted opportunities for physical examination and routine STI screening, and some participants described it as impersonal or less conducive to discussing sensitive issues. Importantly, almost half preferred a hybrid model that combined in-person and telehealth consultations, underscoring that digital delivery complements rather than replaces face-to-face care.

These findings are consistent with the experience in the USA,[6] and highlight the delicate balance between accessibility and comprehensiveness in HIV service delivery. As telehealth becomes embedded in health systems, maintaining options for in-person assessment and STI testing remains essential. The Australian experience reinforces that hybrid care—where convenience meets continuity—can sustain engagement and patient satisfaction.

Wang *et al.* add a complementary perspective from China, examining how digital and online approaches intersect with PrEP engagement.[7] Their multicentre cohort among men who have

sex with men (MSM) leveraged social networking platforms such as WeChat for recruitment and follow-up, demonstrating how digital tools can extend beyond clinical delivery to support research participation and peer engagement. Across both contexts, digitalisation proved to be not only a stop-gap response to pandemic restrictions but a lasting transformation in how HIV prevention and care are accessed and managed.

HIV PrEP preferences

The global scale-up of HIV pre-exposure prophylaxis (PrEP) has achieved substantial gains, but there are persistent disparities.[8] Three papers in this Collection illuminate the behavioural, structural, and contextual factors shaping PrEP access, use, needs, and preferences across Asia and the Pacific.[9-11]

Dai *et al.* explored PrEP re-initiation among Chinese MSM who had participated in a PrEP demonstration trial.[9] While two-thirds discontinued PrEP after the trial ended, only half re-started within three months. Re-initiation was most likely among those with concurrent partners, drug use during sex, or who lived alone—signalling that risk perception and partner dynamics strongly influence prevention decisions. Partner expectations for condomless sex also played a significant role. The authors conclude that PrEP use is not linear but cyclical—reflecting "seasons of risk"—and that interventions should focus on encouraging re-initiation and consistent prevention behaviour when risk increases.

While oral PrEP remains central to prevention, Bavinton *et al.* outlined a regional roadmap for introducing and scaling up long-acting injectable cabotegravir (CAB-LA) across Asia.[10] Drawing on a 2023 Singapore roundtable, they highlighted that despite WHO recommendation and proven efficacy, implementation is constrained by regulatory delays, limited manufacturing capacity, and high costs. Only Australia had regulatory approval at the time, and many Asian countries risked falling behind. The authors called for strengthened research and implementation preparedness, faster product licensing, and capacity readiness for scale-up—including task-sharing models that enable lay or pharmacist-led injections. Without such planning, long-acting PrEP could inadvertently re-medicalise HIV prevention and marginalise community-led services that have been central to oral PrEP delivery. Ensuring equitable access, affordable pricing, and sustained community engagement were identified as critical to the success of CAB-LA and future long-acting options.

Sun *et al.*[11] conducted an online survey to examine PrEP preferences among MSM in mainland China and Hong Kong using machine-learning models. While oral PrEP—particularly on-demand and monthly oral formulations—remained the most preferred, willingness to use injectable or implantable PrEP was markedly lower. Preferences varied by social and behavioural context: in Hong Kong, condom use frequency and migration status shaped PrEP willingness, while in mainland China, peer influence and perceived risk were stronger predictors. These findings underscore the importance of offering multiple PrEP modalities while tailoring messaging to local realities of access, stigma, and sexual behaviour. We cannot use assume a “one size fits all” approach will address these divergent needs.

Together, these studies reveal a dynamic picture of PrEP decision-making influenced by social networks, partner expectations, and health-system context as much as by biomedical efficacy. They collectively call for person-centred prevention strategies that support PrEP access and use.

Sexual satisfaction and well-being

Biomedical progress has dramatically reduced HIV transmission, yet the quality of life and sexual wellbeing of PLHIV remain highly uneven and inequitable. Norman *et al.* analysed data from the *HIV Futures 9* national survey of PLHIV in Australia.[12] More than half (56.5%) of participants were dissatisfied with their sex lives, and 44% had avoided sex because of their HIV status. Older age, poorer health, and being single were associated with lower satisfaction. Although awareness of undetectable = untransmissible (U = U) was high (74%), lack of confidence in non-transmission still predicted dissatisfaction. The study concluded that stigma—both internalised and perceived—continues to undermine sexual enjoyment, even in the era of biomedical prevention. Efforts to improve wellbeing must therefore move beyond viral suppression to embrace stigma reduction, mental-health support, and affirming approaches to sexuality.

Stigma in the Social Context

Stigma remains a major barrier to delivering high-quality HIV services in a wide range of settings. Two original research manuscripts examined social stigma in Asia.[13,14] One study focused on PLHIV perspectives [13] while the other focused on measuring HIV stigma in health workers.[14]

Healey *et al.*interviewed newly diagnosed PLHIV at a sexual health clinic in Syndey, Australia between 2022 and 2023. Despite the significant support available at the clinic, the initial diagnosis of HIV still invited dismay, shame, and disbelief. Those newly diagnosed with HIV infection described devastation, social isolation, and severe distress. At the same time, they also noted that support from health professionals and peers immediately after diagnosis mitigated some of these intense feelings. Culturally appropriate communication approaches may be particularly important for PLHIV for whom English is not their first language. Clinicians can call out experiences of internalized stigma to help PLHIV better understand the social context of life with HIV infection.

Many health workers continue to harbor stigmatizing behaviors and attitudes towards PLHIV.[15] Toh *et al.* used a validated survey instrument to explore HIV stigma in Taiwan.[14] About three-quarters of the 550 health workers surveyed reported negative attitudes towards PLHIV and one-third refused to provide some HIV services to key populations. Despite the high frequency of negative attitudes, HIV training was associated with reduced HIV stigma and a greater willingness to serve key populations. Having infectious diseases clinical experience reduced fear related to HIV infection. This suggests that further HIV training and direct clinical experiences can help to break down some of the stigma that persists among healthcare workers related to PLHIV.

HIV and women

Women living with HIV are under-represented in the global HIV literature.[16] Two studies in this collection focus on women living with HIV in order to better understand HIV service provision and gaps.[17,18]

Huang *et al.* organized a clinical audit of all cisgender women attending the Sydney Local Health District Department of Sexual Health Medicine during 2021 and 2022 (n = 27).[17] Only about one-third of women who were middle-aged or older aged had menopause status recorded. Given that menopause is known to occur earlier in women living with HIV,[19] greater attention to menopause in this population is warranted. Over a third of women screened reported experiencing current intimate partner violence, underlining the importance of identifying and responding to the needs of intimate partner violence survivors across the lifespan. In response to the clinical audit, the clinic provided longer appointment times for women living with HIV and launched a series of training for health professionals. More research and advocacy focused on serving women with HIV is needed.

A related study by Peel *et al.* included women living with HIV in Australia and focused entirely on women 45 years and younger.[18] This study examined reproductive plans, contraceptive counselling, and ART choice, particularly dolutegravir. Among the women living with HIV who attended the service, approximately half were using some form of contraception. Despite guidelines advocating for annual discussions about sexual activity and pregnancy planning with health professionals, the retrospective analysis found that many women living with HIV did not have sexual activity documented as part of a clinician review. These data highlight the need for comprehensive woman-centered services within sexual health.

HIV vulnerabilities and resilience

HIV continues to disproportionally impact people at the margins of society.[20,21] At the same time, vulnerable groups are able to demonstrate remarkable resilience in the face of climate and related crises.[20] One way to potentially enhance resilience is through peer-based interventions.[21]

Logie *et al.* reported on the relationship between extreme weather events and sexual behaviors among 400 young refugees in a refugee settlement in Uganda.[20] Extreme weather events are unusually severe and include droughts, floods, heat waves, and severe storms. Approximately three-quarters of youth reported experiencing at least one extreme weather event in the past year, with extreme heat and wind being most common. The team found that extreme weather event experiences were correlated with a wide range of HIV vulnerabilities, including reproductive autonomy, intimate partner violence, and multiple sex partners. These data suggest the need for more research on sexual health in humanitarian settings and other locations where extreme weather events are more common.

Addressing such broad structural and systematic issues may seem daunting, but there are some potential ways to address peer-peer vulnerabilities in sexual health. UNAIDS has recommended community empowerment as a key strategy to build climate resilience.[22] Building on this theme of mobilizing communities, Krulic *et al.* described a peer navigator service led by a community-based organization. Navigators were employed part-time and

received training and support from the community organization. Peer navigators were able to help link a diverse group of people into HIV and related social services. The navigation program was able to continue during the COVID-19 pandemic, accelerating referrals and linking vulnerable groups into health, financial, and social services.

Conclusion

Together, the publications in this Collection reflect a global HIV response at a crossroads—facing funding constraints, persistent stigma, and widening inequities, yet also demonstrating extraordinary resilience, innovation, and community strength. Whether through digital transformation, long-acting prevention options, or peer-led empowerment, the message is clear: progress depends on integrating science with solidarity.[23] Advancing on the gains of the past four decades will require renewed commitment to equity, meaningful community engagement, and investment in local capacity. At this inflection point, the global HIV movement must continue to adapt, ensuring that every person in the world has access to dignified, people-centred HIV prevention, treatment, and care.

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