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Viewpoint

Latin America Priorities after 40 years of the beginning of the HIV pandemic[☆]

Omar Sued, Pedro Cahn*

Fundación Huésped, Buenos Aires, Argentina



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On June 5th, 1981, the MMWR reported the first 5 cases of *Pneumocystis carinii* pneumonia (later renamed as *P. jirovecii*) presenting since October 1980 among young gay males, which became the first report of AIDS. By 1984, most Latin American (LA) countries had reported cases and started to develop their responses. Early in the 90s, Brazil and Argentina were the first non-high-income countries to establish public free antiretroviral programs and paved the route for a public health approach for global treatment.

LA used to be the developing region with higher HIV treatment coverage, i.e., in 2005, it was 20% compared with 3% in Sub-Saharan Africa, but in the last decade, the progress has slowed. In 2019, LA scored below the 90-90-90 global figures, with 77%, 60%, 53% for people diagnosed, on treatment and suppressed, respectively, below the global figures of 81%, 67% and 59%. Of more concern, between 2010 and 2020, the number of new cases increased 21% (compared to a global reduction of 23%), and deaths decreased only 8% compared to the global 39%.¹ Deaths by tuberculosis coinfection increased 7% between 2010 and 2017.²

Current epidemiological situation in Latin America

It is estimated that at the end of 2019, LA had 2.1 million individuals living with HIV, with 120,000 new infections and 37,000 estimated deaths in this year.¹ Within countries, the distribution of HIV individuals is concentrated in specific urban areas with 50% of mortality concentrated in 10% of the municipalities.³

Specific populations carry most of the HIV burden. Sex between men represents 44% of 2019 HIV infections in LA.¹ The overall

prevalence among men having sex with men (MSM) is 12.6% ranging from 1.2 to 32.6% in different countries, with an increasing trend among young gay men.⁴ The prevalence is higher among transgender people (22%) with 6% of the share of 2019 infections. The prevalence of syphilis among these populations can be extremely high, with a recently reported lifetime prevalence in Peru of 37.7% and 54.8% for MSM and transgender women (TGW), respectively.⁵

Intravenous drug use, which was a frequent route early in the HIV epidemic, is now only 2% due to different patterns of drug use. Introduction of new illicit drugs can complicate the situation in the future.⁶ The male-to-female rate is increasing, with only 23% of 2019 infections being cisgender women.

Mother-to-child transmission has improved from 20 to 15% in the last decade but continues being unacceptably high for the region with mature healthcare services and free HIV care and antiretroviral treatment (ART) in most countries, although this only represents 2.8% of new HIV infections.¹ Most transmission is explained by social disparities where local interventions to address sociodemographic and infrastructural factors might reduce its impact. Lack of timely HIV diagnosis is due more to lack of test offered or lack of care-access rather than mother refusal.⁷

Internal and international migration is a key determinant of HIV and sexually transmitted risk, particularly in the Mesoamerican corridor,⁸ where social and structural forces create local conditions for gender-based violence, survival sex-work and human rights violations. Venezuela's crisis, which accounts for more than 5 million displacements, has created unprecedented challenges including the surge of many communicable disease outbreaks in other countries.⁹

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* Corresponding author: Pedro Cahn; MD, PhD., Fundación Huésped, Buenos Aires, Argentina

E-mail address: pedro.cahn@huesped.org.ar (P. Cahn).

Opportunities to eliminate HIV as a public threat in Latin America

In 2020, the emergence of SARS-CoV-2 diverted all the attention, resources, and efforts to respond to the COVID19 pandemic and paralyzed many of the HIV activities all over the world. In LA the identification and treatment of new cases decreased by 50%. For instance, in Guatemala, the mortality due to opportunistic infections increased.¹⁰ The pandemic also had a severe impact on key populations, increasing their socioeconomic vulnerability. A renovated effort is needed for getting HIV again within the public agenda of the National AIDS Programs. Some interventions can make the difference and reduce the gap imposed by the high inequity between and within LA countries that hinders the response.

HIV self-testing and other innovations for expanding HIV testing. It is critical and urgent to increase the volume of testing. Although WHO recommended PITC since 2017 and annual testing for MSMs since 2010, the uptake has been low, except for pregnant women.

The biggest difficulty that physicians face when offering HIV testing is the need to discuss sexual activity and preferences. The integration of HIV testing into routine care could reduce this barrier, reducing stigma. Facilitated access for MSMs is recommended, addressing the difficulties that the *machismo* imposes to reach this heterogeneous population. A better understanding of the user's perspectives, motivations, and context will improve the programmatic implementation of different options and frequency of HIV testing.¹¹

Self-testing for key populations has the potential to overcome many of the barriers key populations face, and evidence shows that increased frequency of testing results in earlier identification of positive cases and reaches first-time testers.¹²

Two cost-effective interventions, with >20% positivity of testing, include home-base testing for TGW,¹³ and assisted partner notification and testing.¹⁴ Other urgent needs include modifying restrictive legal frameworks, expanding rapid HIV testing using task shifting, reducing pre-test counseling time, and lifting the need for a signed informed consent.

Pre-Exposure Prophylaxis. LA has been in the forefront of research on Pre-Exposure Prophylaxis (PrEP). The high enrollment in iPrEX, MTN-017, ACTG A5175, HPTN-077, HPTN-083 and Discover trials demonstrates its high acceptability. The ImPrEP study is an ongoing same-day oral PrEP study which will enroll 7,500 MSM and TGW at high risk for HIV infection in Brazil, Peru, and Mexico. Preliminary reports showed 0.26% baseline prevalence of acute HIV infection,¹⁵ high prevalence of active syphilis, chlamydia, and gonorrhea with 9.9%, 11.7% and 7.4%, respectively, high uptake, and adherence¹⁶. However, wide programmatic implementation of PrEP is limited to Brazil. Hard work is needed to expand implementation, including dismantling its implicit or explicit moral objections.

Optimization of antiretroviral treatments. This involves the early (ideally same day) initiation of treatment using simpler, safer, and more affordable treatments. Brazil was one of the first countries to migrate to dolutegravir based regimens. The viral suppression after one year was 90.5%, with an adjusted odds ratio relative to an efavirenz regimen of 1.56 (95% CI 1.40-1.75).¹⁷ Patents and drug prices will be a determinant factor for the optimization plans in LA. The PAHO Strategic Fund is providing the co-formulation of dolutegravir-tenofovir-lamivudine to 15 countries at USD 5 per month of treatment, but in Mexico, the patents conditioned the access to generic dolutegravir and the country selected bictegravir-TAF-emtricitabine as the first line regimen at USD 250 per month. Dual therapy based on dolutegravir-lamivudine demonstrated similar efficacy to triple therapy,¹⁸ and injectable cabotegravir-ripirovirine, which can be administered every 2 months, has the promise of improved adherence and outcomes, but the cost will shape its roll-out in a region where 96% of re-

sponse relies on domestic sources. Of note, one of the major challenges to increasing the effectiveness of the ARV rollout programs is retention in care. The system works by receiving all comers, but, with few exceptions, it lacks programs to retain care of those that became lost to follow up for a variety of reasons.

Community involvement of MSM and TGW

Direct involvement of key populations in the planning, communication, and provision of HIV interventions is important to enhance favorable norms, reduce stigmatization, and build a response adjusted to their expectations and needs. Culturally competent and sensitive care has a strong impact on services where discrimination continues being the most important access barrier for key populations.¹⁹

Therefore, health systems should design plans for community engagement and specific training curricula in differentiated care for MSM and TGW. Community-delivered services (community clinics, mobile clinics, NGOs, safe spaces, etc) can result in higher reach, uptake, and adherence than standard services. The use of online technologies is effective to outreach MSM, particularly those not self-identified as gay.²⁰ Integrated care, harm reduction, mental health support, STI screening and treatment are essential components, with the addition of gender affirmation therapies for transgender individuals.

Conclusion

In LA, inequity and structural problems continue limiting HIV diagnosis and ART. Health systems, although more developed than in other regions, are characterized by weak health information systems, frequent inefficiencies, and low quality of care. COVID-19 exacerbated vulnerabilities and inequities while diverting the attention and available resources. Strong commitment, more energy and resources, and renewed leadership are needed to re-take the roadmap for the HIV elimination in the region during and after the COVID-19 pandemic. The involvement of affected communities to expand self-testing, PrEP, same day treatment using simple and potent combinations might turn the route in the right way. The velocity relies on us.

TABLE: Selected HIV indicators in LA region.

	Self-testing implemented	Individuals on PrEP	% ART coverage	HIV prevalence	Prevalence among MSM	Prevalence among SW	Prevalence among TGW
Argentina	No	0	67	0.4	-	-	-
Bolivia	No	0	60	0.2	25.4	-	22.6
Brazil	Yes	15,074	69	0.5	18.3	5.3	30
Chile	Yes	100-300*	68	0.5	-	-	-
Colombia	No	0	45	0.5	17	1.2	21.4
Costa Rica	No	0	66	0.4	-	-	-
Ecuador	No	0-200*	65	0.4	-	-	-
El Salvador	No	0	50	0.5	-	-	-
Guatemala	No	400-600*	58	0.3	-	-	-
Honduras	No	0	48	0.3	-	-	-
Mexico	Yes	3000-3500*	-	-	-	-	-
Nicaragua	No	0	59	0.2	8.6	2.6	8.1
Panama	No	400-600*	-	-	-	-	-
Paraguay	No	0	44	0.5	20.7	1.3	23
Peru	No	2000-2500*	77	0.3	-	-	-
Uruguay	No	0	-	-	-	-	-
Venezuela	No	0	40	0.6	-	-	-

All data taken from UNAIDS 2020 Report, except for those marked with *, that are taken from PrEPwatch.org. ART: antiretroviral treatment, MSM: men having sex with men, SW: sex-workers, TGW: transgender women.

Contributors

Both authors OS and PC contributed equally.

Declaration of interests

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