

Challenges in HIV infection control in transgender women sex workers



Simultaneous interventions directed at various segments of the infection chain is an effective approach to control HIV infection. Controlling the source of infection (ie, through antiretroviral treatment [ART]), protecting ports of entry (through condom use), and increasing host defenses (through prophylactic ART) can bring infection rates down, but it all comes at a cost. Moreover, on the path to success, every extra step to achieve infection control requires a greater effort and the increasing marginal costs of elimination are particularly evident in the case of HIV. Thus, robust modelling, monitoring, and evaluation—including a good understanding of the behavioural characteristics of the population group—are essential to inform policy formulation and implementation.

A few population groups are at high risk of contracting and transmitting HIV and require packages of interventions tailored to the susceptibilities of their specific infection chain. Such groups include men who have sex with men, male or female sex workers, transgender people, drug users, prison inmates, migrants, or any combination of the above.¹ Providing access to highly effective prevention and treatment interventions for these populations is extremely challenging, partly because of the criminalisation and stigmatisation of the very same acts that cause their vulnerability. In *The Lancet Publish Health*, Annick Bórquez and colleagues acknowledge this fact and build the case around transgender women sex workers (TGSW) in Lima, Peru, in their mathematical modelling study.² The evaluation framework of the cost-effectiveness of combined HIV prevention and treatment interventions, aimed at averting future infections in TGSW and their partners and clients, captures the complexities of HIV infection control and provides valuable lessons not only for other populations group at risk of infection of HIV but also for other infectious diseases that present the same challenges of hard-to-reach populations.²

By focusing on the triple combination of health system capacity evaluation, stakeholder analysis, and mathematical modelling, a more balanced and robust conclusion can be reached on the feasibility, acceptability, and cost-effectiveness of different HIV

control strategies.² Health system capacity evaluation allows for additional costs to be incorporated into the analysis, such as the cost of introducing outreach mobile units to increase HIV testing rates. Stakeholder analysis integrates with mathematical modelling hypotheses that reflect the specificities of the group, examples of which include the distribution of branded rather than generic condoms or the difficulty of increasing condom use between TGSW and their stable partners. Complex problems often demand multipronged strategies tackling a variety of disease transmission factors simultaneously. The sum of the effectiveness of individual interventions does not necessarily equal the effectiveness of their combination.

Nevertheless, when modelling meets reality, policy implementation can differ from the expected outcomes based on a model's parameters. Therefore, reliable monitoring and evaluation of the proposed interventions are needed to guarantee that deviations from expected results can be matched with timely policy reformulation. A good example of the complexities involved in the implementation of these policies is the assumption on the availability of low-priced generic drugs, an essential condition to deliver cost-effectiveness. Bórquez and colleagues² suggest that Peru, currently employing branded drugs, can achieve these prices by joining the PAHO Strategic Fund. Nevertheless, these proposals have come up against political and logistical implementation barriers in other country settings.^{3,4} Vested interests related to the use of branded drugs might be an important obstacle in joining the Fund, whereas countries that are already members can struggle to come up with basic Fund requirements such as demand analysis or procurement plans.⁵ Taking into account the difficulties that Peru might face in its effort to become a member of the Fund is vital to achieve the results the study model predicts.² Similarly, targeted promotion to increase condom use between TGSW and their clients is countered by market forces, where the risk incurred for sex services with and without condom commands differentiated prices.⁶

The effort to close the gap between efficacy and effectiveness of policies, interventions, drugs, devices,

Published Online
January 22, 2019
[http://dx.doi.org/10.1016/S2468-2667\(18\)30259-7](http://dx.doi.org/10.1016/S2468-2667(18)30259-7)
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or other health inputs is further reflected in the agenda pushed through by the US Food and Drug Administration for the use of real-world evidence to support health-care decision making.⁷ Collection of real-world data has been facilitated by the increasing availability of computers and other digital information technologies but can further be enriched through continuous monitoring and evaluation. This, in combination with innovative study designs and sophisticated analytical tools, allows answering of questions previously thought unfeasible and advancement in the implementation of real-world policies.

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EG-P reports advisory fees from Hoffmann—La Roche, outside of the submitted work. GP declares no competing interests.

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