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TITLE

Cost-effectiveness of three different Pre-Exposure Prophylaxis (PrEP) regimens for HIV prevention in Mexico

PRESENTER

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BACKGROUND: Pre-exposure prophylaxis (PrEP) can be cost-effective in populations at high risk of HIV. While PrEP is the Mexico, evidence of its cost-effectiveness is lacking. Therefore, we analysed the cost-effectiveness of PrEP among men men (MSM) and transgender women (TGW).

METHODS: We developed a Markov model to examine the impact of scaling up PrEP through government and commu and TGW 15 years at high risk of HIV. Primary analysis evaluated generic emtricitabine-tenofovir disoproxil fumarate (I emtricitabine-tenofovir alafenamide (F/TAF), and long-acting cabotegravir (CAB-LA) versus no-PrEP. Secondary analys and CAB-LA versus F/TDF. The model was analysed from the healthcare perspective in a 15-year horizon (2022-2036). In quality-adjusted life-year (QALY) was compared against the national cost-effectiveness threshold (CET) of $10,165 per C varied key parameters in sensitivity analyses.

RESULTS: Annual costs of F/TDF, F/TAF and CAB-LA were $1,384, $2,220, and $1,384, respectively. If PrEP was scaled-up at 3 80% uptake, F/TDF would avert 57,150 HIV transmissions and yield 138,892 incremental QALYs with an additional cost of compared with no-PrEP. F/TAF and CAB-LA would avert 55,000 HIV transmissions, achieving 134,018 and 133,951 increme additional $1.6 and $1.2 billion costs, respectively. Compared with no-PrEP, the incremental cost-effectiveness ratio (ICE and CAB-LA were $4,427, $12,216, and $8,955 per QALY gained, with an 89%, 30% and 63% probability of cost-effectivene respectively. F/TAF and CAB-LA were dominated by F/TDF. Results were robust to sensitivity analyses. Compared with F cost-effective at a maximum price of $788 and in populations with higher HIV incidence.

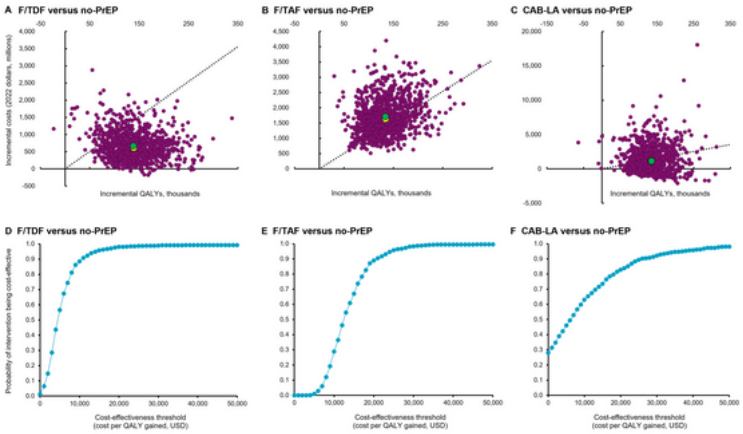

Figure 1: Cost-effectiveness planes and cost-effectiveness acceptability curve (CEAC).
The costs and quality-adjusted life-years (QALY) shown in A), B), and C) are incremental to no-PrEP, which is shown at [0,0]. The purple dots show the individual 1,000 simulations. The green dot displays the mean incremental cost and mean incremental QALYs from the PSA. The yellow dot depicts the mean incremental cost and mean incremental QALYs from the DSA. The CEAC shows the probability of D) F/TDF, E)F/TAF, and F) CAB-LA being cost-effective versus no-PrEP at different cost-effectiveness thresholds. CAB-LA= Long-acting cabotegravir; F/TAF= emtricitabine-tenofovir alafenamide fumarate; F/TDF= emtricitabine-tenofovir disoproxil fumarate; No-PrEP= No pre-exposure prophylaxis (PrEP); PSA= Probabilistic sensitivity analysis; DSA= Deterministic sensitivity analysis.

CONCLUSIONS: PrEP scale-up can have a substantial public health impact in Mexico over the following 15 years. To be F/TDF, CAB-LA should be half the F/TDF price.