Medical Xpress

Preventing HIV infection with anti-HIV drugs in people at risk is cost-effective

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An HIV prevention strategy in which people at risk of becoming exposed to HIV take antiretroviral drugs to reduce their chance of becoming infected (often referred to as pre-exposure prophylaxis or PrEP), may be a cost-effective method of preventing HIV in some settings, according to a study by international researchers published in this week's *PLOS Medicine*.

In an analysis of 13 modelling studies led by Gabriela Gomez from the Department of Global Health, Academic Medical Centre, University of Amsterdam/AIGHD in The Netherlands, the authors evaluated the impact of pre-exposure prophylaxis in different populations (heterosexual couples, men who have sex with men, and people who inject drugs) in different regions and countries, such as southern Africa, Ukraine, the US, and Peru.

They found that in every setting, the cost of antiretroviral drugs was an important factor influencing the affordability of effective prevention programmes but delivery of pre-exposure prophylaxis to populations at higher risk of HIV exposure appeared to be the most cost-effective strategy. The authors also found that both behavioural changes and adherence to the pre-exposure prophylaxis drug regimens affected programme effectiveness.

The authors say: "Our findings show that pre-exposure prophylaxis has the potential to be a cost-effective addition to HIV prevention programmes in some settings."

They continue: "However, the cost-effectiveness of pre-exposure prophylaxis is likely to depend on considerations such as cost, the epidemic context, pre-exposure prophylaxis programme coverage and prioritisation strategies, as well as individual adherence levels and pre-exposure prophylaxis efficacy estimates."

The authors add: "Given that our review shows that both the setting and which population is prioritised for pre-exposure prophylaxis are critical drivers of cost-effectiveness, the next step is to conduct context-specific demonstration studies, including comprehensive cost analyses, of different prioritisation and adherence promotion strategies to ensure that the maximum benefit from the introduction of pre-exposure prophylaxis is realised within combination HIV prevention programmes."

More information: Gomez GB, Borquez A, Case KK, Wheelock A, Vassall A, et al. (2013) The Cost and Impact of Scaling Up Pre-exposure Prophylaxis for HIV Prevention: A Systematic Review of Cost-Effectiveness Modelling Studies. *PLoS Med* 10(3): e1001401. doi:10.1371/journal.pmed.1001401

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