

# MODELLING THE EPIDEMIOLOGICAL IMPACT AND COST-EFFECTIVENESS OF PREP FOR HIV TRANSMISSION IN MSM IN CHINA

## Authors:

Zhang L<sup>1,2,3</sup>, Peng P<sup>3</sup>, Wu Y<sup>4</sup>, Ma X<sup>1</sup>, Soe N N<sup>1</sup>, Huang X<sup>5</sup>, Wu H<sup>5</sup>, Markowitz M<sup>4</sup>, Meyers K<sup>4</sup>

<sup>1</sup> Research Centre for Public Health, Tsinghua University, Beijing, China

<sup>2</sup> Melbourne Sexual Health Centre, Alfred Health, Melbourne, Australia

<sup>3</sup> Central Clinical School, Faculty of Medicine, Monash University, Melbourne, Australia

<sup>4</sup> Aaron Diamond AIDS Research Center, The Rockefeller University, New York, NY, USA

<sup>5</sup> Center for Infectious Diseases, Beijing You'an Hospital, Capital Medical University, Beijing, China

## Introduction:

Risk of HIV infection is high in Chinese MSM, with an annual HIV incidence ranging from 3.41 to 13.7/100 person-years. Tenofovir-based PrEP is effective in preventing HIV transmission in MSM. This study evaluates the epidemiological impact and cost-effectiveness of implementing PrEP in Chinese MSM over the next two decades.

## Methods:

A compartmental model for HIV was used to forecast the impact of PrEP on the number of infections, deaths, and disability-adjusted life years (DALY) averted. We also provide an estimate of the incremental cost-effectiveness ratio (ICER) and the cost per DALY averted of the intervention.

## Results:

Without PrEP, there will be 1.1–3.0 million new infections and 0.7–2.3 million HIV-related deaths in the next two decades. Moderate PrEP coverage (50%) would prevent 0.17–0.32 million new HIV infections. At Truvada's current price in China, daily oral PrEP costs \$46,813–52,008 per DALY averted and is not cost-effective; on-demand Truvada reduces ICER to \$25,057–27,838 per DALY averted, marginally cost-effective; daily generic tenofovir-based regimens further reduce ICER to \$3675–8963, wholly cost-effective.

## Conclusion:

The cost of daily oral Truvada PrEP regimen would need to be reduced by half to achieve cost-effectiveness and realize the public health good of preventing hundreds of thousands of HIV infections among MSM in China

## Disclosure of Interest Statement:

None declared

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