

# The economics of effective AIDS treatment in Thailand

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**Introduction:** The speed with which Thailand has scaled up public provision of antiretroviral therapy (ART) has been unprecedented, with more than 80 000 individuals on treatment at the end of 2006 through Thailand's National Access to Antiretroviral Program for People Living with HIV/AIDS (NAPHA). This paper projects the cost effectiveness, the affordability and the future fiscal burden of NAPHA to the government of Thailand under several different policy scenarios until the year 2025.

**Methods:** An economic/epidemiological model of access to ART was constructed, and this composite model was calibrated to economic and epidemiological data from Thailand and other countries. The economic model adopts the conditional logit specification of demand allocation across multiple treatment modes, and the epidemiological model is a deterministic difference-equation model fitted to the cumulated data on HIV incidence in each risk group.

**Results:** The paper estimates that under 2005 prices NAPHA will save life-years at approximately US\$736 per life-year saved with first-line drugs alone and for approximately US\$2145 per life-year if second-line drugs are included. Enhancing NAPHA with policies to recruit patients soon after they are first eligible for ART or to enhance their adherence would raise the cost per life-year saved, but the cost would be small per additional life-year saved, and is therefore justifiable. The fiscal burden of a policy including second as well as first-line drugs would be substantial, rising to 23% of the total health budget by 2014, but the authors judge this cost to be affordable given Thailand's strong overall economic performance. The paper estimates that a 90% reduction in the future cost of second-line therapy by the exercise of Thailand's World Trade Organization authority to issue compulsory licences would save the government approximately US\$3.2 billion to 2025 and reduce the cost of NAPHA per life-year saved from US\$2145 to approximately US\$940.

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