



## The potential demand for an AIDS vaccine in Thailand

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### Abstract

The recent ongoing phase III clinical trial of a preventive vaccine in Thailand has prompted studies on potential demand for the vaccine among public, employers and households. This study aims to demonstrate the impact of HIV/AIDS, estimate the AIDS vaccine budget required and design the vaccination strategies for different population groups. The analysis is based on available secondary data and several assumptions on levels of secondary infections among various risk groups. Among 15 groups, we identified eight groups as potential vaccinees: Direct CSW, IDU in treatment, IDU out of treatment, male STD, transport workers, CSW indirect, conscripts and prisoners. The vaccine budget, excluding other operating expenditure, was estimated based on a single dose regimen ranging from 100 Baht (US\$3) to 1000 Baht (US\$29) per dose. A total of US\$1.8–17.7 million is required for non-infected catch-up population and US\$0.2–1.9 million for the maintenance population in the subsequent year. We foresee a relative inefficient and inequitable consumption of AIDS vaccine, which requires proper policy analysis and government interventions. Before vaccine adoption, strong preventive measures must be in place. AIDS vaccine could play an additional, not a substituting, role. A thorough understanding, a wide consultation with stakeholders and public debates are crucial steps for sound policy formulation. © 2001 Elsevier Science Ireland Ltd. All rights reserved.

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## 1. Introduction

The AIDS epidemic in Thailand had tremendous negative impacts on the households, demographic structure as well as economic and health sectors. The government, non-governmental sector and general public had responded to the epidemic through major public health preventive programmes, notably the use of condoms, fostering education aiming at safer sex and behavioural changes, blood screening and recently the use of antiretroviral drugs (ARV) for maternal transmission prevention. The initial AIDS control approach using “medical model” has gradually transformed to a comprehensive “civil empowerment”. The government also invested in the treatments of opportunistic infections (OI) among AIDS patients including other community palliative care.

The recent ongoing phase III clinical trials of a preventive vaccine in the USA among gay men and in Thailand among intravenous drug users (IDU) will produce a result by Fall 2002. Economic perspectives on AIDS vaccine, therefore, should be investigated thoroughly for vaccine policy adoption, for example: financial requirement, who will pay for the vaccine — public and private; which groups should be the priority and the most cost-effective for vaccination; at what level the public and private household are willing to pay for the vaccine. Most importantly, before the adoption of AIDS vaccine, thorough studies of cost and outcome comparing vaccine with existing preventive strategies are needed for policy adoption of vaccine.

Although Thailand<sup>1</sup> has maintained her efforts on primary prevention with a reputable record, the Thai Government may need to see how a new AIDS vaccine could play an additional role. Thailand has a higher ability to pay compared to other developing countries. The current economic crisis, however, placed a hard burden on both public and private finance. Therefore, all aspects must be considered seriously before an adoption of an AIDS vaccine.

Since Thailand is currently the only developing country with an ongoing Phase III AIDS vaccine efficacy trial, the study on the potential market of AIDS vaccine and what specific group is the most-cost effective candidate for vaccinations is a crucial input for policy analyses.

Consequently, the specific objectives of this study are:

1. To demonstrate the costs and impact of HIV/AIDS in terms of disease and economic burden to individuals and society. This is a proxy for the benefits of current prevention measures, i.e. information, education and communication on behaviour changes, condoms, vertical transmission, blood screening, and of a new alternative AIDS vaccine.

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<sup>1</sup> A middle-income developing country with a 1999 GNP per capita of US\$2,045 down from 2740 in 1997 [1].