

## Abstract

The aim of the study was to quantify the incidence of illness and treatment behaviour in relation to CD4 count, age, and gender among a cohort of persons living with HIV/AIDS in Thailand. 464 participants with a CD4 count between 50 and 550 cells/mm<sup>3</sup> were followed up for 12 months. Multiple Poisson regression was used to model the adjusted incidence rate ratio of illness and care seeking at different levels. The incidence of morbidity and treatment pattern were significantly different among participants with different CD4 count, age and gender. For example, morbidity incidence was significantly higher among participants with CD4 count of less than 200 cells/mm<sup>3</sup>, among female participants, and participants aged 35 years or over. Females made significantly higher use of hospital ambulatory care and private clinics than males and males made significantly more use of private pharmacies. The potential opportunity cost of not providing ART to these different groups can be estimated and used to inform further economic evaluation and policy decisions on whether to provide ART at all and which patient groups to prioritise. *Asia Pac J Public Health* 2006; 18(1): 39–48.

**Keywords:** HIV, AIDS, Thailand, healthcare seeking behaviour, antiretroviral therapy, targeting, economic evaluation.

Address for correspondence:

Yot Teerawattananon  
International Health Policy  
Program,  
Ministry of Public Health,  
Tiwanon Rd., Nonthaburi 11000  
Thailand  
Email: yot.t@ihpp.thaigov.net

# Targeting Antiretroviral Therapy: Lessons from a Longitudinal Study of Morbidity and Treatment in Relation to CD4 Count in Thailand

Y Teerawattananon<sup>1</sup>, MD, PG Dip  
W Hanshaoworakul<sup>2</sup>, MD, MSc.  
S Russell<sup>3</sup>, Ph.D.  
V Tangcharoensathien<sup>1</sup>, MD, Ph.D.  
S Jiamton<sup>4</sup>, MD, Ph.D.

<sup>1</sup>International Health Policy Program-Thailand, Ministry of Public Health

<sup>2</sup>Epidemiology Division, Ministry of Public Health, Thailand

<sup>3</sup>School of Development Studies, University of East Anglia, UK

<sup>4</sup>Sexually Transmitted Infections Clinic, Department of Dermatology, Mahidol University, Thailand

## Introduction

In Thailand, AIDS is the number one cause of disability-adjusted life years (DALYs) lost in both genders, accounting for 960,000 (17%) and 372,000 (9%) DALYs lost in men and women in a single year respectively<sup>1</sup>. HIV/AIDS-related morbidity and mortality place a heavy cost burden on public health services and wider society in Thailand and the prevention and treatment of the disease are a high priority of the Thai government and the Ministry of Public Health (MOPH)<sup>2</sup>.

In recent years, opportunities to expand access to anti-retroviral treatment (ART) in resource poor settings have improved dramatically due to price reductions and increased financing through national and international initiatives such as

the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM) and the WHO strategy to achieve treatment for three million people living with HIV/AIDS (PLHA) by 2005<sup>3</sup>. In Thailand the government has implemented successful awareness and prevention measures, but due to past infections the number of AIDS cases is rising and the Thai government is seeking to expand access to ART through a phased introduction with support from the GFATM<sup>2,4,5</sup>.

In resource poor settings where government and NGO providers do not have the funds to provide ART to all PLHA, difficult targeting decisions need to be made. Biomedical selection criteria are first needed to ensure that treatment is clinically appropriate and effective and these are either HIV-related symptoms that reflect late