The Economics of Effective AIDS Treatment
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Evaluating Policy Options for Thailand

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Dedication

This report is dedicated to Nicholas Prescott, former staff member of the World Bank, who collaborated with the Thai government and the World Health Organization from 1995 through 1997 in an early analysis of the costs and benefits of antiretroviral therapy. Nicholas Prescott was a friend and mentor to many of the members of the current report team before his untimely death on February 19, 2000.
We in the National AIDS Prevention and Problem Alleviation Program of the Kingdom of Thailand bear the responsibility for managing national and non-national resources that are spent on protecting people from being infected with HIV and to provide care and treatment for the people who have already been infected. In this capacity, we are constantly aware of the need to balance the resources used for one aspect against those for another. Like officials in public health programs in other countries, we often have difficulty justifying expenditures to prevent disease when there are such clear and urgent needs all around us for treatment of people who are already sick. This is because well people are seldom aware that they have been saved from illness or death by a prevention expenditure made years previously by the Program. On the other hand, people who have been treated and are recovering attribute their recovery to those who helped them. It is more obvious and popular for a government to provide treatment than to provide prevention.

Although the subject matter of this book is the economics of AIDS treatment, perhaps its most important lessons are in the area of prevention. After carefully computing the probable future cost of Thailand’s ARV treatment program, the authors have been able to compare that cost to the much larger cost that Thailand would have had to shoulder if the country had not engaged in such a vigorous HIV prevention program in the 1990s. They estimate that for every Baht that the Thai government spent on HIV prevention in the 1990s, 43 Baht of government expenditure on treatment has been avoided. Even if they have underestimated by 50 percent the cost of prevention (for example, by leaving out the value of the many voluntary contributions to HIV prevention of the members of many national NGOs) and overestimated the savings by a factor of two...
(because some of the reduction in risk behavior might have occurred without government intervention), one would estimate a saving of 10 Baht for every Baht spent on prevention. These calculations demonstrate the value of prevention of HIV and suggest that prevention of other diseases that afflict the nation might also be worthwhile investments.

This study forecasts that government spending on ARV therapy through the National Access to ARV for People with HIV and AIDS (NAPHA) will rise to equal 24 percent of the projected government health budget in the year 2013. But costs will rise even more if the availability of treatment leads to a return of high-risk behavior. The threat of these future costs has led to decisions by the National AIDS Committee early in 2006 to refocus on HIV prevention. In a speech at the United Nations General Assembly in New York in June 2006, Thailand announced that its new goal is to reduce by half the previously expected annual number of new HIV infections by the year 2010. To meet this goal, all stakeholders, including the government agencies and its civil society partners, will work together to sustain condom use where it is high and to increase it where it is low. New free condom distribution programs will be targeted to those particularly likely to contract and transmit HIV, including the discordant couples, female sex workers and their clients, intravenous drug users, men who have sex with men, clients of VCT and STI clinics, and youth as a cross-sectional group.

In view of the large cost of second-line drugs at current prices, the ARV Program is working with partners such as the Global Fund and Médecins sans Frontières to maximize the benefits of first-line therapy for each patient. As recommended in this study, we are expanding the coverage of patient support groups attached to each public antiretroviral treatment center.

We in the National AIDS Prevention and Problem Alleviation Program appreciate that the estimates in this book, although based on the best current information about costs and effects, are subject to change over time. The analytical framework used will be useful as we periodically return to these issues and construct new forecasts based on the most recent information. We look forward to future collaboration with the World Bank in the analysis of selected health sector policy issues.

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<th>Abbreviation</th>
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<tr>
<td>3TC</td>
<td>Lamivudine</td>
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<tr>
<td>AEM</td>
<td>Asian Epidemiological Model</td>
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<tr>
<td>AIDS</td>
<td>Acquired immunodeficiency syndrome</td>
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<td>ART</td>
<td>Antiretroviral therapy</td>
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<td>ARV</td>
<td>Antiretroviral</td>
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<tr>
<td>ATC</td>
<td>Access to care</td>
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<td>AZT</td>
<td>Zidovudine</td>
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<tr>
<td>BSS</td>
<td>Behavioral Surveillance Survey</td>
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<tr>
<td>CD4</td>
<td>Immune cell that is a target for HIV (also called T-cell)</td>
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<tr>
<td>CMV</td>
<td>Cytomegalovirus</td>
</tr>
<tr>
<td>CRN</td>
<td>Clinical research network</td>
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<tr>
<td>CSMBS</td>
<td>Civil Servant Medical Benefit Scheme</td>
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<tr>
<td>d4T</td>
<td>Stavudine</td>
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<tr>
<td>ddI</td>
<td>Didanosine</td>
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<tr>
<td>DOTS</td>
<td>Directly observed treatment short course</td>
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<tr>
<td>EFV</td>
<td>Efavirenz</td>
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<tr>
<td>GFATM</td>
<td>Global Fund to Fight AIDS, Tuberculosis, and Malaria</td>
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<tr>
<td>GPO</td>
<td>Government Pharmaceutical Organization</td>
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<tr>
<td>HAART</td>
<td>Highly active antiretroviral therapy</td>
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<tr>
<td>HIV</td>
<td>Human immunodeficiency virus</td>
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<tr>
<td>HIV-NAT</td>
<td>HIV–Netherlands Australia Thailand Research Collaboration</td>
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<tr>
<td>IDU</td>
<td>Injecting drug user</td>
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<tr>
<td>IDV</td>
<td>Indinavir</td>
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<tr>
<td>IRS</td>
<td>Immune reconstitution syndrome</td>
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<tr>
<td>LPV</td>
<td>Lopinavir</td>
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<tr>
<td>LPV/r</td>
<td>Lopinavir/ritonavir</td>
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<tr>
<td>Abbreviation</td>
<td>Full Form</td>
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<tr>
<td>MAC</td>
<td>Mycobacterium avium complex</td>
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<tr>
<td>MDR-TB</td>
<td>Multidrug-resistant TB</td>
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<tr>
<td>MOPH</td>
<td>Ministry of Public Health</td>
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<tr>
<td>MSF</td>
<td>Médecins sans Frontières</td>
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<tr>
<td>MSM</td>
<td>Men who have sex with men</td>
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<tr>
<td>NAPHA</td>
<td>National Access to Antiretroviral Program for People Living with HIV/AIDS</td>
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<tr>
<td>NESDB</td>
<td>National Economic and Social Development Board</td>
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<tr>
<td>NGO</td>
<td>Nongovernmental organization</td>
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<tr>
<td>NNRTI</td>
<td>Nonnucleoside reverse transcriptase inhibitor</td>
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<tr>
<td>NRTI</td>
<td>Nucleoside reverse transcriptase inhibitor</td>
</tr>
<tr>
<td>NVP</td>
<td>Nevirapine</td>
</tr>
<tr>
<td>OECD</td>
<td>Organisation for Economic Co-operation and Development</td>
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<tr>
<td>OI</td>
<td>Opportunistic infection</td>
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<tr>
<td>PCP</td>
<td>Pneumocystis carinii pneumonia</td>
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<tr>
<td>PHA</td>
<td>Person living with HIV/AIDS</td>
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<tr>
<td>PI</td>
<td>Protease inhibitor</td>
</tr>
<tr>
<td>PMTCT</td>
<td>Prevention of mother-to-child transmission</td>
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<tr>
<td>RTV</td>
<td>Ritonavir</td>
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<tr>
<td>SGOT</td>
<td>Serum glutamic oxaloacetic transaminase</td>
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<tr>
<td>SQV</td>
<td>Saquinavir</td>
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<tr>
<td>SQV/r</td>
<td>Saquinavir/ritonavir</td>
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<tr>
<td>SSS</td>
<td>Social Security Scheme</td>
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<tr>
<td>STI</td>
<td>Sexually transmitted infection</td>
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<tr>
<td>TB</td>
<td>Tuberculosis</td>
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<tr>
<td>TNP+</td>
<td>Thai Network of People Living with AIDS</td>
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<tr>
<td>TRIPS</td>
<td>Agreement on Trade-Related Aspects of Intellectual Property Rights</td>
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<tr>
<td>UCS</td>
<td>Universal Coverage Scheme</td>
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<td>UNAIDS</td>
<td>Joint United Nations Programme on HIV/AIDS</td>
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<tr>
<td>VCT</td>
<td>Voluntary counseling and testing</td>
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<tr>
<td>WCF</td>
<td>Workmen’s Compensation Fund</td>
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<td>WHO</td>
<td>World Health Organization</td>
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<td>World Trade Organization</td>
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