

Resource Requirements for  
Cambodia's 2001-2005  
HIV/AIDS National Strategic Plan

By

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September 2002



*POLICY is a five-year project funded by the U.S. Agency for International Development under Contract No. HRN-C-00-00-00006-00, beginning July 7, 2000. The project is implemented by The Futures Group International in collaboration with Research Triangle Institute (RTI) and The Centre for Development and Population Activities (CEDPA).*

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## List of Acronyms

AEM	Asian Epidemic Model
AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal Clinic
BBC/WST	British Broadcasting Corporation/World Service Trust
CCM	Country Coordinating Mechanism
DfID	Department for International Development
FHI	Family Health International
GFATM	Global Fund for AIDS, TB and Malaria
HAART	Highly Active Antiretroviral Therapy
HIV	Human Immunodeficiency Virus
MOEYS	Ministry of Education, Youth and Sport
NAA	National AIDS Authority
NCHADS	National Center for HIV/AIDS, Dermatology and STD
NGO	Non-Governmental Organization
NSP	National Strategic Plan
OI	Opportunistic Infection
RGC	Royal Government of Cambodia
STI	Sexually Transmitted Infections
UNGASS	United Nations General Assembly Special Session on HIV/AIDS
VCT	Voluntary Counseling and Testing

# I. Executive Summary

The following report provides a summary analysis of the resources required to achieve the broad objectives outlined in Cambodia's National Strategic Plan (NSP). This report outlines the costs associated with each strategic objective.

This costing study began with the UN model, which was used to determine that \$9.2 billion would be required globally for HIV/AIDS programs by 2005. The data specific to Cambodia were then revised and updated using a combination of: 1) key informant interviews with 40 Cambodian policymakers, implementers and researchers, 2) a review of 6 existing HIV/AIDS budgets in Cambodia, and 3) various demographic and economic surveys conducted on HIV/AIDS interventions in Cambodia.

In costing Cambodia's NSP, it was necessary to develop a set of strategic objectives that could be costed. Since Cambodia's NSP includes a number of strategies that could not be costed (due to a lack of detail included in these strategies), it was necessary to merge the set of UN objectives used in their modeling exercise with the NSP strategies. The 19 objectives that were derived and subsequently costed are as follows:

- Strengthening the managerial structures, processes and mechanisms to increase the capacity for coordinating, monitoring and implementing HIV/AIDS actions, and enhance cooperation with stakeholders at national and international levels.
- Enhancing legislative measures and policy development
- Strengthening Cambodia's capacity to conduct and lead a multisectoral HIV/AIDS response
- Strengthening national capacity for monitoring, evaluation and research
- Ensuring support for orphans affected by HIV/AIDS
- Empowering the individual, the family and community in dealing with the consequences of HIV/AIDS through the promotion of a social, cultural and economic environment that is conducive to the mitigation of HIV/AIDS
- Providing palliative care to those infected with HIV/AIDS
- Treating opportunistic infections (OIs)
- Offering HIV-infected individuals OI Prophylaxis
- Ensuring that reliable ARV treatments are available
- Providing HIV/AIDS prevention services for youth in-school and out-of-school
- Expanding interventions with CSWs and their clients
- Ensuring existing STI services are accessible
- Strengthening and expanding voluntary HIV counseling and testing
- Strengthening and expanding workplace programs and programs for mobile populations
- Ensuring a safe blood supply
- Reducing transmission of HIV from mothers to their children
- Strengthening and expanding IEC, BCC and outreach to promote behavior change
- Encouraging behavior change through a mass media campaign

These 19 objectives are likely to be revised as Cambodia revises and progresses with its strategic planning process. However, the following costing exercise does provide an indication of the types of resources that will be required as the country strengthens its multisectoral response.

Overall the cost analysis concludes that international donors and the RGC need to provide \$54.7 million for HIV/AIDS programs in 2005. Of this amount, 56% would be allocated to prevention, 22% to treatment, 17% to management/policy/research and 6% to mitigation. While the current resource envelope is uncertain, it is estimated that approximately \$30 million will be available from donors and the RGC for HIV/AIDS programs in 2003. This suggests that it will be necessary to mobilize additional resources during the remaining years of the NSP in order to achieve its objectives.

The next step in Cambodia's financial analysis should be the following:

1. Confirm or revise the strategic objectives costed in this preliminary report.
2. Confirm or revise the assumptions regarding unit costs, target populations, and coverage levels assumed in this costing study.
3. Conduct an evaluation of current spending on HIV/AIDS programs by donors and the RGC.
4. Identify potential sources of funding, where financial gaps appear to exist.
5. Develop a resource allocation strategy using tools such as **Goals**<sup>1</sup>, in conjunction with policymakers and civil society, so that resources are spent on interventions that are likely to achieve the greatest impact.

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<sup>1</sup> Goals Model for Estimating the Effects of Resource Allocation Decisions on the Achievement of the Goals of the HIV/AIDS Strategic Plan. Version 2.0

## **II. Background**

### **A. *Epidemiology of HIV/AIDS in Cambodia***

Cambodia is the most severely-affected country in Asia in terms of HIV/AIDS. It is estimated that in a population of around 12 million, there are currently close to 165,000 people infected with HIV. Over 40 percent of all sex workers have at least one STI, as well as 17 percent of soldiers and police. It is estimated that there will be more than 90,000 children orphaned due to AIDS by 2005.

There are, however, some encouraging signs in terms of the course of the epidemic in Cambodia. HIV prevalence appears to have stabilized and has perhaps begun to decline. The prevalence of HIV among brothel-based sex workers has declined significantly since the introduction of programs that have promoted a 100% condom use policy.

Despite this encouraging news, investing in Cambodia's HIV/AIDS response remains a critical priority. While prevalence may be stabilizing, the number of Cambodians requiring treatment continues to rise. Furthermore, without a sustained response, there are no guarantees that prevalence levels will not rise again.

*“With 3 percent of adult Cambodian males living with HIV, any significant drop in condom use will inevitably lead to a resurgence of the epidemic. Thus, intensive multisectoral prevention efforts must be sustained and further expanded to cover other increasingly important forms of transmission, even as care and support needs create greater demands on resources through the future.”<sup>2</sup>*

### **B. *Economic Impact of HIV/AIDS in Cambodia***

HIV/AIDS is likely to affect the economic viability of Cambodia in a number of ways. Families are already incurring health costs of around US\$30 per capita, of which US\$22 per capita is spent on medication. This is a very high amount, given that the per capita income of Cambodia is only US\$263 per year. The lack of access to many of the HIV/AIDS services that are provided in the public sector are likely to mean that Cambodian families affected by HIV/AIDS will incur significant and impoverishing costs to care for ill family members. This strain on the family may be further worsened if families attempt to pay for expensive medications from their own pockets (ARVs, for example, can cost anywhere from US\$300 to US\$5,000 per year, not including the costs of related services, tests for viral load, CD4, CD8, etc<sup>3</sup>). The additional cost of illness

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<sup>2</sup> The Cambodia Working Group on HIV/AIDS Projections, May 2002. *Projections for HIV/AIDS in Cambodia: 2000-2010*, Cambodia.

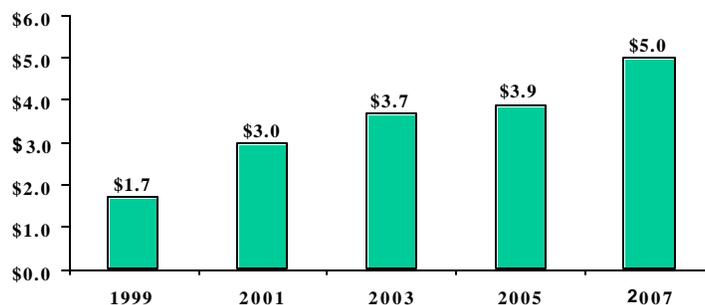
<sup>3</sup> Forsythe S, 2001. An Economic Evaluation of HIV/AIDS Services in Kenya: A Practical Policy Application of Contingent Valuation. The Liverpool School of Tropical Medicine.

associated with HIV/AIDS is likely to be devastating for already impoverished Cambodian families.

*The burden of illness and death will fall heavily on households with numerous interconnected consequences including: debt, sale of assets, malnutrition of children, school dropouts, and extended family and grandparent care of orphans.*<sup>4</sup>

The economic impact of HIV/AIDS on the health care system also remains uncertain, although some conservative estimates have been developed. Based on an assessment from a variety of inpatient and outpatient facilities in Cambodia, it was estimated that in 1999 the annual cost of care per PLWA was US\$291 without ARV.<sup>5</sup> The projections indicate that total cost of treating PLWHAs (without ARVs) would rise from US\$1.7m in 1999 to US\$5.0m by 2007, as shown in Figure 1.

**Figure 1:**  
**Cost of AIDS Treatment in Cambodia (US\$m)**



Source: S Bunna and C Myers (1999) "Estimated Economic Impacts of AIDS in Cambodia," Unpublished report.

HIV is also likely to have an economic impact because the epidemic most affects individuals within their prime age of productivity. For example, in Cambodia the highest level of labor force participation is reached by men between the ages of 35 and 44 years.<sup>6</sup> This is also the age range most affected by HIV/AIDS among men in Cambodia.

The relatively high level of HIV infection also means that the cost of the disease will be incurred at least in part by Cambodia's employers. As infected workers become increasingly ill, their productivity is likely to be diminished. This applies to Cambodian workplaces in the public and the private sector. The garment factories may be particularly hard hit, given that this industry is the largest private sector employer in Cambodia. However, it is also conceivable that since employees have few benefits and are easily

<sup>4</sup> Bunna S, Myers C, 1999. *Estimated Economic Impacts of AIDS in Cambodia*. 1-28. Phnom Penh, Cambodia.

<sup>5</sup> Bunna S, Myers C, 1999. *Estimated Economic Impacts of AIDS in Cambodia*. 1-28. Phnom Penh, Cambodia.

<sup>6</sup> National Institute of Statistics (MOP), 1999. *General Population Census of Cambodia, 1998: Final Census Results*. Phnom Penh, Cambodia.

fired, the private sector may attempt to shift the burden of HIV from their companies back to the Cambodian government and/or the families of employees.

*Although the evidence is still largely anecdotal, it is clear that companies, while bearing some of the costs of AIDS prevention and care internally, will be able to shift many of the internal costs of HIV/AIDS onto governments and households.<sup>7</sup>*

The macroeconomic impact of HIV/AIDS in Cambodia has yet to be calculated. Studies regarding the potential impact of HIV/AIDS on macroeconomic growth in other countries have generally not been conclusive, with some studies in Botswana and Tanzania showing that the change in per capita income would be minor. Other studies, however, found a much more significant impact, with predictions that HIV/AIDS would leave the Kenyan economy one-sixth smaller than it would have been in the absence of HIV/AIDS.<sup>8</sup> More recent economic analyses have indicated that the epidemic may be affecting growth to a much greater extent than earlier predicted.<sup>9</sup> In the case of Cambodia, it is likely that any benefits from having a smaller population would be quickly outweighed by the loss of savings and decreases in non-health spending. At the same time, the Cambodian economy is already so impoverished that the impact of HIV/AIDS is likely to be observed more in terms of increases in devastating poverty at the household level and missed economic opportunities rather than in significant declines in an already low per capita income.

### **C. Finance and Planning**

The RGC launched its first national AIDS programme in 1993. The RGC established the National Centre for HIV/AIDS, Dermatology and STDs (NCHADS) in 1998, as a unit within the MOH. In 1999, the Government also set up the National AIDS Authority (NAA) to coordinate a multisectoral approach involving ministries beyond the MOH, as well as the voluntary and private sectors.

The RGC has completed its most recent National Strategic Plan (NSP), which covers the period from 2001 to 2005. The NSP builds on the success of Cambodia's ongoing efforts to reduce the prevalence of HIV. Cambodia's NSP also represents a key turning point in the country's effort to create a more comprehensive and multisectoral response. While Cambodia's Ministry of Health, predominantly through NCHADS, has actively and successfully performed its role, other ministries have been much less successful in responding to HIV/AIDS as a critical development issue. Cambodia's NSP provides particular guidance and direction to these ministries, as they develop their own workplans for responding to the HIV/AIDS epidemic.

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<sup>7</sup> Simon J, et al (2000). The Response of African Businesses to HIV/AIDS. *HIV/AIDS in the Commonwealth 2000/01*. London: Kensington Publications.

<sup>8</sup> AIDS in Kenya: *Socio-economic Impact and Policy Implications*. Arlington, Virginia: Family Health International, 1996.

<sup>9</sup> Bonnel R, 2000. *HIV/AIDS: Does It Increase or Decrease Growth in Africa?* Washington DC, World Bank.

The NSP was designed to provide a clear vision about Cambodia's future direction in responding to the HIV/AIDS epidemic. The NSP is the first step in designing a multisectoral workplan and budget, which will eventually indicate the activities that need to be initiated by each ministry and the resources required to complete each of these activities. The NAA is currently finalizing a workplan which specifies the activities that need to be completed in order to successfully achieve the NSP. Up to now, however, the resources required for achieving the goals of the NSP have not been estimated.

The fact that there is currently no comprehensive workplan covering all ministries and all activities over the 5 year period of time makes it difficult to provide an accurate costing of the NSP. However, it is possible to develop an estimate of resource requirements, based on current knowledge regarding the costs of interventions and the likely demand for these services. Future refinements of these estimates, however, would be extremely useful as workplans become more clearly defined.

The main purpose of costing the NSP is to provide estimates of the resource requirement that would need to be borne by RGC and by its donor partners to implement the NSP. While important costs are incurred by households, mission hospitals, military hospitals, NGOs, the private sector and other parties, these are not treated directly in this report.

It is important to note that this costing exercise is not intended to estimate the resources required to meet every need. It is probably not realistic, for example, to assume that by 2005 every adult in Cambodia would receive voluntary counseling and testing (VCT) services, every workplace would have a peer education program, every infected individual would receive the best available care, etc. Therefore this analysis is based on certain assumptions regarding the level of "scaling up" that could be realistically achieved by 2005. The idea is to closely align this costing with the goals and objectives of Cambodia's NSP, while developing a budget that is feasible yet adequately ambitious.

### **III. Methodology**

Various demographic and behavioral databases were available for use in estimating the potential demand for the various HIV/AIDS services. For example, data were collected from Cambodia's 1998 Census, the 2000 Demographic and Health Survey, the Cambodian Household Male Survey 2000 and Cambodia's 2000-01 Education Indicators.

In conducting this analysis, 40 key informants in Cambodia were interviewed between April 29<sup>th</sup>, 2002 and June 8, 2002 by POLICY Project Consultant, James D'Ercole. These individuals were able to verify the cost of various interventions, the potential demand for such interventions, and the capacity of existing institutions to successfully implement scale-up activities. These interviews served as inputs into the costing exercise.

In addition, various documents that contained cost estimates were used to determine the resources that would be required to achieve specific objectives. These documents included:

- Comprehensive Budget Allocations in the Health Sector, NCHADS
- A Media Initiative to Combat HIV/AIDS in Cambodia, BBC/WST
- Strengthening Cambodia's Response to HIV/AIDS, DfID
- Proposed DfID Programme to Support Activities to Combat HIV/AIDS in Cambodia: Draft Proposal on Component with MoEYS, DfID
- Education Sector Plan, MoEYS
- Country Coordination Proposal for the Global Fund to Fight AIDS, TB and Malaria, CCM

Wherever possible, the data from the key informant interviews and the existing budget documents were utilized. When none of these data sources could provide the required inputs, it was necessary to apply either regional or global cost estimates. These items were collected from the model produced for the 2001 article, "Resource Needs for HIV/AIDS", which was published in the journal, *Science*, in preparation for the UN General Assembly Special Session on HIV/AIDS (UNGASS) in 2001.<sup>10</sup>

The process of costing Cambodia's NSP involves three components. The first component involves determining the unit costs required for delivering a particular service. In order to collect unit costs, key informants in Cambodia were interviewed and asked to define the resources requirement to provide particular services. For example, individuals were asked to describe the cost of running condom distribution programs, VCT sites, STI clinics, etc. These costs were compared to global estimates and checked for consistency.

The second component involved determining the level of demand for particular services. The potential demand for particular services was based on available demographic information, assumptions about the need for services that were used in making the UNGASS estimates and information collected from various surveys in Cambodia. For example, the number of people in need of STI services was collected based on the prevalence of various STIs and the size of Cambodia's adult population.

The third part of the cost analysis involved determining levels of coverage that could be achieved by 2005. This was a challenging step, as Cambodia's NSP does not contain specific coverage targets. Therefore coverage estimates had to be developed based on interviews with individuals involved in planning and scale-up activities.

It is critical to recognize that this initial costing exercise will need to be part of a dynamic process, in which more specific plans are clarified and budgetary requirements are further detailed. NCHADS, for example, frequently revises its estimates of resource requirements, based on an up-to-date assessment of the country's need, the latest

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<sup>10</sup> Schwartlander B, Stover J, Walker N, Bollinger L, Gutierrez JP, McGreevey W, Opuni M, Forsythe S, Kumaranayake L, Watts C, Bertozzi S. AIDS. Resource needs for HIV/AIDS. *Science* 2001; 292:2434-36.

information on the effectiveness of health interventions and a realistic assessment of resources that are available and are likely to be available in the future.

## **IV. Cost Estimates of HIV/AIDS Interventions**

The following section describes the strategic objectives that were costed, the targets that were established for these strategic objectives and an estimate of the financial resources that would be required to achieve the target.

### **A. Management, Coordination, Capacity Building, Surveillance, Research and Policy/Legislative Development**

*Goal for 2005: Management, coordination, surveillance, evaluation, capacity strengthening and improving the policy environment.*

*Cost in 2005: \$6,541,000*

The estimated resources required for management, coordination, capacity building, surveillance, research and policy/legislative development are based on budget estimates made by NCHADS, NAA, MoEYS, CCM and The POLICY Project. Overall it was calculated that approximately \$6,541,000 would be required in 2005, including:

- \$3,381,000 for Management and Coordination
- \$1,236,000 for Policy-Related Activities
- \$626,000 for Surveillance
- \$599,000 for Capacity Building
- \$399,000 for Technical Assistance
- \$300,000 for Research

### **B. Mitigation**

#### **1. Ensuring Support for Orphans Affected by HIV/AIDS**

*Goal for 2005: Of all children orphaned by parents that died of HIV/AIDS, 5% receive care in orphanages, 10% receive assistance through their communities and 15% receive school subsidies.*

*Cost in 2005: \$2,444,000*

Based on projections made in Cambodia using the AIDS Impact Model (AIM), the number of children who will be orphaned due to HIV/AIDS will be 93,000 by the year 2005.

The cost of providing orphan care was assumed to be comprised of three different cost categories. The first involved the cost of care for children in orphanages. This approach for caring for orphans is clearly the least desirable and most expensive approach, and was

assumed to involve only about 5% of all orphans. The cost of orphan care, based on an average of global estimates, was assumed to be \$356 per year per orphan.

The second component of orphan care is community assistance. Of the children not receiving care in orphanages, it was assumed that 10% could potentially be reached with community assistance by the year 2005. The cost of this community assistance, again based on global costings, was determined to be \$51 per year per orphan.

The final component of orphan care focuses on the provision of school subsidies. These subsidies were assumed to cost approximately \$25 per orphan per year, and cover 15% of all children orphaned by HIV/AIDS.

Based on these estimates, it was determined that the resources required to ensure support for orphans affected by HIV/AIDS would reach \$2,444,000 in the year 2005.

## **2. Empowering the Individual, the Family and Community in Dealing with the Consequences of HIV/AIDS**

*Goal for 2005: Strengthen the capacities of vulnerable families to improve their quality of life; strengthen the capacities of families, orphans and others to cope with their problems and mobilize and strengthen community based responses.*

*Cost in 2005: \$610,000*

Cambodia's Global Fund application indicates that Cambodia will "increase the reach of successful HIV/AIDS impact mitigation projects to offer a comprehensive approach of social interventions reducing the burden cause by the epidemic on children and their families, through community based responses supported by expanded partnerships between governmental institutions, humanitarian organisations, other civil society and community members."

In estimating the cost of this intervention, it was necessary to assume that the amount budgeted for in Cambodia's GFATM application adequately represented the resources required. Specifically the GFATM indicated that \$610,000 was required in the first year. It was therefore assumed that the same amount would be required in subsequent years.

### **C. Treatment**

#### **1. Providing Palliative Care to those Infected with HIV/AIDS**

*Goal for 2005: Approximately two-thirds of Cambodians requiring palliative care are able to receive it.*

*Cost in 2005: \$1,252,000*

The model estimates that in the year 2005, approximately 26,000 Cambodians will need palliative care. Such care is relatively inexpensive, at about \$75 per infected. However, less than half of those who need care services are able to receive them. It was determined

in the UNGASS modeling exercise, that palliative care services could feasibly be scaled up in Cambodia, such that 62% of all those in need could be assisted. The cost of palliative care is approximately \$75 per client, or about \$1,252,000 per year by the year 2005. As noted throughout this document, the cost assigned to the strategic objective represents only the recurrent cost of the service provided, unless otherwise noted.

## **2. Treating Opportunistic Infections**

*Goal for 2005: Over 50% of people infected with HIV and in need of care are able to receive treatment for their opportunistic infections.*

*Cost in 2005: \$4,112,000*

It is currently estimated that only 20% of infected individuals in need of care are able to receive treatment for their opportunistic infections. This was determined to feasibly be scaled up to more than 50% by 2005. OI treatment is more expensive than palliative care (\$300 per year vs. \$75 per year), but still needs to be strongly prioritized in order to increase the quantity and quality of life of those infected. In order to provide care services to 51% of those in need, it is estimated that resources for OI treatment need to be increased to \$4,112,000 by the year 2005.

## **3. Offering HIV-Infected Individuals OI Prophylaxis**

*Goal for 2005: Over 40% of people needing care are able to receive prophylaxis to prevent opportunistic infections.*

*Cost in 2005: \$352,000*

OI prophylaxis has been shown to be both a highly cost-effective and affordable way to improve the health of people living with HIV/AIDS. It has been estimated that the average OI prophylaxis costs only about \$32 per year and could potentially reach over 11,000 Cambodians by the year 2005. The need for OI prophylaxis is also closely related to the availability of highly active antiretroviral therapy (HAART). As resources for HAART become more widely available, the resources required for providing OI prophylaxis is likely to decline. The total cost for OI prophylaxis was determined to be \$352,000.

## **4. Ensuring that Reliable ARV Treatments Are Available**

*Goal for 2005: Nearly 40% of people in need of HAART are able to receive it*

*Cost in 2005: \$6,335,000*

The cost of HAART varies greatly, depending on a number of factors (the availability of generics, the non-drug cost of HAART, etc.). In developed countries, HAART medications can cost more than \$10,000 per year. However, generic versions of HAART medications have been offered at prices as low as \$300 per patient per year.

For the purpose of the UNGASS estimates, it was assumed that HAART drugs could cost as much as \$3,900. However, in the final calculations, a lower cost estimate of \$392 per patient per year for medications and \$140 for lab costs was used. This is less expensive than is currently available in Cambodia, but assumes that a level of price discounts for drugs will continue through 2005.

Currently HAART is available to only a very few Cambodians who need it. With a scaled up program, however, it is estimated that as many as 11,000 Cambodians could potentially have access to HAART by 2005. If this scale up occurs, Cambodia would need to obtain resources of over \$6.3 million to pay for medications and additional laboratory costs.

## **D. Prevention**

### **1. Providing HIV/AIDS Prevention Services for Youth In-School and Out-of-School**

*Goal for 2005: 20% of all teachers trained in HIV/AIDS per year*  
*Cost in 2005: \$3,142,000*

The cost of youth-focused interventions was based on a combination of in-school and out-of-school interventions. The in-school youth intervention includes the training of primary and secondary school teachers. These teachers will, in turn, teach their students regarding HIV/AIDS. The resources required for youth-focused interventions is comprised of a combination of costs for training primary and secondary school teachers to teach students about HIV/AIDS, as well as the cost of managing a peer education program for out-of-school youth. In the case of this modeling exercise, it was assumed that 20% of all primary and secondary school teachers would receive training in HIV/AIDS every year at a cost of \$35 per teacher trained. Furthermore, the costing model assumed that 30% of out-of-school youth between the ages of 12 and 15 could be reached at a cost of \$8 per youth per year. In total, it is estimated that youth-focused interventions would cost \$3.1 million in 2005.

### **2. Expanding Interventions with CSWs and their Clients**

*Goal for 2005: 90% of CSWs reached with peer education; condom use rises to 90%*  
*Cost in 2005: \$4,449,000*

Interventions with CSWs and their clients were assumed to involve peer education for CSWs, along with the distribution of male and female condoms. The best available evidence from Cambodia suggests that the cost of peer education programs are approximately \$78 per year per CSW reached. Estimates of the number of direct and indirect CSWs in Cambodia varies greatly, from as low as 12,000 to as high as 110,000. For the purpose of this exercise, it was assumed that there are 16,000 direct CSWs in Cambodia, or about 3.4% of urban women between the ages of 15 and 49. Of these

CSWs, it was determined that a successful program would reach 90% of these CSWs by 2005.

The Behavioral Sentinel Surveillance V indicated that CSWs engaged in an average of 3.2 sex acts per day. The goal established is that by the year 2005, 90% percent of these sex acts would be protected. Of these condoms, it was assumed that 95% would be male condoms and 5% would be female condoms. The cost per male condom distributed was estimated \$0.20 and the cost per female condom distributed was \$1.00 (these costs represent not only the cost of the commodities, but also the cost associated with distributing them).

In total, it was therefore estimated that Cambodia would need approximately \$4.4 million in 2005 for interventions with CSWs.

### **3. Ensuring STI Services are Accessible**

*Goal for 2005: 53,000 STI cases treated*

*Cost in 2005: \$9,212,000*

It appears that the incidence of STIs has been declining, in conjunction with Cambodia's drop in HIV prevalence and increase in condom use. Using the UNGASS estimates, it was possible to estimate that there are approximately 53,000 STI cases treated per year in Cambodia. The unit cost estimates, based on Cambodia-specific data, indicates that STI cases at clinics are treated at \$8.34 per visit and the cost of syphilis screening for ANC attendees is \$2 per woman screened. Additional resources for capacity building, training, and programs designed to provide STI treatment to CSWs were added based on budget estimates provided by NCHADS. Thus it was calculated that \$9.2 million would be needed in 2005.

### **4. Strengthening and Expanding VCT**

*Goal for 2005: 47,000 people screened for HIV*

*Cost in 2005: \$2,244,000*

Currently there are very few individuals who have been tested for HIV. However, the RGC is planning to scale-up VCT services across the country. It is estimated that by the year 2005, VCT services will be used by 47,000 Cambodians. At a full cost of approximately \$47 per client, it is estimated that \$2.2 million would be required per year.

### **5. Strengthening and Expanding Workplace Programs**

*Goal for 2005: 25% of formal workforce have access to STD treatment; 3% of formal workforce have access to peer education,*

*Cost in 2005: \$773,000*

Currently Cambodia has a relatively small private sector and very limited HIV/AIDS workplace programs. Various organizations are scaling up their HIV/AIDS workplace activities in Cambodia, with interventions including peer education, the treatment of employees with STIs and condom distribution.

The goals that were established in the UNGASS estimates were that 25% of workers in Cambodia's formal sectors have access to the treatment of STIs and 3% of these workers would have access to peer education programs by the year 2005. At a unit cost of \$7 per employee reached with peer education, \$8 per employee treated for an STI and \$0.10 per condom distributed at the workplace, it is estimated that \$773,000 would be required in 2005.

## **6. Ensuring a Safe Blood Supply**

*Goal for 2005: 100% of blood supply screened for HIV*

*Cost in 2005: \$537,000*

Estimates are that 27,000 units of blood would be required in Cambodia in 2005. According to Cambodia-specific estimates, it is estimated that the cost of screening is approximately \$20 per unit of blood. Therefore it is estimated that \$537,000 would be required to assure a safe blood supply.

## **7. Reducing transmission of HIV from mothers to their children**

*Goal for 2005: 50% of ANC attenders are screened for HIV and receive nevirapine and formula, where necessary*

*Cost in 2005: \$646,000*

In Cambodia there will be approximately 407,000 births in 2005. Of this number, it is estimated that 52% of pregnant women will use ANC services. The goal established in the UNGASS model is that 50% of these women will be able to receive screening for HIV by 2005. Among the women who are HIV-infected, it is assumed that 90% would agree to use nevirapine to prevent mother-to-child transmission and 50% of women would use formula feeding to prevent transmission to their newborn.

It is estimated that the cost of HIV screening would be \$3.80 per woman, the cost of nevirapine would be \$5 per infected woman and the cost of six months worth of formula would be \$50 per infected woman. In addition, there would be an additional \$28 per infected woman to strengthen the health system in order to assure the proper provision of PMTCT services. The total cost therefore to reach this goal would be \$646,000 by 2005.

## **8. Strengthening and Expanding IEC, BCC and Outreach to Promote Behavior Change**

*Goal for 2005: IEC, BCC and Outreach activities provide information required to inform, educate, and encourage behavior change.*

*Cost in 2005: \$3,086,000*

The estimated cost of IEC, BCC and outreach activities was based predominantly on estimates provided by NCHADS regarding the resources currently required to carry on planned activities. Estimates are that Cambodia requires approximately \$3,086,000 per year for conducting these activities. In this case it was assumed that the cost of the program would be relatively constant between current funding and funding required in 2005.

## **9. Encouraging Behavior Change Through a Mass Media Campaign**

*Goal for 2005: Improve knowledge and understanding of HIV/AIDS, promote sexual behavior change, normalise and open up discussion surrounding HIV/AIDS.*

*Cost in 2005: \$1,450,000*

The cost of a mass media campaign is based on estimates developed by the BBC/WST. The proposed mass media program is designed to include a significant number of radio and television programs which reach out to the community and encourage behavior change. The cost of this proposal is approximately £1 million, or \$1.45 million, per year.

## **V. Summary of Costing Estimates**

Table 1 illustrates the level of resources that will be required by the year 2005 in order to achieve the objectives identified. These cost estimates are one year estimates. They do not include a number of cost items, including various costs not directly associated with delivering services (e.g., overhead costs of international cooperating agencies are not included in this analysis, yet are likely to represent a fairly significant portion of funding from donors).

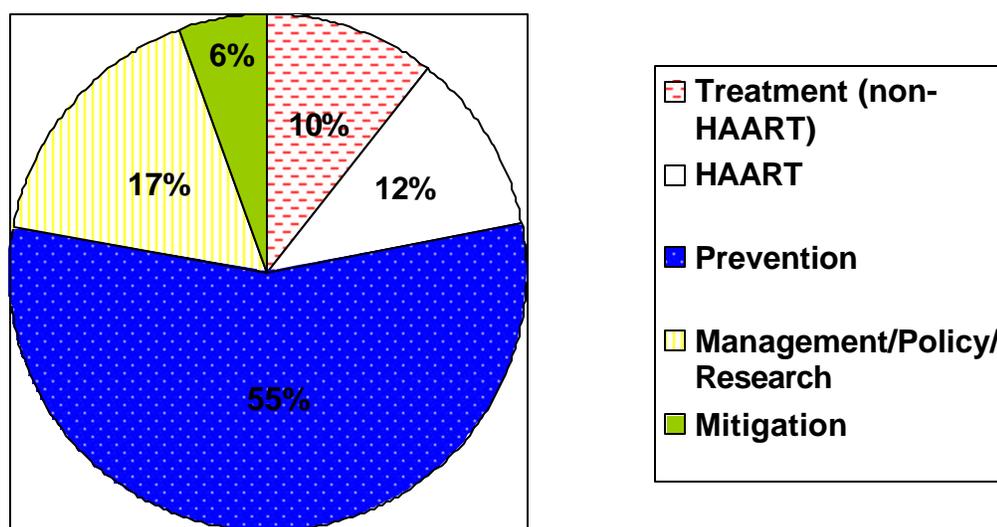
The exact level of current funding for HIV/AIDS programs from donors and the RGC remains uncertain. However, a review of spending on HIV/AIDS in the health sector indicates that there is likely to be a gap in the available resources without additional funding. For example, NCHADS estimates that in 2001, \$13.8 million was spent on HIV/AIDS. In 2002, donors and the RGC are estimated to spend \$15.3 million on HIV/AIDS programs within the health sector (\$6.7 million through NCHADS and \$8.7 million through NGOs and other sources). In 2003, there could be an increase in spending of as much as \$15 million, due to the availability of additional funds from USAID, the Global Fund for AIDS, TB and Malaria (GFATM) and DfID. However, even with \$30 million per year, there would remain a gap of around \$23 million that would need to be closed by the year 2005.

**Table 1: Estimated Costs of Cambodia's NSP (2005)**

	<b>2005</b>	
<b>Treatment</b>		
Palliative Care	\$ 1,251,918	
Treatment of OIs	\$ 4,112,177	
Prophylaxis of OIs	\$ 352,540	
HAART	\$ 6,335,443	
<b>Subtotal</b>	<b>\$ 12,052,079</b>	<b>22.0%</b>
<b>Prevention</b>		
Youth-Focused Interventions	\$ 3,142,276	
CSWs and Clients	\$ 4,448,810	
Condoms	\$ 2,528,312	
STI Management	\$ 9,211,629	
VCT	\$ 2,243,671	
Workplace	\$ 773,439	
Blood Safety	\$ 536,759	
MTCT	\$ 645,985	
IEC/BCC	\$ 3,567,289	
Outreach/BCC	\$ 1,932,270	
Mass Media	\$ 1,450,000	
<b>Subtotal</b>	<b>\$ 30,480,439</b>	<b>55.7%</b>
<b>Management/Policy/Research</b>		
Surveillance	\$ 625,540	
Research	\$ 300,192	
Management & coordination	\$ 3,381,029	
Technical assistance	\$ 399,400	
Policy	\$ 1,235,800	
Capacity building	\$ 599,400	
Monitoring & evaluation	\$ 2,606,416	
<b>Subtotal</b>	<b>\$ 9,147,777</b>	<b>16.7%</b>
<b>Mitigation</b>		
Orphan Care	\$ 2,444,441	
Impact Mitigation	\$ 610,000	
<b>Subtotal</b>	<b>\$ 3,054,441</b>	<b>5.6%</b>
<b>TOTAL</b>	<b>\$ 54,734,736</b>	<b>100.0%</b>

As shown in Figure 2, the distribution of resources in this costing analysis suggest that about 55% of all resources would be spent on prevention, while 23% would be spent on treatment, 17% on management and coordination and 6% on mitigation. Such a distribution should not be taken as given, but instead should be discussed and debated by Cambodia's policymakers, advocates, and members of civil society.

## Figure 2: Distribution of Costs



It is worth noting that this distribution does appear to represent an increased emphasis on treatment relative to previous years. In 2002, for example, NCHADS estimates that only 16% of the HIV/AIDS resources were spent on treatment, while in 2001 the proportion spent on treatment was only 12%.

## VI. Recommendations

The costing exercise suggests that Cambodia can achieve its goals established in the NSP with a significant but feasible increase in new HIV/AIDS resources. This analysis indicates that if international donors and the RGC can together mobilize \$55 million in 2005, then the strategic objectives outlined in this analysis can be achieved.

There are a number of next steps that do need to be taken by policymakers in Cambodia to strengthen Cambodia's ability to mobilize resources. First, the NAA and NCHADS should confirm or revise the strategic objectives costed in this preliminary report. Second, these same organizations need to review and revise the assumptions made in this report regarding unit costs, target populations, and assumed coverage levels. Third, the

NAA should conduct an evaluation of current spending on HIV/AIDS programs by donors and the RGC. Fourth, NAA should work to identify potential sources of funding, where financial gaps appear to exist. Finally, Cambodia's policymakers, in conjunction with civil society, should use tools such as **Goals**, so that resources are spent on interventions that are likely to achieve the greatest impact.