Thailand National Expenditure on HIV/AIDS 2008-2009

Thai Working Group on National AIDS Spending Assessment
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1. Background

As required by UNGASS country report 2010, the Thai working group on National AIDS Spending Assessment (NASA) convened several rounds of work session among partners in and outside Ministry of Public Health, who are most knowledgeable on spending on HIV/AIDS. These work sessions were tasked to estimate the total spending on HIV/AIDS for 2008 and 2009.

This report continues the last report of 2007 spending, table 1 provides background spending on HIV/AIDS in 2007

Table 1 Total AIDS expenditure, 2007, current year price

	2007
Total AIDS expenditure, million Baht	6,728
Forecast Total Health Expenditure, million Baht	248,852.4
Total AIDS expenditure 2007	
• per capita population, Baht	105
• per capita PLWHA, Baht	11,600
• % GDP	0.08%
• % THE	2.7%

Source UNGASS country progress report for January 2006-December 2007

2. Objectives

1. To estimate the magnitude, sources and profile of expenditure on HIV/AIDS for 2008 and 2009
2. To produce key indicators on total expenditure on HIV/AIDS in terms of
    a. Baht per capita Thai population
    b. Baht per capita PLWHA,
    c. Percent of GDP
    d. Percent of Total Health Expenditure (THE)

3. Methodology

3.1 Methods

1. With the application of National Health Account [OECD System of Health Account, version 1.0: 2000], a two dimensional matrix of financing sources by healthcare function was produced. We deliberately do not produce the third dimension on AIDS expenditure by public and private healthcare providers, as there is limited policy utilities and huge time consuming to produce such data.
2. Compile secondary data on actual expenditure on HIV/AIDS where available from relevant financing agents.

3. Where there is no ready reference secondary data on spending on HIV/AIDS, the Working Group applied different impute methods, based on PQ approaches (P refers to price or unit cost, Q refers to quantity or services rendered, mostly relied on epidemiological data). For example, expenditure on ART, opportunistic infections and laboratories from health insurance schemes. There are three public health insurance schemes operating in Thailand in 2008 and 2009, the Civil Servant Medical Benefit Scheme, the Social Health Insurance and the Universal Coverage Scheme. Private insurance was deliberately excluded as it applies pre-application screening and excluded PLWHA to join in member of private insurances.

3.2 Data sources

1. Actual spending on HIV/ AIDS was retrieved from mostly government spending records in various Departments across different Ministries, as well as donor sources, such as Ministry of Public Health, National Health Security Office who is responsible for universal access to ART program and OI for HIV patients under the Universal Health Care Scheme (UC), the Comptroller General's Department of the Ministry of Finance on expenditure on HIV/AIDS for the Civil Servant Medical Benefit Scheme, Social Security Office who spent for their social health insurance members and the Global Fund and other donors from outside country.
2. The most update GDP for 2008 and 2009 were retrieved from the website of the National Account Office of the National Economic and Social Development Board [1]
3. Total Health Expenditure for 2008 was retrieved from the National Health Account 1994-2008 of Thailand, however; the total health expenditure for 2009 was estimated based on historical growth of THE [2].
4. Number of people living with HIV/AIDS in 2008 and 2009 based on estimation from the registration system of the National Health Security Office.

3.3 Scope

1. We use actual spending on HIV/AIDS, not budgeting figures.
2. This study covers only spending by government and donor resources. We deliberately exclude household spending on HIV/AIDS, as there is no any national dataset capturing household spending specifically on HIV/AIDS. In the context of universal coverage, household spending on HIV/AIDS is likely to be extremely low; all OI services were fully covered by each of the three insurance schemes and also ART is universally covered by all three schemes, free at point of services. There is no co-payment. However, there may be certain proportion of patients seek ART services from private hospitals, for which households bear the full cost of these treatment. However, it is unknown on the magnitude of these patients, voluntarily opted out from insurance scheme.
3. Due to gross lack of data, we did not cover expenditure by local government
4. Fiscal year (October to September) for government expenditure and calendar year (January to December) for international expenditure are treated equivalent.
5. Healthcare function applies the 8 items of expenditure proposed by UNGASS template.

4. Results

4.1 Financing context in Thailand

Table 2 background data on healthcare financing 2008-09, current year price

	2008	2009
Population	63,121,000	63,396,000
Total Health Expenditure (THE) per capita, Baht	5,739	6,183
THE per capita, US$	171	178
Exchange rate, Baht per US$*	33.13	34.72

Source: Total Health Expenditure for 2008 refers to Thai NHA 1994-2008. The total health expenditure for 2009 was estimated based on historical trend of 1994-2008 by The Working Group (Average geometrical growth rate was 5.3%).
Note: Exchange rate quote from Bank of Thailand

Background data on healthcare financing indicated that in 2008, Thailand spent 5,739 Baht per capita for health of the Thai population, or US$ 173 per capita (exchange rate 33.13 Baht per US$), see Table 2. Per capita total health expenditure slightly increased to US$ 178 in 2009.

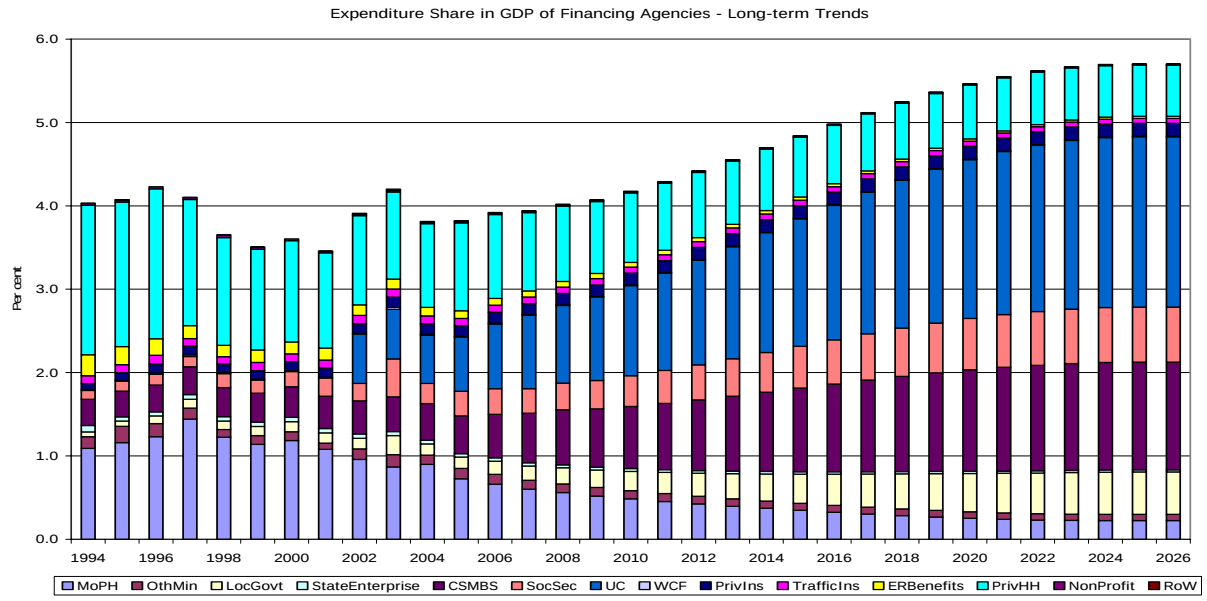
Table 3 Total health expenditure and selected NHA indicators, selected year 1994 to 2008, current year prices

NHA indicators	1994	1997	2001	2002	2005	2006	2007	2008
THE, Total Health Expenditure, million Baht	127,655	189,143	170,203	201,667	251,665	290,573	314,712	363,771
THE as % of GDP	3.5%	4.0%	3.3%	3.7%	3.6%	3.7%	3.7%	4.0%
Public Financing Agencies (%)	45%	54%	56%	63%	64%	68%	73%	75%
Private Financing Agencies (%)	55%	46%	44%	37%	36%	32%	27%	25%
THE, Baht per capita	**2,160**	**3,110**	**2,732**	**3,211**	**4,032**	**4,625**	**4,992**	**5,739**
THE, USD per capita	**86**	**99**	**61**	**74**	**100**	**122**	**144**	**171**

Source: Thai Working Group on NHA, 1994-2008

Table 3 provides a time series between 1994 and 2008, for some selected years; THE as percent of GDP had never reached beyond 4.0%. The public financing agencies play increasing role in financing health in Thailand, from 45% in 1994 to 75% in 2008; while a decreasing trend of the proportion of private source of finance was observed; down from 55% in 1994 to 25% in 2008.

Figure 1 Long term THE projection 2006 to 2026 based on 1994-2005 NHA



Based on 1994-2005 NHA, a long term projection of total health expenditure between 2006 and 2026 was conducted jointly by ILO and a number of Thai researchers [3]. In figure 1, by 2026, total health expenditure would be within the capacity of the government to afford, less than 6% of GDP, whereby the general tax funded universal coverage would have the highest share of financing sources; this was followed by Civil Servant Medical Benefit Scheme expenditure. Private household spending would be equivalent to that of by Social Health Insurance Scheme. Historically, donors' resources play insignificant role in financing health in Thailand, less than 0.05% of total health spending.

4.2 How much Thailand spent on HIV/AIDS?

Table 4 Total AIDS expenditure, 2008-09, current year price

	2008	**2009**
Total AIDS expenditure, million Baht	6,928	7,208
Total Health Expenditure, million Baht	363,771	383,051*
Total AIDS expenditure 2007, as		
• per capita population, Baht	110	114
• per capita PLWHA, Baht	14,275	14,417
• per capita population, US$	3.3	3.3
• per capita PLWHA, US$	430.9	415.2
• % GDP	0.08	0.08
• % THE	1.9	1.9

* Total Health Expenditure for 2009 was estimated based on historical trend of 1994-2008 by The Working Group

In 2008, the total expenditure on HIV/AIDS was 6.928 billion Thai Baht. This is equivalent to 110 Baht per capita Thai population, or 14,275 Thai Baht per capita PLWHA, given the total number of 485,325 PLWHA. The total expenditure on HIV/AIDS

accounts for 0.08% of GDP in 2008, or equivalent to 1.9% of Total Health Expenditure, See table 4.

In 2009, there was a slight increase of Total AIDS expenditure, 114 Baht per capita population or 14,417 Baht per PLWHA. There was a very marginal increase of AIDS spending. Therefore the ratio between AIDS spending and GDP or THE was unchanged in two years; remained at 0.08% of GDP and 1.9% of THE respectively for both years.

4.3 What are HIV/AIDS expenditure used for?

Table 5 Total AIDS expenditure by functions, 2008-09, current year price

	2008		2009	
	Thai Baht, million	Percent	Thai Baht, million	Percent
1. Prevention	1,500	21.7%	987	13.7%
2. Care and Treatment	4,560	65.8%	5,483	76.1%
3. Orphans and Vulnerable Children (OVC)	50	0.7%	52	0.7%
4. Program Management Administration Strengthening	397	5.7%	250	3.5%
5. Incentive Human Resources	44	0.6%	208	2.9%
6. Social protection and social services excluding Orphans and vulnerable Children	219	3.2%	171	2.4%
7. Enabling Environment and community Development	2	0.0%	8	0.1%
8. Research excluding operational research	156	2.3%	49	0.7%
Total	6,928	100.0%	7,208	100.0%

In the light of the universal ART adopted by the Royal Government of Thailand since 2003, a majority share of total AIDS spending was used for care and treatment, up to 65.8% in 2008 and increased to 76.1% in 2009. At the same time, expenditure on prevention reduced from 21.7% in 2008 and to 13.7% in 2009. Six other spending items were small; see Table 5. In 2009, OVC and research got less than 1% share, program management and administration strengthening got 3.5% share, incentive for human resources 2.9% and social protection and other social services, 2.4%.

Note that **Annex 1** provides full account of detail expenditure on HIV/AIDS.

4.4 What are sources of financing HIV/AIDS?

Table 6a Total AIDS expenditure by sources and functions 2008, current year price

	Total	Domestic sources	International
1. Prevention	22%	20%	30%
2. Care and Treatment	66%	71%	34%
3. Orphans and Vulnerable Children	1%	1%	0%
4. Program Management Administration Strengthening	6%	3%	22%
5. Incentive Human Resources	1%	1%	1%
6. Social protection and social services excluding Orphans and vulnerable Children	3%	4%	0%
7. Enabling Environment and community Development	0%	0%	0%
8. Research excluding operational research	2%	0%	13%
Total	100%	100%	100%
Total, million Thai Baht	6,928	5,917	1,011
Column percent	100%	85%	15%

Table 6b Total AIDS expenditure by sources and functions 2009, current year price

	Total	Domestic sources	International
1. Prevention	14%	13%	29%
2. Care and Treatment	76%	80%	15%
3. Orphans and Vulnerable Children	1%	1%	0%
4. Program Management Administration Strengthening	3%	2%	17%
5. Incentive Human Resources	3%	1%	33%
6. Social protection and social services excluding Orphans and vulnerable Children	2%	3%	0%
7. Enabling Environment and community Development	0%	0%	1%
8. Research excluding operational research	1%	0%	4%
Total	100%	100%	100%
Total, million Thai Baht	7,208	6,726	482
Column percent	100%	93%	7%

Financing HIV/AIDS program relied mostly on domestic resource, 85% of total spending in 2008 and 93% in 2009. This reflected government financial commitment and we foresee good financial sustainability, as it relies less on donor resources.

Expenditure profile of donor resources significantly differed from that of domestic resources. Domestic resources concentrate most on care and treatment (71% and 80% in 2008 and 2009 respectively). The Thai HIV/AIDS program purchased generic medicine from locally produced ARV and imported generic ARV while donor resources had limitation to purchase generic, only WHO Pre-qualified mostly brand products were allowed to purchase using resources from the Global Fund.

Also donor resources spread throughout the eight major spending items, in particular 33% on incentive for human resources, 29% on prevention, 17% on program management and administration strengthening, 15% on care and treatment. See Table 6a and 6b

4.5 How much different domestic source contributes to financing HIV/AIDS?

From the systems analysis, we categorize five groups of domestic financing sources for HIV/AIDS, (1) the Ministry of Public Health (all relevant departments) is the main stakeholder for HIV/AIDS prevention and control, (2) other ministries such as Ministry of Education, Ministry of Defense, blood safety program spearheaded by the Thai Red Cross, (3) the National Health Security Office is responsible for the provision of OI services and ART for members of the UC scheme, (4) the Civil Servant Medical Benefit Scheme covers the formal sector public employees for treatment of OI and provision of ART, (5) The Social Health Insurance covers the private sector employee, is responsible for provision of ART and OI services for its members.

Table 7a Total AIDS expenditure by sources and functions 2008, current year price

Expenditure profiles	Total	Domestic resources					International
		MOPH	Others	NHSO	CSMBS	SHI	
1. Prevention	22%	37%	43%	24%	4%	4%	30%
2. Care and Treatment	66%	4%	8%	73%	96%	96%	34%
3. Orphans and Vulnerable Children	1%	20%	0%	0%	0%	0%	0%
4. Program Management Administration Strengthening	6%	30%	7%	2%	0%	0%	22%
5. Incentive Human Resources	1%	2%	1%	1%	0%	0%	1%
6. Social protection and social services excluding Orphans and vulnerable Children	3%	0%	39%	0%	0%	0%	0%
7. Enabling Environment and community Development	0%	0%	0%	0%	0%	0%	0%
8. Research excluding operational research	2%	6%	2%	0%	0%	0%	13%
Total	100%	100%	100%	100%	100%	100%	100%
Total, million Baht	6,928	245	556	3,349	831	936	1,011
	100%	4%	8%	48%	12%	14%	15%

Table 7b Total AIDS expenditure by sources and functions 2009, current year price

Expenditure profiles	Total	Domestic resources					International
		MOPH	Others	NHSO	CSMBS	SHI	
1. Prevention	14%	43%	47%	11%	3%	3%	29%
2. Care and Treatment	76%	0%	1%	88%	97%	97%	15%
3. Orphans and Vulnerable Children	1%	16%	0%	0%	0%	0%	0%
4. Program Management Administration Strengthening	3%	36%	8%	0%	0%	0%	17%
5. Incentive Human Resources	3%	1%	1%	1%	0%	0%	33%
6. Social protection and social services excluding Orphans and vulnerable Children	2%	0%	37%	0%	0%	0%	0%
7. Enabling Environment and community Development	0%	0%	0%	0%	0%	0%	1%
8. Research excluding operational research	1%	4%	4%	0%	0%	0%	4%
Total	100%	100%	100%	100%	100%	100%	100%
Total, million Baht	7,208	324	461	3,939	937	1,064	482
	100%	4%	6%	55%	13%	15%	7%

Among the domestic sources of finance, National Health Security Office--responsible for the UC Scheme has the major share of spending, 48% in 2008 and 55% in 2009 respectively, as the NHSO is responsible for UC scheme which covers 75% of total Thai population, see Table 7a and 7b.

Civil Servant Medical Benefit Scheme and Social Health Insurance has a similar share, 12% and 14% in 2008, and 13% and 15% in 2009 respectively; Table 7a and 7b. Different source of finance has different spending profiles. While all three public insurance schemes concentrate more on care and treatment, MOPH and other ministries concentrate their spending on prevention, 43% and 47% respectively and also on other items.

5. Discussions

Table 8 compare total AIDS spending in the last three years, 2007 to 2009 at current year price. Clearly there was no significant change in term of per capita population, US$ 3 in 2007 and US$ 3.3 in 2008 and 2009. However, in term of per capita People Living with HIV/AIDS, it increased significantly from US$ 331.4 in 2007 to US$ 415.2 in 2009, as there is decreasing number of total PLWHA who are still alive due to success in epidemic control, and also increase in the unit cost of ART per patient years, and increasing number of ART patients who experienced failure to the first line regimen and required second line medicines.

The working group on NASA had an impression that the total spending on HIV/AIDS--less than 2% of Total Health Spending, is affordable by the Royal Thai Government in particular there is very limited and decreasing role of donor resources in financing AIDS program in Thailand.

Table 8 Total AIDS expenditure, 2007-09, current year price

	2007	2008	2009
Total AIDS expenditure, million Baht	6,728	6,928	7,208
Total Health Expenditure, million Baht	248,852.4	363,771	383,051
Total AIDS expenditure 2007, as			
• per capita population, Baht	105	110	114
• per capita PLWHA, Baht	11,600	14,275	14,417
• per capita population, US$	3.0	3.3	3.3
• per capita PLWHA, US$	331.4	430.9	415.2
• % GDP	0.08%	0.08	0.08
• % THE	2.7%	1.9	1.9

Source: Thai Working Group on National AIDS Spending Account

Table 9 Total AIDS expenditure by sources and functions 2007-09, current year price

	2007			2008			2009		
Type of expenditure	Total	Domestic	International	Total	Domestic	International	Total	Domestic	International
1. Prevention	14.1	7.3	6.8	22	20	30	14	13	29
2. Care and Treatment	71.8	67.2	4.6	66	71	34	76	80	15
3. Orphans and Vulnerable Children	1.5	1.4	0.1	1	1	0	1	1	0
4. Program Management Administration Strengthening	9.7	5.0	4.7	6	3	22	3	2	17
5. Incentive Human Resources	1.3	0.4	0.9	1	1	1	3	1	33
6. Social protection and social services excluding Orphans and vulnerable Children	0.0	0.0	0.0	3	4	0	2	3	0
7. Enabling Environment and community Development	0.8	0.7	0.1	0	0	0	0	0	1
8. Research excluding operational research	0.7	0.7	0.0	2	0	13	1	0	4
Total, percent	100	100	100	100	100	100	100	100	100
Total Million Thai Baht	6,728	5,564	1,164	6,928	5,917	1,011	7,208	6,726	482
Column percent	**100**	**83**	**17**	100	**85**	**15**	**100**	**93**	**7**

Table 9 compared three year spending profile of HIV/AIDS program. A number of key observations are; a decreasing role of international of financing HIV/AIDS, from 17% in 2007 to 15% in 2008 and 7% in 2009. Vice versa, there was a significant increased commitment by the government, from 83% of total HIV/AIDS spending in 2007 to 93% in 2009. The proportion of care and treatment increased from 71.8% in 2007 to 76% in 2009.

In the era of universal ART program, a vast majority of AIDS spending was for care and treatment; there is a need to have a closer investigation into this spending item.

In 2009, the highest proportion of total HIV/AIDS expenditure, the amount of 3,125 million Baht or 43% of total was used for ART provision. This followed by spending for treatment of OI for inpatients 14%, outpatients 7%, specific HIV laboratory monitoring in support of universal ART 5%, OI prophylaxis 3%, nutritional support in particular for newborn in the PMTCT program 2% and palliative care 1%; see Table 10.

Detail analysis [data not shown in the tables] found that expenditure on ART increased from 2,031 million Baht in 2008 to 3,125 million Baht in 2009, a 54% increase in one year. This is a result from increase number of ART enrollee, notably in the UC scheme from 96,199 in 2008 to 108,924 in 2009 for the first line regimens, and increase number of patients who resisted to first line and have to be treated by the second line drugs. This number increased from 2,998 in 2008 to 5,572 in 2009. This is equivalent to 85.9% increase in one year. The average annual cost per patient year also increased from 10,728 Baht per patient year in 2008 to 16,162 Baht per patient year in 2009. Note that the unit cost for 2nd line medicine was 1.507 times higher cost than the 1st line; as a result of higher cost due to second line regimens.

As HIV/AIDS program spent huge amount of scarce resource, ART should foster the program performance in terms of adherence to medications through empowerment of patients and peer support. Patient groups and civil society can play a significant role to sustain the efficacy of the first line ARV and avoid resistance. Regimens on second line,

though some were compulsory licensed, are expensive and a major factor for cost increase and constraint the limited budget.

Program performance also determine by the level of CD4 count when enrolled to the ART program. Early enrolment of PLWHA when CD4 count drops below 200 cells face difficulties, still a number of PLWHA enrolled at very low level of CD4 count. This was reflected by the fact that still 14% and 7% of total spending on HIV/AIDS was devoted for OI treatment for inpatients and outpatients respectively. The level of CD4 count at the first enrolment to ART is a key monitoring indicator. Public awareness among PLWHA of the universal free ART will gradually improve the early enrolment to ART program.

Table 10 Care and treatment 2008-09, sorted by 2009 spending

Category of healthcare function	2008		2009	
	Million Baht	Percent	Million Baht	Percent
2. Care and Treatment (Sub-Total)	**4,560**	**66%**	**5,483**	**76%**
2.4 Antiretroviral therapy	2,031	29%	3,125	43%
2.12 In-patient Care	942	14%	1,042	14%
2.1 Outpatient care	420	6%	491	7%
2.6 Specific HIV Laboratory monitoring	697	10%	373	5%
2.3 Opportunistic Infection (OI) Prophylaxis	190	3%	215	3%
2.5 Nutritional Support	141	2%	139	2%
2.9 Palliative Care	67	1%	75	1%
2.10 Home-based Care	50	1%	11	0%
2.99 Others / Not-elsewhere Classified	20	0%	7	0%
2.8 Psychological care	4	0%	5	0%
2.2 Provider initiate testing		0%		0%
2.7 Dental Care		0%		0%
2.11 Additional / Informal provider		0%		0%
2.13 Opportunistic Infection (OI) Treatment		0%		0%

Source Annex 1

Table 11 Prevention 2008-09, sorted by 2009 spending

Category of healthcare function	2008		2009	
	Million Baht	Percent	Million Baht	Percent
1. Prevention Sub-total	1,500	22%	987	14%
1.18 Blood safety	404	6%	343	5%
1.17 Prevention of mother-to-child transmission	136	2%	131	2%
1.19 Post-exposure prophylaxis	6	0%	105	1%
1.5 Youth in school	118	2%	78	1%
1.1 Mass media	30	0%	48	1%
1.3 Voluntary Counseling and Testing	23	0%	37	1%
1.10 Harm Reduction Programs for IDUs	2	0%	36	1%
1.11 Workplace activities	48	1%	34	0%
1.13 Public and Commercial sector condom provision	51	1%	23	0%
1.6 Youth out of school	100	1%	22	0%
1.4 Program for Vulnerable and special Populations	26	0%	20	0%
1.16 Improving management of STIs	7	0%	19	0%
1.9 Programs for MSM	7	0%	8	0%
1.2 Community mobilization	2	0%	7	0%
1.7 Prevention Program for PLHA	5	0%	5	0%
1.8 Programs for sex workers and their clients	10	0%	4	0%
1.14 Female condom	0	0%	1	0%
1.99 Others / Not-elsewhere Classified	525	8%	65	1%
1.12 Condom social marketing		0%		0%
1.15 Microbicides		0%		0%
1.20 Safe medical injections		0%		0%
1.21 Male Circumcision		0%		0%
1.22 Universal Precautions		0%		0%

Source Annex 1

As AIDS epidemic becomes mature, it is understandable that a large part of HIV/AIDS expenditure has to devote to care and treatment. However, it is unfortunate that reductions in prevention spending in monetary term and percentage of total HIV/AIDS spending was observed, see Table 11. Prevention spending reduced from 1,500 million Baht in 2008 to 987 million in 2009, a 34.2% reduction; also it reduced from 22% to 14% of total HIV/AIDS spending.

The profile of prevention spending is dominated by blood safety 6% and 5% of total AIDS spending in 2008 and 2009 respectively; PMTCT spent 2%. Post exposure prophylaxis, youth in school, mass media, VCT and harm reduction each spent equally 1% of total HIV/AIDS spending.

Though blood safety is necessary biomedical intervention; too little was spent on social mobilization and behavioural changes in the Thai HIV/AIDS program.

6. Conclusion and recommendations

In the light of universal ART in Thailand, financial resources were devoted disproportionately to care and treatment; in particular ART. While the spending on ART increased in monetary term and percentage of total HIV/AIDS spending, unfortunately we observed reduction of total spending on prevention both monetary term and percentage of total HIV/AIDS expenditure.

A 54% increase in ART spending was observed between 2008 and 2009, not only due to the increase in the total number of enrolees, it was significant attributed by the increase in the proportion of 2nd line regimens, 85.9% increase over one year; while the cost per patient year for 2nd line regimen is 1.507 higher than the 1st line regimen

There are three cost drivers for spending on ART: the increase in numbers of enrolee, the increase in the proportion of 2nd line regimens and most importantly, the high cost of 2nd line medication.

If the program loses sight on prevention [for which it had at least in term of limited investment in prevention], the new infections will, in the future, add to the pool of ART. It is the first cost drivers of program expenditure on ART.

If the program fails to ensure adherence to the 1st regimens, it results in significant resistance to the 1st line and end up with more expensive 2nd line medicines. These are the two other cost drivers. It is the ethical responsibility of ART enrolees, when using public fund, to adhere to medications.

From the three consecutive year analysis of HIV/AIDS spending, we felt that the program is financially affordable in long term, as it relies mostly on domestic resources. Though domestic financing on HIV/AIDS is subjected to fiscal capacities of the country, the level of spending, less than 2% of Total Health Expenditure was affordable. Financing HIV/AIDS program is not subject to unpredictable donor funding, which is the strengths of the Thai program, as well as the capacity of locally produce first line ARV medicines.

ANNEX 1 Total Expenditure on HIV/AIDS, by detail healthcare functions, 2008-09, current year price

Category of healthcare function	2008		2009	
	Million Baht	Percent	Million Baht	Percent
1. Prevention Sub-total	1,500	22%	987	14%
1.1 Mass media	30	0%	48	1%
1.2 Community mobilization	2	0%	7	0%
1.3 Voluntary Counseling and Testing	23	0%	37	1%
1.4 Program for Vulnerable and special Populations	26	0%	20	0%
1.5 Youth in school	118	2%	78	1%
1.6 Youth out of school	100	1%	22	0%
1.7 Prevention Program for PLHA	5	0%	5	0%
1.8 Programs for sex workers and their clients	10	0%	4	0%
1.9 Programs for MSM	7	0%	8	0%
1.10 Harm Reduction Programs for IDU	2	0%	36	1%
1.11 Workplace activities	48	1%	34	0%
1.12 Condom social marketing		0%		0%
1.13 Public and Commercial sector condom provision	51	1%	23	0%
1.14 Female condom	0	0%	1	0%
1.15 Microbicides		0%		0%
1.16 Improving management of STI	7	0%	19	0%
1.17 Prevention of mother-to-child transmission	136	2%	131	2%
1.18 Blood safety	404	6%	343	5%
1.19 Post-exposure prophylaxis	6	0%	105	1%
1.20 Safe medical injections		0%		0%
1.21 Male Circumcision		0%		0%
1.22 Universal Precautions	0	0%		0%
1.99 Others / Not-elsewhere Classified	525	8%	65	1%
2. Care and Treatment Sub-total	4,560	66%	5,483	76%
2.1 Outpatient care	420	6%	491	7%
2.2 Provider initiate testing		0%		0%
2.3 Opportunistic Infection Prophylaxis	190	3%	215	3%
2.4 Antiretroviral therapy	2,031	29%	3,125	43%
2.5 Nutritional Support	141	2%	139	2%
2.6 Specific HIV Laboratory monitoring	697	10%	373	5%
2.7 Dental Care		0%		0%
2.8 Psychological care	4	0%	5	0%
2.9 Palliative Care	67	1%	75	1%
2.10 Home-based Care	50	1%	11	0%
2.11 Additional / Informal provider		0%		0%
2.12 In-patient Care	942	14%	1,042	14%
2.13 Opportunistic Infection (OI) Treatment		0%		0%
2.99 Others / Not-elsewhere Classified	20	0%	7	0%
3. Orphans and Vulnerable Children Sub-total	50	1%	52	1%
3.1 Education	1	0%	1	0%
3.2 Basic health care		0%		0%
3.3 Family/Home support	48	1%	51	1%
3.4 Community Support		0%		0%
3.5 Administrative Cost		0%		0%
3.99 Others / Not-elsewhere Classified	1	0%		0%
4. Program Management Administration Strengthening Sub-total	397	6%	250	3%
4.1 Programme Management	213	3%	19	0%
4.2 Planning and coordination	48	1%	43	1%
4.3 Monitoring and Evaluation	5	0%	9	0%
4.4 Operation Research	1	0%	2	0%

Category of healthcare function	2008		2009	
	Million Baht	Percent	Million Baht	Percent
4.5 Sero-Surveillance	42	1%	52	1%
4.6 HIV drug- resistance surveillance	2	0%	3	0%
4.7 Drug Supply systems		0%		0%
4.8 Information technology	0	0%	2	0%
4.9 Supervision of Personnel	13	0%		0%
4.10 Upgrading Laboratory infrastructure	13	0%	13	0%
4.11 Construction of new Health centres		0%		0%
4.99 Others / Not-elsewhere Classified	60	1%	107	1%
5. Incentive Human Resources Sub-total	44	1%	208	3%
5.1 Monetary incentive for physicians	6	0%	0	0%
5.2 Monetary incentive for nurses		0%		0%
5.3 Monetary incentive for other staffs		0%	88	1%
5.4 Formative education and build-up of an AIDS Workforce	0	0%		0%
5.5 Training	38	1%	119	2%
5.99 Others / Not-elsewhere Classified	0	0%	1	0%
6. Social protection and social services excluding Orphans and vulnerable Children Sub-total	219	3%	171	2%
6.1 Monetary Benefits		0%		0%
6.2 In-Kind Benefits		0%		0%
6.3 Social services	166	2%	171	2%
6.4 Income generation		0%		0%
6.99 Others / Not-elsewhere Classified	53	1%	0	0%
7. Enabling Environment and community Development Sub-total	2	0%	8	0%
7.1 Advocacy and Strategic Communication	2	0%	3	0%
7.2 Human Rights		0%	3	0%
7.3 AIDS-specific institutional development		0%	2	0%
7.4 AIDS - specific program involving woman		0%	2	0%
7.99 Others / Not-elsewhere Classified	0	0%	0	0%
8. Research excluding operational research Sub-total	156	2%	49	1%
8.1 Biomedical Research	12	0%	7	0%
8.2 Clinical Research	124	2%	14	0%
8.3 Epidemiological Research	3	0%	5	0%
8.4 Social science research	1	0%	1	0%
8.5 Behavioural research	1	0%	1	0%
8.6 Research in economics	4	0%	1	0%
8.7 Research capacity strengthening		0%		0%
8.8 Vaccine related research		0%		0%
8.99 Others / Not-elsewhere Classified	11	0%	20	0%
GRAND TOTAL	**6,928**	**100%**	**7,208**	**100%**

ANNEX 2 Brief methodologies on care and treatment and prevention

As ART takes the majority share of total HIV/AIDS spending, it is important to document the methodology and assumptions proposed by the Thai Working Group (WG) for future reference. The colleagues from the National Health Security Board responsible for 75% of total population under the UC scheme, contributed significantly to this estimate.

Prevention expenditure

1.1 Voluntary Counselling and Testing by UC members, The WG applied real expenditure records in the database.

1.2 PMTCT, estimate 0.8% of total ANC clients would be HIV positive based on the most recent national sero-sentinel survey multiplied by unit cost of 3,360 Baht per person. This assumes that the compliance to the PMTCT is 100% of all HIV positive during ANC visits which is a slight high estimate. There is no real data on the percent enrolment into PMTCT.

1.3 In PMTCT, the PCR expenditure was estimated at 0.8% HIV prevalence among the ANC clients multiply by total number of pregnancies, multiply by an average of 1.6 PCR per person, and multiply by 1,000 Baht per investigation.

1.4 Expenditure on anti-HIV screening in ANC, was estimated by total pregnancies multiply by 140 Baht per screening test.

1.5 Total ANC clients refer to the total birth registration by the National Civil Registration Office; birth registration covers 98% of total actual births, and estimate ANC coverage at 90%

1.6 Post exposure prophylaxis, among health workers, rape cases, occupational accidents, the estimate cost of one month ARV was 3,000 Baht is multiplied by the total number of PEP clients recorded by the NHSO.

1.7 Subsidies to the integrated HIV centres, NGO and patient groups who support the PLWHA on their medication, counselling and provision of condoms, the WG refer to the actual expenditure data.

Care and treatment

2.1 Expenditure on outpatient care for PLWHA was estimated based on total number of HIV infections multiply by the average outpatient utilization rate of 3.65 visits per capita per year by the average unit cost per visit. This assume all HIV positive are able to access to care widely without discrimination.

2.2 The prophylaxis of opportunistic infection, assuming that all ART members would get cotrimoxazole, one table daily, and 50% of ART members got daily tablet of fluconazone, multiply by unit cost of cotrimoxazole and fluconazone

2.3 Cost of ARV based on real expenditure records in NHSO

2.4 Nutritional support for all newborns from mothers under PMTCT, estimate unit cost of 24,000 Baht per person year.

2.5 Specific HIV laboratory monitoring,

- o CD4 count monitoring: for UC and SHI based on real expenditure, while CSMBS and others based on the average CD4 monitoring 1.3 and 1.7 screening per person per year in 2008 and 2009 respectively, multiplied by unit cost of CD4 monitoring.
- o Viral Load testing for UC and SHI based on actual expenditure, while CSMBS and others estimated based on all ART members X average 0.75 screening per person per year.

2.6 Palliative care

- o For IP in UC scheme, assume that all HIV/ AIDS deaths in hospitals get all necessary palliative care, this is estimated by the adjusted CMI multiplied by the real reimbursement in that year 2008 and 2009.

- For CSMBS, actual expenditure for all HIV/AIDS inpatient deaths in hospitals get necessary palliative care and treatment, for 2009 there is no expenditure data, assuming 2009 equal to 2008.
- SHI in 2008, number of hospital deaths due to HIV/AIDS multiplied by actual reimbursement per case with reference to UC scheme.

2.7 Inpatient care

- All UC scheme patients admitted due to HIV/AIDS (excluding deaths in hospitals), multipled by adjCMI and reimbursement rates in 2008 and 2009
- For CSMBS, refer to actual spending recorded by Comptroller General Department of Ministry of Finance
- SHI in 2009 refer to 2008 as there was no 2009 information, total admission with HIV/AIDS multiplied by base rate from UC scheme.

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The Working Group dedicates this of work to the late Dr. Sanguan Nittayarumpong, the first Secretary General of National Health Security Office. Together with partners, his contribution to the initiation and implementation of Compulsory Licensing for certain ARV medicines enabled Thai People Living with HIV/AIDS not only members of UC scheme, all PLWHA have better access to affordable ARV; for which it saves huge number of death tolls.

The Working Group wishes to thank to all partners in the MOPH and outside who contributes to the development of this report.

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