National AIDS Spending Assessment Report 2010-2011

Thai Working Group on National AIDS Spending Assessment

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Executive Summary

HIV/AIDS spending assessment is demanded in order to guide properly the country health financing policy in short- and long-term. The National AIDS Spending Assessment (NASA) report (previously, the National AIDS Account (NAA)) was initiated in Thailand in the year 2000. It has been developing a way to properly report the financial profiles of the national HIV/AIDS program.

The objectives are to estimate the magnitude, sources, activities and beneficiary populations of expenditure on HIV/AIDS during 2010 to 2011 and to produce key indicators on total expenditure on HIV/AIDS. With the application of National Health Accounts [OECD System of Health Account, version 1.0: 2000], a two dimensional matrix of financing sources and beneficiary populations by healthcare function was produced. Data were compiled from secondary data on actual expenditure on HIV/AIDS where available from relevant financing agents.

Results show that, in 2010, the total expenditure on HIV/AIDS was 7,733 million Thai Baht or 121 Baht per capita of Thai population, or 15,487 Thai Baht per capita PLWHA given the total number of 499,324 PLWHA. The total expenditure on HIV/AIDS accounts for 0.08% of GDP in 2010, or equivalent to 2.0% of Total Health Expenditure, See table 4. In 2011, the expenditure increased slightly to 9,922 million Baht of total AIDS expenditure or 154 Baht per capita population or 20,594 Baht per PLWHA. However, the ratio between AIDS spending and Gross Domestic Production (GDP) ranges from 0.08-0.09% of GDP and 2.0-2.4% of THE.

Financing HIV/AIDS program relied mostly on domestic resource, 85.20% of total spending in 2010 and 85.67% in 2011. This reflected government financial commitment and we foresee good financial sustainability, as it relies less on donor resources. Domestic resources concentrate most on care and treatment (84.29% and 83.93% in 2010 and 2011, respectively). Donor resources spent throughout the eight major spending items in 2011, particularly, 41.56% on prevention, 23.64% research excluding operational research, 12.04% on program management and administration strengthening, 8.9% on care and treatment.

Among the domestic sources of finance, National Health Security Office, which is responsible for the Universal Coverage Scheme (UC), has the major share of spending, 48.75% in 2010 and 52.91% in 2011 respectively, as the NHSO is responsible for UC scheme which covers of total Thai population.

Civil Servant Medical Benefit Scheme and Social Health Insurance has a share, 15.05% and 10.43% in 2010, 12.32% and 10.38% in 2011 respectively. Different sources of finance have different spending profiles. While all three public insurance schemes concentrate more on care and treatment, MOPH and all other public concentrate their spending on prevention and other items.

Initially, the report provides spending profile among beneficiary populations (BP) with regard to AIDS spending categories (ASC) between the year 2010 and 2011. Although there were 19 out of 28 financing sources that could provide their data, which were disaggregated into BP table, those accounted for around 90 per cent of lump sum expenditures. Major share of spending to BP was under 15-year children living with HIV regardless of genders, which accounted for 43.39% and 47.9% in 2010 and 2011, respectively, following by 15-year or over 15-year adult and young people living with HIV regardless of genders, which were 27.79% and 24.9%, in 2010 and 2011, respectively. Both BP were spent mostly on care and treatment. In contrast, female sex workers and their clients, men who have sex with men (MSM), children born or to be born of women living with HIV, indigenous groups, prisoners and other institutionalized persons, children and youth out of school, institutionalized children and youth, people attending Sexual Transmitted Infection clinics, military, factory employees (e.g. for workplace interventions) were spent mostly on prevention in both years.

HIV/AIDS expenditure in Thailand has increased for 4 years that care and treatment, in particular Antiretroviral Therapy (ART) was a majority of this category. From the analysis of HIV/AIDS spending during 2008 to 2011, the program is financially affordable in long term, as it relies mostly on domestic resources. Although 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-drug of antiretroviral treatment.

In contrast, during 2008 to 2011, it was obvious that international source is dominant in supporting prevention program, which increased significantly their role, comparing to domestic sources.

In conclusion, to achieve the goal of National AIDS plan, hence, prevention activities among HIV/AIDS population group are highly recommended, in particular from domestic financing sources enabling to ensure the sustainability of HIV/AIDS prevention activities. The development of NASA methodology, in particular, completing the data of beneficiary populations is required in order to strengthen the capacity of NASA report.

1. Background

Since 1992, Thailand has achieved greatly in dealing with HIV/AIDS in aspect of prevention, care, treatment and social participation and cooperation. In particular care and treatment, HIV/AIDS antiretroviral drugs (ARV) were included in health-benefit package for HIV patients, who are members in Universal coverage (UC) scheme, by National Health Security Office (NHSO) in October 1, 2006. Likewise the list of ARV available among UC members, this also covers HIV patients who were the members of Social Security scheme (SSS).

HIV/AIDS spending assessment is demanded in order to guide properly the country health financing policy in short- and long-term. The National AIDS Spending Assessment (NASA) report (previously, the National AIDS Account (NAA)) was initiated in Thailand in the year 2000. It has been developing a way to properly report the financial profiles of the national HIV/AIDS program.

As required by Global AIDS Response Progress (GARP) country report 2012, NASA is a major source of data regarding the financing indicator that inform the whole figure of HIV/AIDs expenditures in Thailand. The Thai working group on National AIDS Spending Assessment (NASA) convened several rounds of work sessions among partners in and outside the Ministry of Public Health (MOPH), who are most knowledgeable on spending on HIV/AIDS, and involved with HIV/AIDS interventions and activities. These work sessions were tasked to estimate the total spending on HIV/AIDS between 2010 and 2011.

2. Objectives

1. To estimate the magnitude, sources, activities and beneficiary populations of expenditure on HIV/AIDS during 2010 to 2011,
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

1. With the application of **Guide to Produce National AIDS Spending Assessment (NASA) 2009**[1], a two dimensional matrix of financing sources and beneficiary population by healthcare function was produced.
2. Compile secondary data on actual expenditure on HIV/AIDS where available from relevant financing agents.
3. There are three public health insurance schemes providing health insurance for the entire population in 2010 and 2011: the Civil Servant Medical Benefit Scheme (CSMBS), the Social Health Insurance (SHI) and the Universal Health Coverage (UHC) Scheme.

3.2 Data sources

1. Actual spending on HIV/AIDS was retrieved from mostly government spending records in various organizations and Ministries, as well as international sources, such as Ministry of Public Health (MOPH), National Health Security Office (NHSO) who is responsible for universal access to ART program and OI for HIV patients under the Universal Health Care Scheme (UHC), the Comptroller General's Department (CGD) of the Ministry of Finance (MOF) on expenditure on HIV/AIDS for the Civil Servant Medical Benefit Scheme, Social Security Office (SSO) who spent for their social health insurance members the Global Fund, United Nation family and other donors from outside country.
2. The most update GDP for 2010 and 2011 were retrieved from the website of the National Account Office of the National Economic and Social Development Board
3. Total Health Expenditure for 2008-2010 was retrieved from the National Health Account (NHA) 2009-2010[2], however; the total health expenditure for 2011 was estimated based on historical growth of THE.
4. Number of people living with HIV/AIDS in 2010 and 2011 based on estimation from the UNGASS Report of Thailand (January 2008-December 2009).

3.3 Scope

1. We used actual spending on HIV/AIDS, not budgeting figures.
2. This study covers only spending by government, non-profit and international resources. We deliberately exclude household spending on HIV/AIDS, as there is no any national household

survey 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 Opportunity Infection (OI) services were fully covered by each of the three insurance schemes and also antiretroviral treatment (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 seeking ART services from private hospitals or private clinics, for which households bear the full cost of these treatments. However, it is unknown on the magnitude of these patients, voluntarily opted out from insurance scheme.

3. Fiscal year (from October to September of another year) for government expenditure and calendar year (from January to December) for international expenditure are treated equivalent.
4. Healthcare function applies or AIDS spending categories the 8 items of expenditure proposed by UNGASS template.

4. Results

4.1 Financing context in Thailand

Table 1 background data on healthcare financing 2008-2011, current year price

	2008	**2009**	**2010**	**2011**
Population	63,121,000	63,396,000	63,878,267	63,891,000
Total Health Expenditure (THE) per capita, Baht	5,683	5,938	6,142	6,397
THE per capita, US$	171	173	194	201
Exchange rate, Baht per US$*	33	34	32	30

Source: Total Health Expenditure for 2008-2010 refers to Thai NHA working group. The total health expenditure for 2011 was estimated based on historical trend of 2008-2010 by The Working Group (Average geometrical growth rate was 4.3 %). Exchange rate was cited from Bank of Thailand

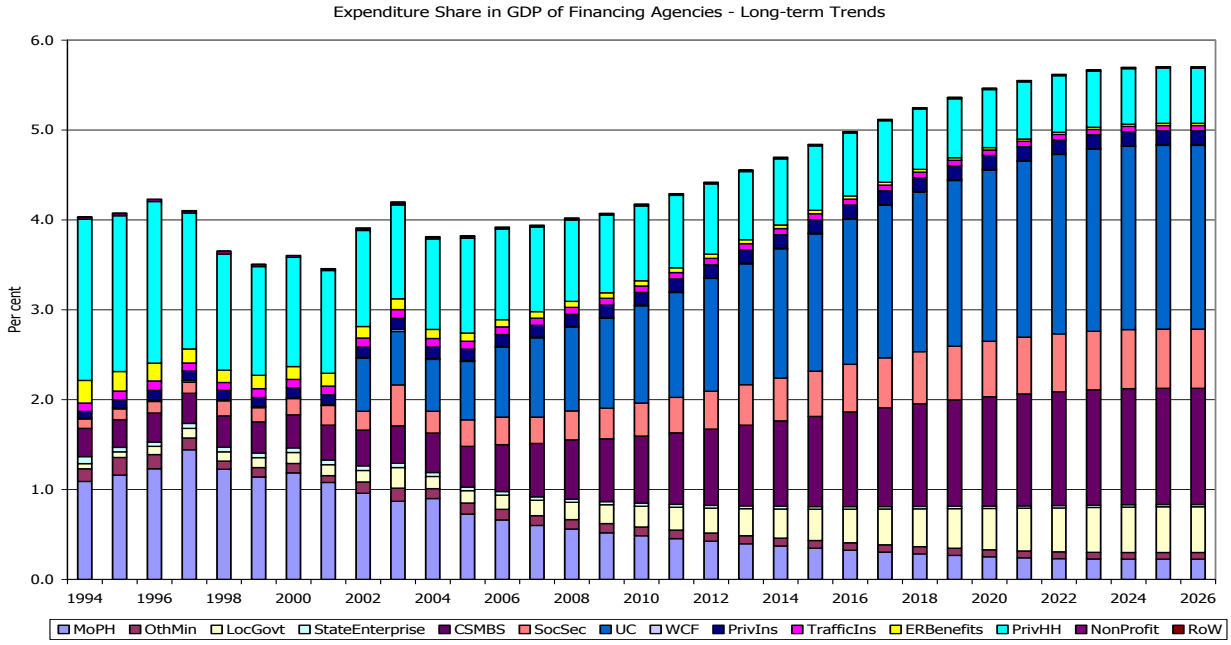
From background of data on healthcare financing indicated that, in 2010, Thailand spent 6,142 Baht per capita for health of the Thai population, or approximately 194 US$ per capita (exchange rate 32 Baht per US$), (see Table 1). Total health expenditure slightly increased from 194 USD per capita in 2010 to 201 US$ per capita in 2011.

Table 2 Total health expenditure and selected NHA indicators, selected year 1994 to 2010, current year prices.

Indicator	1994	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
THE, Total Health Expenditure (mln baht)	127,655	170,203	201,679	211,957	228,041	251,693	274,055	303,853	360,272	377,226	392,368
THE as % of GDP	3.5%	3.3%	3.7%	3.6%	3.5%	3.5%	3.5%	3.6%	4.0%	4.2%	3.9%
THE from Public Financing Agencies (mln baht)	56,885	95,779	127,534	134,670	147,459	161,282	198,407	231,034	273,372	280,373	293,378
THE from Private Financing Agencies (mln baht)	70,771	74,424	74,146	77,288	80,582	90,411	75,648	72,819	86,901	96,854	98,990
THE from Public Financing Agencies (%)	45%	56%	63%	64%	65%	64%	72%	76%	76%	74%	75%
THE from Private Financing Agencies (%)	55%	44%	37%	36%	35%	36%	28%	24%	24%	26%	25%
THE per capita (baht per capita per year)	2,160	2,732	3,211	3,354	3,680	4,032	4,362	4,820	5,683	5,938	6,142
THE per capita (USD per capita per year)	86	61	75	81	91	100	115	140	171	173	194
Exchange Rate (baht per USD)	25	44	43	41	40	40	38	35	33	34	32

Table 2 provides a time series from 1994 to 2026, 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 2011; while a decreasing trend of the proportion of private source of finance was observed; down from 45% in 1994 to 25% in 2011.

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



Based on 1994-2008 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 3 Total AIDS expenditure, 2008-11, current year price

	2008	2009	2010	2011
Total AIDS expenditure, million Baht	6,928	7,208	7,733	9,922
Total Health Expenditure, million Baht	360,272	377,226	392,368	408,718*
Total AIDS expenditure, as				
• **per capita population, Baht**	110	114	121	154
• **per capita PLWHA, Baht**	14,275	14,417	15,487	20,594
• **per capita population, US$**	3.3	3.3	3.8	5.1
• **per capita PLWHA, US$**	430.9	415.2	488.72	675.40
• **% GDP**	0.08	0.08	0.08	0.09
• **% THE**	1.9	1.9	2.0	2.4

*Total Health Expenditure for 2011 was estimated based on historical trend of 1994-2020 by The Working Group by The Working Group.

In 2010, the total expenditure on HIV/AIDS was 7,733 million Thai Baht. This is equal to 121 Baht per capita of Thai population, or 15,487 Thai Baht per capita PLWHA (the total number of 499,324 PLWHA). The total expenditure on HIV/AIDS accounts for 0.08% of GDP, or 2.0% of Total Health Expenditure in 2010 (See table 3).

In 2011, the total expenditure was 9,922 million Baht, or 154 Baht per capita population or 20,594 Thai Baht per PLWHA. There was a slightly increase of AIDS spending and the ratio between AIDS spending, which was 0.09% of GDP or 2.4% of THE (See table 3).

4.3 What are HIV/AIDS expenditure used for?

Table 4 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 and 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%

Table 5 Total AIDS expenditure by functions, 2010-11, current year price

	2010		2011	
	Thai Baht, million	Percent	Thai Baht, million	Percent
1. Prevention	1,015	13.12%	1,334	13.44%
2. Care and Treatment	5,676	73.40%	7,261	73.18%
3. Orphans and Vulnerable Children (OVC)	24	0.31%	24	0.25%
4. Program Management and Administration Strengthening	195	2.52%	320	3.22%
5. Incentive Human Resources	147	1.90%	207	2.09%
6. Social protection and social services excluding Orphans and vulnerable Children	224	2.89%	224	2.25%
7. Enabling Environment and community Development	124	1.60%	169	1.70%

	2010		2011	
	Thai Baht, million	Percent	Thai Baht, million	Percent
8. Research excluding operational research	330	4.26%	383	3.86%
Total	7,733	100.00%	9,922	100.00%

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, then increased to 76.1% in 2009, down to 73.40% in 2010, and 73.18% in 2011. At the same time, expenditure on prevention reduced continuously from 21.7% in 2008 and to 13.44% in 2011. Six other spending items were small.

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%. Whilst, in 2011, OVC is less than 1% share, program management and administration strengthening got 3.22% share, incentive for human resources 2.09% and social protection 2.25%. (See Table 4 and 5)

4.4 What are sources of financing HIV/AIDS?

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

AIDS Spending Categories	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

AIDS Spending Categories	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. Expenditure profile of donor resources differed significantly from that of domestic resources. Domestic resources concentrate mostly on care and treatment (71% in 2008 and 80% in 2009). Donor resources spent 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)

Table 6c Total AIDS expenditure by sources and functions 2010, current year price

AIDS Spending Categories	Total	Domestic sources	International
1. Prevention	13.12%	8.03%	42.39%
2. Care and Treatment	73.40%	84.29%	10.74%
3. Orphans and Vulnerable Children	0.31%	0.06%	1.74%
4. Program Management Administration Strengthening	2.52%	1.27%	9.68%
5. Incentive Human Resources	1.90%	1.41%	4.75%
6. Social protection and social services excluding Orphans and vulnerable Children	2.89%	3.39%	0.00%
7. Enabling Environment and community Development	1.60%	1.00%	5.06%
8. Research excluding operational research	4.26%	0.55%	25.64%
Total	100.00%	100.00%	100.00%
Total, million Thai Baht	7,733.28	6,588.39	1,144.89
Column percent	100.00%	85.20%	14.80%

Table 6d Total AIDS expenditure by sources and functions 2011, current year price

AIDS Spending Categories	Total	Domestic sources	International
1. Prevention	13.44%	8.74%	41.56%
2. Care and Treatment	73.18%	83.93%	8.98%
3. Orphans and Vulnerable Children	0.25%	0.00%	1.70%
4. Program Management Administration Strengthening	3.22%	1.75%	12.04%
5. Incentive Human Resources	2.09%	1.42%	6.07%
6. Social protection and social services excluding Orphans and vulnerable Children	2.25%	2.63%	0.00%
7. Enabling Environment and community Development	1.70%	0.98%	6.00%
8. Research excluding operational research	3.86%	0.55%	23.64%
Total	100.00%	100.00%	100.00%
Total, million Thai Baht	9,922	8,499	1,422
Column percent	100.00%	85.67%	14.33%

During 2010 to 2011, financing HIV/AIDS program still relied mostly on domestic resource, 85.20% and 85.67% of its total spending in 2010 and 2011, respectively. This reflected government financial commitment and it is foreseen a good financial sustainability, as it relies less on donor resources. Additionally, 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.

Domestic resources still focused on care and treatment (84.29% and 83.93% in 2010 and 2011, respectively). However, Donor resources spread throughout the eight major spending items in 2011, particularly, 41.56% on prevention, 23.64% research excluding operational research, 12.04% on program management and administration strengthening, 8.98% on care and treatment. (See Table 6c and 6d)

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

During 2008 to 2011, from the systems analysis, five groups of domestic financing sources for HIV/AIDS were categorize: (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, and other public, (3) the National Health Security Office is responsible for care and treatment, in particular, antiretroviral therapy for members of the UC scheme, (4) the Civil Servant Medical Benefit Scheme covers the formal sector public employees mainly for care and treatment, (5) The Social Health Insurance covers the private sector employee, is also responsible mainly for care and treatment 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
Column percent	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
Column percent	100%	4%	6%	55%	13%	15%	7%

During 2008 to 2009, table 8a and 8b are presented that 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.

In addition, 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.

Table 7c Total AIDS expenditure by sources and functions 2010, current year price

Expenditure profiles	Total	Domestic resources						International
		MOPH	NHSO	CSMBS	SHI	All other public	NPI	
1. Prevention	13.12%	51.25%	4.14%	0.00%	0.00%	8.15%	92.03%	42.39%
2. Care and Treatment	73.40%	0.49%	93.36%	100.00%	99.65%	19.03%	0.00%	10.74%
3. Orphans and Vulnerable Children	0.31%	0.00%	0.06%	0.00%	0.00%	0.41%	0.00%	1.74%
4. Program Management Administration Strengthening	2.52%	5.26%	1.72%	0.00%	0.00%	0.46%	0.72%	9.68%
5. Incentive Human Resources	1.90%	27.60%	0.00%	0.00%	0.35%	1.86%	0.00%	4.75%
6. Social protection and social services excluding Orphans and vulnerable Children	2.89%	0.00%	0.00%	0.00%	0.00%	66.08%	0.00%	0.00%
7. Enabling Environment and community Development	1.60%	14.22%	0.55%	0.00%	0.00%	0.55%	0.00%	5.06%
8. Research excluding operational research	4.26%	1.18%	0.16%	0.00%	0.00%	3.45%	7.25%	25.64%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Total, million Baht	7,733.28	302.59	3,769.89	1,164.18	806.42	338.39	206.91	1,144.89
Column percent	100.00%	3.91%	48.75%	15.05%	10.43%	4.38%	2.68%	14.80%

Table 7d Total AIDS expenditure by sources and functions 2011, current year price

Expenditure profiles	Total	Domestic resources						International
		MOPH	NHSO	CSMBS	SHI	All other public	NPI	
1. Prevention	13.44%	49.50%	4.82%	0.00%	0.20%	8.89%	94.05%	41.56%
2. Care and Treatment	73.18%	0.36%	92.04%	100.00%	99.52%	15.79%	0.00%	8.98%
3. Orphans and Vulnerable Children	0.25%	0.00%	0.00%	0.00%	0.00%	0.03%	0.00%	1.70%
4. Program Management Administration Strengthening	3.22%	4.24%	2.44%	0.00%	0.00%	0.93%	0.51%	12.04%
5. Incentive Human Resources	2.09%	28.13%	0.00%	0.00%	0.28%	4.23%	0.00%	6.07%
6. Social protection and social services excluding Orphans and vulnerable Children	2.25%	0.00%	0.00%	0.00%	0.00%	66.41%	0.00%	0.00%
7. Enabling Environment and community Development	1.70%	14.51%	0.57%	0.00%	0.00%	0.00%	0.00%	6.00%
8. Research excluding operational research	3.86%	3.26%	0.13%	0.00%	0.00%	3.72%	5.44%	23.64%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Total, million Baht	9,921.65	368.74	5,249.73	1,221.91	1,030.05	336.75	292.22	1,422.24
Column percent	100.00%	3.72%	52.91%	12.32%	10.38%	3.39%	2.95%	14.33%

During 2010 to 2011, table 8c and 8d are shown that National Health Security Office--responsible for the UC Scheme has the major share of spending, 48.75% in 2010 and 52.91% in 2011. It is obvious that the share of prevention in NHSO expenditure profile was decline remarkably in a couple years, compared to its share in 2008 and 2009. Civil Servant Medical Benefit Scheme and Social Health Insurance has a similar share, 15.05% and 10.43% in 2010, and 12.32% and 10.38% in 2011.

Additionally, the share of spending from international source reached 15% in 2008 then dropped to 7% in 2009 and eventually increased to over 14 % in 2010 and 2011. Prevention activity is the major spending from international source across years.

4.5 What are beneficiary populations (BP) toward AIDS spending categories?

Regarding the data, beneficiary populations (BP), which were subsidized by AIDS spending categories (ASC), were presented between the year 2010 and 2011. This is an initiative of Thai NASA in providing more in-depth analyzed data. Although there were 19 out of 28 financing sources that could provide their data, which were disaggregated into BP table, those accounted for around 90 per cent of lump sum expenditures.

During 2010-2011, the major share of spending to BP was under 15-year children living with HIV regardless of genders, which accounted for 43.39% and 47.9% of total AIDS expenditure in 2010 and 2011, respectively, following by 15-year or over 15-year adult and young people living with HIV regardless of genders, which were 27.79% and 24.9% of total AIDS expenditure in 2010 and 2011, respectively. Both BP were spent mostly on care and treatment. (See table 8a-8b)

In contrast, female sex workers and their clients, men who have sex with men (MSM), children born or to be born of women living with HIV, indigenous groups, prisoners and other institutionalized persons, children and youth out of school, institutionalized children and youth, people attending Sexual Transmitted Infection clinics, military, factory employees (e.g. for workplace interventions) were spent mostly on prevention in both years. (See table 8a-8b)

Table 8a Total AIDS expenditure by beneficiary populations and functions 2010, current year price

	Adult and young people (15 years and over) living with HIV not disaggregated by gender	Children (under 15 years) living with HIV not disaggregated by gender	People living with HIV not disaggregated by age or gender	Injecting drug users (IDU) and their sexual partners	Female sex workers and their clients	Men who have sex with men (MSM)	Orphans and vulnerable children (OVC)	Children born or to be born of women living with HIV	Migrants/mobile populations	Indigenous groups	Prisoners and other institutionalized persons	Children and youth out of school	Institutionalized children and youth	People attending STI clinics	Health care workers	Military	Factory employees (e.g. for workplace interventions)	General population not disaggregated by age or gender.	Specific targeted populations not elsewhere classified (n.e.c.)	Non-classified Beneficiary Populations	TOTAL
Prevention	0.0%	1.3%	5.3%	3.8%	95.4%	87.8%	0.0%	100.0%	17.3%	97.1%	100.0%	100.0%	93.8%	71.3%	9.8%	64.8%	100.0%	73.2%	26.0%	44.4%	13.1%
Care and treatment	99.9%	98.6%	12.5%	0.0%	0.0%	0.0%	0.0%	0.0%	39.0%	0.0%	0.0%	0.0%	0.0%	28.1%	0.2%	7.3%	0.0%	1.1%	0.0%	10.0%	73.4%
Orphans and vulnerable children	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	95.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.5%	0.2%	0.3%
Programme management and administration	0.0%	0.0%	0.4%	32.7%	4.6%	6.3%	5.0%	0.0%	11.6%	2.9%	0.0%	0.0%	0.0%	0.7%	33.3%	2.2%	0.0%	17.3%	15.3%	7.8%	2.5%
Human Resources	0.1%	0.0%	0.0%	0.0%	0.0%	4.6%	0.0%	0.0%	28.5%	0.0%	0.0%	0.0%	0.0%	0.0%	35.9%	25.8%	0.0%	0.0%	0.2%	1.1%	1.9%
Social protection and social services (excluding OVC)	0.0%	0.0%	64.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.9%
Enabling environment	0.0%	0.0%	0.0%	63.4%	0.0%	1.3%	0.0%	0.0%	3.5%	0.0%	0.0%	0.0%	6.2%	0.0%	20.0%	0.0%	0.0%	6.6%	49.0%	1.2%	1.6%
HIV-related research (excluding operations research)	0.0%	0.0%	17.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%	0.0%	0.0%	1.8%	6.9%	35.3%	4.3%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total, Million Baht	2,148,940,014.10	3,355,327,597.39	345,104,545.38	8,907,055.32	57,847,254.38	38,152,233.78	20,940,024.59	91,885.00	173,879,450.59	4,485,021.00	13,596,119.71	133,979,338.56	106,609,873.97	119,052,451.15	226,993,948.39	11,431,870.75	52,348,013.23	83,936,201.00	92,055,145.55	739,597,573.92	7,733,275,617.78
Column percent	27.79%	43.39%	4.46%	0.12%	0.75%	0.49%	0.27%	0.00%	2.25%	0.06%	0.18%	1.73%	1.38%	1.54%	2.94%	0.15%	0.68%	1.09%	1.19%	9.56%	100.00%

Note: There are 19 out of 28 financing sources that provide their data disaggregated into BP table (90 per cent out of overall HIV/AIDS expenditure).

Table 8b Total AIDS expenditure by beneficiary populations and functions 2011, current year price.

	Adult and young people (15 years and over) living with HIV not disaggregated by gender	Children (under 15 years) living with HIV not disaggregated by gender	People living with HIV not disaggregated by age or gender	Injecting drug users (IDU) and their sexual partners	Female sex workers and their clients	Men who have sex with men (MSM)	Orphans and vulnerable children (OVC)	Children born or to be born of women living with HIV	Migrants/mobile populations	Indigenous groups	Prisoners and other institutionalized persons	Children and youth out of school	Institutionalized children and youth	People attending STI clinics	Health care workers	Military	Factory employees (e.g. for workplace interventions)	General population not disaggregated by age or gender.	Specific targeted populations not elsewhere classified (n.e.c.)	Non-classified Beneficiary Populations	TOTAL
Prevention	0.1%	2.7%	3.7%	3.9%	88.8%	90.4%	0.0%	0.0%	15.2%	50.0%	100.0%	100.0%	99.6%	100.0%	16.1%	63.9%	100.0%	61.8%	42.6%	47.3%	13.4%
Care and treatment	99.8%	97.2%	13.1%	0.0%	0.0%	0.0%	0.0%	0.0%	29.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	9.8%	0.0%	0.8%	0.5%	6.5%	73.2%
Orphans and vulnerable children	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	94.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%
Programme management and administration	0.0%	0.1%	0.5%	35.1%	11.2%	7.8%	0.0%	0.0%	13.8%	33.4%	0.0%	0.0%	0.1%	0.0%	34.7%	2.3%	0.0%	8.4%	1.6%	13.9%	3.2%
Human Resources	0.1%	0.0%	0.0%	0.0%	0.0%	1.8%	2.5%	0.0%	31.4%	0.0%	0.0%	0.0%	0.0%	0.0%	30.9%	24.0%	0.0%	0.0%	0.0%	2.4%	2.1%
Social protection and social services (excluding OVC)	0.0%	0.0%	62.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.3%
Enabling environment	0.0%	0.0%	0.0%	55.9%	0.0%	0.0%	0.0%	0.0%	9.6%	16.6%	0.0%	0.0%	0.3%	0.0%	14.8%	0.0%	0.0%	28.0%	48.7%	0.1%	1.7%
HIV-related research (excluding operations research	0.0%	0.0%	20.5%	5.2%	0.0%	0.0%	3.3%	100.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	3.3%	0.0%	0.0%	0.9%	6.5%	29.8%	3.9%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total, Million Baht	2,465,844,821.47	4,750,643,143.56	359,475,159.02	21,696,660.33	70,470,082.86	97,939,494.68	25,724,852.77	1,458,958.00	235,060,302.03	902,483.00	14,874,295.17	108,015,221.00	81,071,952.17	124,711,133.15	329,645,570.89	11,034,753.17	41,418,965.88	114,321,575.06	106,013,361.49	961,324,333.44	9,921,647,119.14
Column percent	24.9%	47.9%	3.6%	0.2%	0.7%	1.0%	0.3%	0.0%	2.4%	0.0%	0.1%	1.1%	0.8%	1.3%	3.3%	0.1%	0.4%	1.2%	1.1%	9.7%	100.0%

Note: There are 19 out of 28 financing sources that provide their data disaggregated into BP table (90.4 per cent out of overall HIV/AIDS expenditure).

5. Discussions

During 2008 to 2011, total AIDS spending per capita population at current year price increase gradually from US$ 3.3 in 2008 to US$ 5.1 in 2011. Moreover, in term of per capita People Living with HIV/AIDS, it increased significantly from US$ 430.9 in 2008 to US$ 675.40 in 2011, while 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.

In addition, the total spending on HIV/AIDS—around 2 percent 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 9a Total AIDS expenditure by sources and functions 2008-09, current year price

	2008			2009		
Type of expenditure	**Total**	**Domestic**	**International**	**Total**	**Domestic**	**International**
1. Prevention	22%	20%	30%	14%	13%	29%
2. Care and Treatment	66%	71%	34%	76%	80%	15%
3. Orphans and Vulnerable Children	1%	1%	0%	1%	1%	0%
4. Program Management Administration Strengthening	6%	3%	22%	3%	2%	17%
5. Incentive Human Resources	1%	1%	1%	3%	1%	33%
6. Social protection and social services excluding Orphans and vulnerable Children	3%	4%	0%	2%	3%	0%
7. Enabling Environment and community Development	0%	0%	0%	0%	0%	1%
8. Research excluding operational research	2%	0%	13%	1%	0%	4%
Total, percent	100%	100%	100%	100%	100%	100%
Total Million Thai Baht	6,928	5,917	1,011	7,208	6,726	482
Column percent	**100**	**85**	**15**	**100**	**93**	**7**

Table 9b Total AIDS expenditure by sources and functions 2010-11, current year price

	2010			2011		
Type of expenditure	**Total**	**Domestic**	**International**	**Total**	**Domestic**	**International**
1. Prevention	13.12%	8.03%	42.39%	13.44%	8.74%	41.56%
2. Care and Treatment	73.40%	84.29%	10.74%	73.18%	83.93%	8.98%
3. Orphans and Vulnerable Children	0.31%	0.06%	1.74%	0.25%	0.00%	1.70%
4. Program Management Administration Strengthening	2.52%	1.27%	9.68%	3.22%	1.75%	12.04%
5. Incentive Human Resources	1.90%	1.41%	4.75%	2.09%	1.42%	6.07%
6. Social protection and social services excluding Orphans and vulnerable Children	2.89%	3.39%	0.00%	2.25%	2.63%	0.00%
7. Enabling Environment and community Development	1.60%	1.00%	5.06%	1.70%	0.98%	6.00%
8. Research excluding operational research	4.26%	0.55%	25.64%	3.86%	0.55%	23.64%
Total, percent	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Total Million Thai Baht	7,733.28	6,588.39	1,144.89	9,922	8,499	1,422
Column percent	**100.00%**	**85.20%**	**14.80%**	**100.00%**	**85.67%**	**14.33%**

During 2008 to 2011, regarding spending profile of HIV/AIDS program, A number of key observations are; a decreasing role of international of financing HIV/AIDS, from 17% in 2008 to 7% in 2009 but increase to over 14% in 2010 and 2011. Meanwhile, there was a strong commitment by the domestic source, which was over 85% of total HIV/AIDS spending in 2010-2011. The proportion of care and treatment increased from 71.8% in 2008 to 73.18% in 2011. (see in table 9a and 9b)

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.

Table 10a Care and treatment 2008-09 (Source: Annex1)

Category of healthcare function	2008		2009	
	Million Baht	Percent	Million Baht	Percent
2. Care and Treatment (Sub-Total)	**4,560**	**66%**	**5,483**	**76%**
2.1 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%

Table 10b Care and treatment 2010-11 (Source: Annex 2)

Category of healthcare function	2010		2011	
	Million Baht	Percent	Million Baht	Percent
2. Care and Treatment (sub-total)	5,676	74%	7,261	74%
2.01 Outpatient care	4,213	55%	5,764	59%
2.01.01 Provider- initiated testing and counseling	0	0.00%	0	0%
2.01.02 Opportunistic infection (OI) outpatient prophylaxis and treatment	111	1%	98	1%
2.01.03 Antiretroviral therapy	3,065	40%	4,206	43%
2.01.04 Nutritional support associated to ARV therapy	0	0%	0	0%

Category of healthcare function	2010		2011	
	Million Baht	Percent	Million Baht	Percent
2.01.05 Specific HIV-related laboratory monitoring	681	9%	1,065	11%
2.01.06 Dental programmes for PLHIV	0	0%	0	0%
2.01.07 Psychological treatment and support services	1	0%	0	0%
2.01.08 Outpatient palliative care	0	0%	0	0%
2.01.09 Home-based care	59	1%	59	1%
2.01.10 Traditional medicine and informal care and treatment services	0.5	0%	0	0%
2.01.98 Outpatient care services not disaggregated by intervention	295	4%	336	3%
2.01.99 Outpatient Care services not elsewhere classified	0	0%	0	0%
2.02 In-patient care	1,452	19%	1,484	15%
2.02.01 Inpatient treatment of opportunistic infections (OI)	0	0%	0	0%
2.02.02 Inpatient palliative care	0	0%	0	0%
2.02.98 Inpatient care services not disaggregated by intervention	1,452	19%	1,484	15%
2.02.99 In-patient services not elsewhere classified	0	0%	0	0%
2.03 Patient transport and emergency rescue	0	0%	0	0%
2.98 Care and treatment services not disaggregated by intervention	12	0%	13	0%

Regarding the table, the highest proportion of total HIV/AIDS expenditure was used for ART provision, which increased from 29% to 43% of total HIV/AIDS spending, during 2008 to 2011 respectively.

Therefore, ART spending in outpatient care was still the highest proportion compared to other spending categories.

Overall, outpatient care spent over a half of total HIV/AIDS spending, while, the share of inpatient care spending were between 14% and 19%, in 2010 and 2011, respectively. (see Table 10a-10b).

Detail analysis is 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, and then went up to 4,206 million in 2011. The implication of a rapid rise of ART spending was the 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.[4]

Table 11a Prevention 2008-09, sorted by 2009 spending (Source: Annex 1)

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%

Category of healthcare function	2008		2009	
	Million Baht	Percent	Million Baht	Percent
1.10 Harm Reduction Programs for IDUs	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 STIs	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%
1.99 Others / Not-elsewhere Classified	525	8%	65	1%

Table 11b Prevention 2010-11, sorted by 2011 spending. (Source Annex 2)

Category of healthcare function	2010		2011	
	Million Baht	Percent	Million Baht	Percent
1. Prevention (sub-total)	**1,014.50**	**13.12%**	**1,333.69**	**13.44%**
1.01 Communication for social and behavioural change	46.07	0.60%	62.42	0.63%
1.02 Community mobilization	77.09	1.00%	75.90	0.77%
1.03 Voluntary counselling and testing (VCT)	36.13	0.47%	101.14	1.02%
1.04 Risk-reduction for vulnerable and accessible populations	20.65	0.27%	16.72	0.17%
1.05. Prevention - Youth in school	109.40	1.41%	92.44	0.93%
1.06 Prevention - Youth out-of-school	134.03	1.73%	114.40	1.15%
1.07 Prevention of HIV transmission aimed at people living with HIV	0.18	0.00%	24.00	0.24%
1.08 Prevention programmes for sex workers and their clients	61.00	0.79%	67.66	0.68%
1.09 Programmes for men who have sex with men	54.77	0.71%	108.76	1.10%
1.10 Harm-reduction programmes for injecting drug users	18.88	0.24%	70.31	0.71%
1.11 Prevention programmes in the workplace	78.81	1.02%	75.31	0.76%
1.12 Condom social marketing	26.52	0.34%	44.20	0.45%

1.13 Public and commercial sector male condom provision	-	0.00%	-	0.00%
1.14 Public and commercial sector female condom provision	1.10	0.01%	1.13	0.01%
1.15 Microbicides	-	0.00%	-	0.00%
1.16 Prevention, diagnosis and treatment of sexually transmitted infections (STI)	77.38	1.00%	114.70	1.16%
1.17 Prevention of mother-to-child transmission	76.09	0.98%	84.13	0.85%
1.18 Male circumsicion	-	0.00%	-	0.00%
1.19 Blood safety	194.88	2.52%	278.83	2.81%
1.20 Safe medical injections	-	0.00%	-	0.00%
1.21 Universal precautions	-	0.00%	-	0.00%
1.22 Post-exposure prophylaxis	1.52	0.02%	1.64	0.02%
1.98 Prevention activities not disaggregated by intervention	-	0.00%	-	0.00%
1.99 Prevention activities not elsewhere classified	-	0.00%	-	0.00%

While HIV/ AIDS epidemic becomes mature, it is understandable that a large part of HIV/AIDS expenditure has to devote to care and treatment. It is unfortunate that massive reductions in prevention spending in monetary term and percentage of total HIV/AIDS spending during 2008 to 2009 was observed (see Table 12a). Prevention spending reduced from 1,500 million Baht in 2008 to 987 million Baht in 2009, a 34.2% reduction; also it reduced from 22% to 14% of total HIV/AIDS spending.

The percentage of prevention expenditures was a slight decrease to around 13% during 2010 to 2011, though, the amount of spending raised to over 1,000 million Baht in these 2 years. (see Table 11b). The profile of prevention spending was dominated by blood safety, which accounted for 6% and 5% of total AIDS spending in 2008 and 2009 respectively. However, it fell sharply to 0.6% in 2010 and 2011.

Others than that, prevention, diagnosis and treatment of sexually transmitted infections (STI), prevention - youth out-of-school and youth in school, programmes for men who have sex with men, VCT, mother-to-child transmission, programmes in the workplace, harm-reduction programmes for injecting drug users, programmes for sex workers and their clients, and community mobilization each spent equally 1% of total HIV/AIDS spending in the year 2011

6. Conclusion and recommendations

HIV/AIDS expenditure in Thailand has increased for 4 years that care and treatment, in particular Antiretroviral Therapy (ART) was a majority of this category. 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, it tended to have a reduction of total spending on prevention both monetary term and percentage of total HIV/AIDS expenditure. If the program loses sight of prevention, the new infections will, in the future, add to the pool of ART that causing the increase of ART expenditures in relation to the rise of use of second-line ART. The adherence of use of ART among patients, who mostly registered in any public health financing funds, is concerned. 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.

From the analysis of HIV/AIDS spending during 2008 to 2011, it was found that the program is financially affordable in long term, as it relies mostly on domestic resources. Although 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. In contrast, during 2008 to 2011, it was obvious that international source is dominant in supporting prevention program, which increased significantly their role, comparing to domestic sources.

Besides that there was an initiation to provide the data disaggregated into each group of beneficiary populations (BP). The majority of expenditure was spent to children under 15 years old who live with HIV, following by Adult and young people (15 years and over) living with HIV. Furthermore, they were spent more care and treatment than prevention program.

Regarding the estimation of HIV/AIDS incidence by Asian Epidemic Model (AEM), it suggested the solution to halve the number of new HIV/AIDS populations within 2011 that the goal of prevention activities, in particular high risk group, such as, Female Sex Workers (FSW), Men Sex Worker (MSW), and Injection Drug User (IDU), must be achieved.[5] Regarding the data, the share of spending in prevention activities on FSW and IDU was very low. Most prevention programs were financed mainly by non-public sources. To achieve the goal, therefore, it is recommended that prevention activities among HIV/AIDS population group should be highly promoted from domestic financing sources enabling to ensure the sustainability of HIV/AIDS prevention activities.

Because some financing sources could not provide data in BP table, the flow of spending throughout each BP is incomplete. However, it is a progression of NASA report in providing more in-depth and relevant data to support policy-making decision regarding HIV/AIDS activities in Thailand. To strengthen the capacity of NASA, it is recommended by developing the methodology in completing the data of BP table. Additionally, NASA is aimed to provide the complete flow of HIV/AIDS expenditure from financing source, in particular, UC spending in HIV/AIDS activities, to beneficiary populations, which were categorized by socioeconomic status in order to present its equity information. These are the challenges for the working team in conducting NASA report in the next phase.

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%

Category of healthcare function	2008		2009	
	Million Baht	Percent	Million Baht	Percent
2. Care and Treatment Sub-total	4,560	66%	5,483	76%
2.1 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%

Category of healthcare function	2008		2009	
	Million Baht	Percent	Million Baht	Percent
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

Total Expenditure on HIV/AIDS, by detail healthcare functions, 2010-11, current year price.

Category of healthcare function	2010		2011	
	Million Baht	Percent	Million Baht	Percent
1. Prevention (sub-total)	**1,014.50**	**13.12%**	**1,333.69**	**13.44%**
1.01 Communication for social and behavioural change	46.07	0.60%	62.42	0.63%
1.02 Community mobilization	77.09	1.00%	75.90	0.77%
1.03 Voluntary counselling and testing (VCT)	36.13	0.47%	101.14	1.02%
1.04 Risk-reduction for vulnerable and accessible populations	20.65	0.27%	16.72	0.17%
1.05. Prevention - Youth in school	109.40	1.41%	92.44	0.93%
1.06 Prevention - Youth out-of-school	134.03	1.73%	114.40	1.15%
1.07 Prevention of HIV transmission aimed at people living with HIV	0.18	0.00%	24.00	0.24%
1.08 Prevention programmes for sex workers and their clients	61.00	0.79%	67.66	0.68%
1.09 Programmes for men who have sex with men	54.77	0.71%	108.76	1.10%
1.10 Harm-reduction programmes for injecting drug users	18.88	0.24%	70.31	0.71%
1.11 Prevention programmes in the workplace	78.81	1.02%	75.31	0.76%
1.12 Condom social marketing	26.52	0.34%	44.20	0.45%
1.13 Public and commercial sector male condom provision	-	0.00%	-	0.00%
1.14 Public and commercial sector female condom provision	1.10	0.01%	1.13	0.01%
1.15 Microbicides	-	0.00%	-	0.00%
1.16 Prevention, diagnosis and treatment of sexually transmitted infections (STI)	77.38	1.00%	114.70	1.16%
1.17 Prevention of mother-to-child transmission	76.09	0.98%	84.13	0.85%

1.18 Male Circumcision	-	0.00%	-	0.00%
1.19 Blood safety	194.88	2.52%	278.83	2.81%
1.20 Safe medical injections	-	0.00%	-	0.00%
1.21 Universal precautions	-	0.00%	-	0.00%
1.22 Post-exposure prophylaxis	1.52	0.02%	1.64	0.02%
1.98 Prevention activities not disaggregated by intervention	-	0.00%	-	0.00%
1.99 Prevention activities not elsewhere classified	-	0.00%	-	0.00%
2. Care and Treatment (sub-total)	**5,676.28**	**73.40%**	**7,260.93**	**73.18%**
2.01 Outpatient care	**4,212.61**	**54.47%**	**5,764.27**	**58.10%**
2.01.01 Provider- initiated testing and counseling	-	0.00%	-	0.00%
2.01.02 Opportunistic infection (OI) outpatient prophylaxis and treatment	111.49	1.44%	99.64	1.00%
2.01.03 Antiretroviral therapy	3,064.47	39.63%	4,205.00	42.38%
2.01.04 Nutritional support associated to ARV therapy	-	0.00%	-	0.00%
2.01.05 Specific HIV-related laboratory monitoring	680.99	8.81%	1,064.62	10.73%
2.01.06 Dental programmes for PLHIV	-	0.00%	-	0.00%
2.01.07 Psychological treatment and support services	1.47	0.02%	-	0.00%
2.01.08 Outpatient palliative care	-	0.00%	-	0.00%
2.01.09 Home-based care	58.80	0.76%	58.83	0.59%
2.01.10 Traditional medicine and informal care and treatment services	0.55	0.01%	-	0.00%
2.01.98 Outpatient care services not disaggregated by intervention	294.84	3.81%	336.17	3.39%
2.01.99 Outpatient Care services not elsewhere classified	-	0.00%	-	0.00%

2.02 In-patient care	**1,452.25**	**18.78%**	**1,483.92**	**14.96%**
2.02.01 Inpatient treatment of opportunistic infections (OI)	-	0.00%	-	0.00%
2.02.02 Inpatient palliative care	-	0.00%	-	0.00%
2.02.98 Inpatient care services not disaggregated by intervention	1,452.25	18.78%	1,483.92	14.96%
2.02.99 In-patient services not elsewhere classified	-	0.00%	-	0.00%
2.03 Patient transport and emergency rescue	**-**	**0.00%**	**-**	**0.00%**
2.98 Care and treatment services not disaggregated by intervention	11.42	0.15%	12.75	0.13%
2.99 Care and treatment services not-elsewhere classified	-	0.00%	-	0.00%
3. Orphans and Vulnerable Children (sub-total)	**23.61**	**0.31%**	**24.32**	**0.25%**
3.01 OVC Education	-	0.00%	-	0.00%
3.02 OVC Basic health care	-	0.00%	-	0.00%
3.03 OVC Family/home support	-	0.00%	0.09	0.00%
3.04 OVC Community support	19.89	0.26%	24.24	0.24%
3.05 OVC Social services and Administrative costs	-	0.00%	-	0.00%
3.06 OVC Institutional Care	1.38	0.02%	-	0.00%
3.98 OVC services not disaggregated by intervention	2.34	0.03%	-	0.00%
3.99 OVC services not-elsewhere classified	-	0.00%	-	0.00%
4. Program Management and Administration Strengthening (sub-total)	**194.69**	**2.52%**	**319.80**	**3.22%**
4.01 Planning, coordination and programme management	58.44	0.76%	68.09	0.69%
4.02 Administration and transaction costs associated with managing and disbursing funds	-	0.00%	-	0.00%
4.03 Monitoring and evaluation	50.02	0.65%	99.75	1.01%

4.04 Operations research	3.91	0.05%	8.87	0.09%
4.05 Serological-surveillance (Serosurveillance)	15.37	0.20%	25.18	0.25%
4.06 HIV drug-resistance surveillance	2.58	0.03%	2.70	0.03%
4.07 Drug supply systems	-	0.00%	-	0.00%
4.08 Information technology	0.66	0.01%	0.47	0.00%
4.09 Patient tracking	-	0.00%	-	0.00%
4.10 Upgrading and construction of infrastructure	0.10	0.00%	-	0.00%
4.11 Mandatory HIV testing (not VCT)	-	0.00%	-	0.00%
4.98 Program Management and Administration Strengthening not disaggregated by type	63.60	0.82%	114.74	1.16%
4.99 Program Management and Administration Strengthening not-elsewhere classified	-	0.00%	-	0.00%
5. Incentives for Human resources (sub-total)	**147.09**	**1.90%**	**207.25**	**2.09%**
5.01 Monetary incentives for human resources	69.91	0.90%	75.38	0.76%
5.02 Formative education to build-up an HIV workforce	0.10	0.00%	-	0.00%
5.03 Training	15.89	0.21%	35.44	0.36%
5.98 Incentives for Human Resources not specified by kind	61.19	0.79%	96.43	0.97%
5.99 Incentives for Human Resources not elsewhere classified	-	0.00%	-	0.00%
6. Social Protection and Social Services excluding Orphans and Vulnerable Children (sub-total)	**223.63**	**2.89%**	**223.63**	**2.25%**
6.01 Social protection through monetary benefits	223.63	2.89%	223.63	2.25%
6.02 Social protection through in-kind benefits	-	0.00%	-	0.00%
6.03 Social protection through provision of social services	-	0.00%	-	0.00%
6.04 HIV-specific income generation projects	-	0.00%	-	0.00%

6.98 Social protection services and social services not disaggregated by type	-	0.00%	-	0.00%
6.99 Social protection services and social services not elsewhere classified	-	0.00%	-	0.00%
7. Enabling Environment (sub-total)	**123.71**	**1.60%**	**168.71**	**1.70%**
7.01 Advocacy	50.16	0.65%	63.36	0.64%
7.02 Human rights programmes	6.94	0.09%	22.51	0.23%
7.03 AIDS-specific institutional development	57.71	0.75%	53.00	0.53%
7.04 AIDS-specific programmes focused on women	-	0.00%	-	0.00%
7.05 Programmes to reduce Gender Based Violence	-	0.00%	-	0.00%
7.98 Enabling Environment and Community Development not disaggregated by type	8.90	0.12%	29.83	0.30%
7.99 Enabling Environment and Community Development not elsewhere classified	-	0.00%	-	0.00%
8. Research (sub-total)	**329.76**	**4.26%**	**383.31**	**3.86%**
8.01 Biomedical research	0.38	0.00%	-	0.00%
8.02 Clinical research	58.76	0.76%	73.84	0.74%
8.03 Epidemiological research	2.67	0.03%	3.54	0.04%
8.04 Social science research	0.61	0.01%	2.07	0.02%
8.05 Vaccine-related research	0.05	0.00%	0.14	0.00%
8.98 Research not disaggregated by type	267.29	3.46%	303.73	3.06%
8.99 Research not elsewhere classified	-	0.00%	-	0.00%
GRAND TOTAL	**7,733.28**	**100.00%**	**9,921.65**	**100.00%**

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