NATIONAL AIDS SPENDING ASSESSMENT:

Towards a comprehensive estimate of national spending on AIDS in China

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Towards a comprehensive estimate of national spending on AIDS in China

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Joint United Nations Programme on HIV/AIDS (UNAIDS)

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ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
ART	antiretroviral therapy
ARVs	antiretrovirals
AusAID	Australian Government Overseas Aid Program
BCC	behavior change communication
CDC	Center for Disease Control
DFID	The United Kingdom Government Department for International Development
GDP	Gross Domestic Product
GFATM	Global Fund to Fight AIDS, Tuberculosis and Malaria
HIV	Human Immunodeficiency Virus
IDUs	injecting drug users
m	million
MARPs	most-at-risk populations
MTCT	mother-to-child transmission
NASA	National AIDS Spending Assessment
NHA	National Health Accounts
OI	opportunistic infections
OVC	orphans and vulnerable children
PITC	provider-initiated testing and counseling
PLHIV	people living with HIV
PMTCT	prevention of mother-to-child transmission
STI	sexually transmitted infections
SW	sex workers
UNAIDS	Joint United Nations Programme on HIV and AIDS
US$	United States Dollar
VCT	voluntary counseling and testing
¥	Chinese Renminbi Yuan

EXECUTIVE SUMMARY

Towards a comprehensive estimate of national spending on AIDS in China

Background

Comprehensive information about national spending on AIDS response is crucial for health policy development and evaluation. Dehong Prefecture of Yunnan Province is one of the areas hardest hit by HIV in China. Since 1989, when the first 146 HIV-infected injecting drug users (IDUs) were identified in Dehong, this area with 1.1 million of people reported a cumulative total of 17,590 HIV cases by the end of 2010. Studies conducted suggest that the population prevalence for HIV infections in Dehong Prefecture is estimated to be 1.3% [26]. IDUs make up the majority of the people living with HIV (PLHIV) in Dehong Prefecture, accounting for more than a half of the total number of estimated HIV cases in Dehong with high estimated HIV prevalence [26, 28]. HIV transmission mode has been changing gradually over the recent years from intravenous drug use to heterosexual and homosexual transmission [29]. This study provides a comprehensive overview of the overall level and composition of major investments in national AIDS response in Dehong Prefecture introducing National AIDS Spending Assessment (NASA) as a method for the purpose.

Methods

National spending on AIDS in Dehong Prefecture was examined by major funding sources with the use of national statistics, government reports, sector reports, and data reported by prefectural/city and county level public health service institutions for the year of 2010. Standard accountancy estimation methods were used to generate a complete dataset of national spending on AIDS in Dehong Prefecture. Costs were broken down by financing sources, agents, service providers, AIDS spending categories, and beneficiary populations using functional NASA classifications and definitions.

Results

Total estimated national investments on AIDS in Dehong Prefecture accounted for ¥ 45.8 million or US$ 6.8 million in 2010 with US$ 5.6 per capita spending. In 2010, AIDS response in Dehong Prefecture profoundly relied on domestic public investments (93%) and international aid (7%). Central government allocations constituted the largest share of total domestic public investments (91%). The Global Fund to Fight AIDS, Tuberculosis and Malaria (the GFATM) was the main donor and contributed

the largest share in total donor funding (84%). In 2010, international aid in Dehong Prefecture was also provided by the Government of Australia, the Government of the United Kingdom, and the Clinton Foundation. Most of total investments on AIDS were aimed on (1) care & treatment (53%), (2) programme management & administration (24%), and (3) prevention activities (20%). HIV counseling and testing, prevention of mother-to-child transmission (PMTCT), prevention programmes for high risk groups (IDUs, sex workers, men who have sex with men), prevention programmes for key vulnerable populations (migrants, mobile populations, truck drivers, etc.), prevention of HIV transmission aimed at PLHIV, as well as care & treatment programmes, including specific HIV-related laboratory monitoring, antiretroviral treatment (ART), opportunistic infections (OI) prophylaxis and treatment were profoundly funded by domestic public sources of funding. Whereas, international donors and civil society organizations working in Dehong Prefecture channeled majority of their investments on prevention programmes for high risk groups, prevention programmes for key vulnerable populations, prevention of HIV transmission aimed at PLHIV, as well as psychological treatment and support services, home-based care for PLHIV, and activities to provide adherence support.

Conclusions

The pilot implementation of NASA in Dehong Prefecture showed its applicability for conducting HIV expenditure reviews in China context, and proved to be a useful tool to understand national AIDS response from financial aspect, and to assess the extent to which investment pattern matches epidemic pattern. The data and experience obtained will help build capacity for future resource tracking activities in China. It appears reasonable to carry out NASA in the country's regions hardest hit by HIV on the annual basis. NASA findings reveal that AIDS spending in Dehong prefecture in 2010 was generally consistent with local HIV epidemic pattern and disease burden. Although more than 90% of AIDS response in Dehong Prefecture was funded by national government in 2010, prevention programmes for high risk groups (IDUs, sex workers, men who have sex with men), key vulnerable populations (migrants, mobile populations, truck drivers, etc.), prevention of HIV transmission aimed at PLHIV, psychological treatment and support services, home-based care for PLHIV are the key areas which are considerably dependent on international aid. Besides, civil society organizations working with high risk groups, key vulnerable populations and PLHIV in Dehong Prefecture are entirely supported by international aid. This fact draws attention in terms of development of future strategy on funding mechanism and quality assurance mechanism to sustain primary and effective preventive programmes in China. Funding security of national AIDS response faces risks with withdrawal of international aid in future years and a pressing need appears for greater innovation in sourcing sustainable funding of national AIDS response. Efficient allocation and reallocation of AIDS resources in Dehong Prefecture could be further addressed with cost-effectiveness evaluations, applying dynamic modeling based on relevant behavioral and epidemiological pattern.

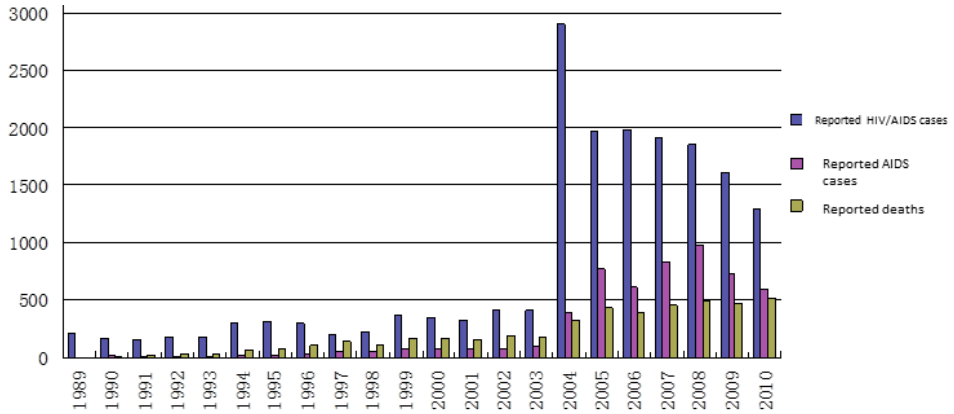
INTRODUCTION

China's HIV epidemic remains low prevalence with high infection among specific sub-populations and in certain geographic areas [29]. Until recently, intravenous drug use was the leading route of HIV transmission in China. HIV continues to spread among IDUs in Dehong Prefecture and other major drug trafficking corridors. However, the HIV transmission mode has been changing gradually from intravenous drug use to heterosexual and homosexual transmission, which is increasing rapidly [29].

By the end of 2009, it is estimated that 740,000 people were living with HIV and AIDS in China. National HIV prevalence was 0.057%. Among 740,000 PLHIV in China 44.3% were infected through heterosexual contact, 14.7% through homosexual contact, and 32.2% through injecting drug use. Of these infections, 84.2% occurred in six provinces: Yunnan, Xinjiang, Guangxi, Guangdong, Guizhou and Sichuan. Blood transmission of HIV accounted for 7.8% of estimated cases, while mother-to-child transmission (MTCT) accounted for 1.0% of the total estimated PLHIV population [29].

Dehong Prefecture lies on Myanmar (Burma) border in Yunnan Province in southwest China. It is one of the areas hardest hit by HIV. The population of 1.1 million people of Dehong prefecture confronts a serious HIV problem fuelled by intravenous drug use. Since 1989, when the first 146 HIV-infected IDUs were identified in Dehong, this area reported a cumulative total of 17,590 HIV/AIDS cases by the end of 2010, including 4,485 recorded deaths (Figure 1).

Figure 1: Annual reported HIV/AIDS cases and AIDS reported deaths in Dehong Prefecture, Yunnan Province, China



Studies suggest that the population prevalence for HIV infections in Dehong Prefecture is estimated to be 1.3% [26]. IDUs make up the majority of the people living with HIV in Dehong Prefecture (Table 2), accounting for more than a half of the total number of estimated HIV cases in Dehong with the highest estimated HIV prevalence [26, 28]. HIV transmission mode has been changing gradually over the recent years from intravenous drug use to heterosexual and homosexual transmission [29]. Among cumulative reported HIV/AIDS cases the proportion of sexual transmission has exhibited a gradual

growth trend over the recent years in Dehong Prefecture (Figures 2-3), which includes homosexual, heterosexual, as well as transmission through contacts between HIV positives and their spouses and partners. Trends in estimated HIV incidence among five key risk populations in Dehong Prefecture also confirm the described epidemiological pattern (Figure 3). Additionally, migration and mobility strongly influences on the spread of HIV in Yunnan Province in recent years with increasing number of new HIV cases among migrants from Myanmar (Burma), Vietnam, and other countries bordering southwest border of China, reaching 20% of new reported HIV/AIDS cases in Dehong Prefecture.

Figure 2: Modes of transmission among annual reported HIV/AIDS cases in Dehong Prefecture, Yunnan Province, China

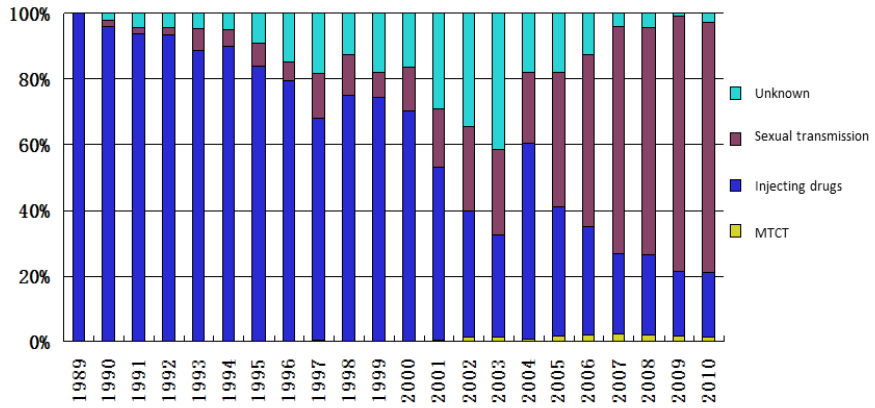


Table 1: Estimated HIV/AIDS prevalence by subgroups, and population size estimates in Dehong Prefecture [26], Yunnan Province, China

Workbook-based estimates of HIV/AIDS prevalence by subgroups in Dehong Prefecture, Yunnan Province in 2005

	Population size estimates (range and mid-point)[a]	Estimated number living with HIV/AIDS (range and mid-point)[a]	Estimated prevalence for HIV/AIDS (range and mid-point)[a]
IDUs	13 100–16 200 (14 700)	6100–9900 (8000)	41.5–61.1 (54.4%)
FSW	1800–2700 (2200)	100–200 (100)	3.9–5.7 (4.8%)
Clients of FSWs	17 800–26 800 (22 300)	500–1200 (800)	2.5–4.2 (3.4%)
Remaining population	1 022 300–1 035 200 (1 028 800)	3000–6800 (4800)	0.4–0.8 (0.5%)
Total	1 068 000[b]	9600–18 100 (13 800)	0.9–1.7 (1.3%)

[a]The estimates of the population size and the estimated number of persons living with HIV/AIDS with plausible bounds and the mid-point are rounded to the nearest 100.

[b]Population census data were collected from the Dehong Prefecture Statistical Bureau. The populations are rounded to the nearest 1000.

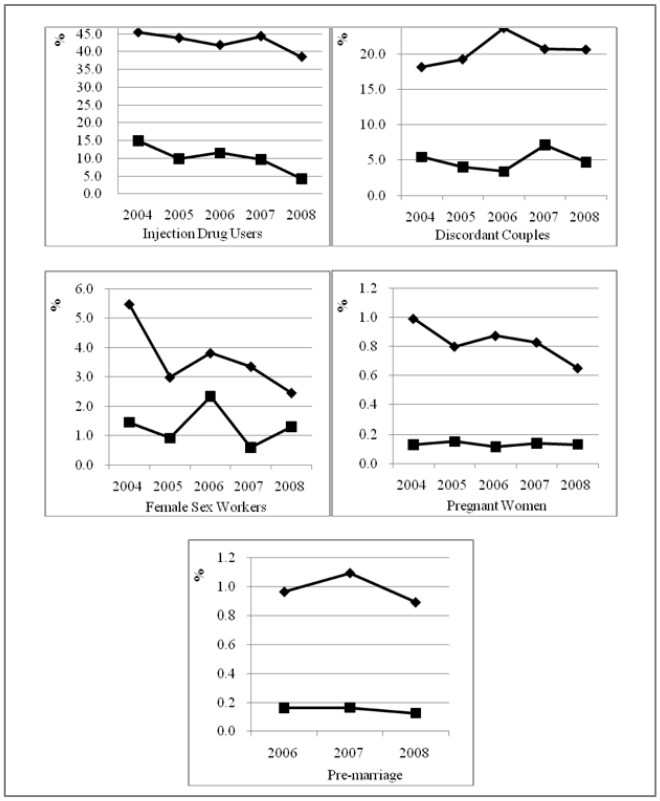
Dynamic model-based estimates of HIV/AIDS prevalence by subgroups in Dehong Prefecture, Yunnan Province in 2005

	Population size estimates (range, mid-point)[a]	Estimated number living with HIV/AIDS (range, mid-point)[a]	Estimated prevalence for HIV/AIDS (range, mid-point)[a]
IDUs	12 200–18 400 (15 300)	5500–10 200 (7800)	35.9–66.7 (51.3%)
FSW	2100–3100 (2600)	90–170 (100)	3.6–6.7 (5.1%)
Clients of FSWs	20 700–31 000 (25 900)	600–1100 (900)	2.3–4.3 (3.3%)
Remaining population	1 015 300–1 032 800 (1 024 000)	3200–5900 (4500)	0.3–0.6 (0.4%)
Total	1 068 000[b]	9300–17 400 (13 300)	0.9–1.6 (1.3%)

[a]The estimates of the population size and the estimated number of persons living with HIV/AIDS with plausible bounds and the mid-point are rounded to the nearest 100.

[b]Population census data were collected from the Dehong Prefecture Statistical Bureau. The populations are rounded to the nearest 1000.

Figure 3: Estimated HIV prevalence and incidence among five populations in Dehong Prefecture [28], Yunnan Province, China*



*Note: Black rhomb indicates HIV-1 prevalence, black square indicates HIV-1 incidence.

The local and national governments have put substantial effort into tackling the HIV epidemic in China. The five-year implementation of China Action Plan to Prevent and Control HIV/AIDS has achieved good results by improving AIDS response mechanisms, implementing a variety of HIV/AIDS measures and expanding the coverage of HIV/AIDS interventions. In order to limit transmission of HIV to a minimum, a number of targeted intervention services including needle exchange programs, methadone maintenance therapy, condom distribution, voluntary counseling and testing, antiretroviral therapy, prevention of mother-to-child transmission and educational information about drug use and HIV have been introduced. By 2010, 3,214 PLHIV have been receiving antiretroviral treatment, accounting for about 58.2% of PLHIV eligible for ART. In 2010, 3,380 intravenous drug users or 21.0% of estimated IDUs in Dehong Prefecture were covered by methadone maintenance treatment and needle and syringe exchange programs. Behavioral change program reached 1,845 female sex workers per month, covering around 50.0% of estimated female sex workers in Dehong Prefecture. Surveillance data in Dehong prefecture show that in 2010, 34.8% of IDUs, 51.0% of female sex workers and 51.4% of MSM underwent HIV testing and counseling at least once in last 12 months and knew their test results. Pregnant women counseling reached the coverage of 99.8%, whereas 99.0% of HIV-infected pregnant women in need of ART received treatment to prevent mother-to-child transmission.

Comprehensive information about national spending on AIDS response is crucial for health policy development and evaluation. We aimed (1) to provide a comprehensive overview of the overall level and composition of major investments in national AIDS response in Dehong Prefecture of Yunnan Province and (2) to introduce and test the feasibility of conducting National AIDS Spending Assessment (NASA) in China context as a method of conducting HIV expenditure reviews; (3) to establish the link between HIV targets set and HIV priority funding allocations to ensure that allocation for HIV prevention, treatment, care and support matches epidemiological patterns.

METHODS

The conceptual framework for this assessment is an analysis of funding flows and resource allocation patterns implemented using the National AIDS Spending Assessment (NASA) framework, developed by the Joint United Nations Programme on HIV/AIDS (UNAIDS) approved by the UNAIDS Global Consortium of Resource Tracking in 2006 and has been used to report progress on the 2001 Declaration of Commitment from the UN General Assembly Special Session on HIV/AIDS (UNGASS) and the recent Political Declaration on HIV/AIDS (2011).

NASA supports countries in planning and monitoring their AIDS responses, allows the monitoring of the annual HIV financial flows and is based on existing accounting approaches and the National Health Accounts framework, which is internationally recognized as a tool for tracking financial flows on healthcare from financing sources to financing agents, down to service providers, providing HIV services and activities to various beneficiary populations.

NASA in Dehong Prefecture of Yunnan Province was undertaken for the period of 2010 with the purpose of building national capacity in conducting HIV expenditure reviews, and aimed on evaluating and analyzing the overall level and composition of major investments in the national AIDS response in Dehong Prefecture. To our knowledge, this is the first comprehensive NASA conducted in China.

National spending on AIDS in Dehong Prefecture was examined by major funding sources with the use of national statistics, government reports, sector reports, and data reported by prefectural/city and county level public health service institutions for the year of 2010. Standard accountancy estimation methods were used to generate a complete dataset of national spending on AIDS. Costs were broken down by financing sources, agents, service providers, AIDS spending categories, and beneficiary populations using functional NASA classifications and definitions.

As a part of its methodology, NASA employs double-entry tables or matrices to represent the origin and destination of resources, in order to avoid double-counting of expenditures by reconstructing the resources flows for every transaction from funding source to service provider, rather than just adding up the expenditures of every agent that commits resources to HIV activities.

The set of core tables in NASA addresses three basic questions:

- Where does the money come from? (sources of funding);
- Where does the money go to? (financial agents and providers of health care services and goods);
- What kind of functionally-defined services are performed?

NASA framework has been designed to include the following dimensions of expenditure classifications:

- Financing sources are institutions that provide the funds used in the system by financing agents;
- Financing agents are institutions that receive funds from financing sources and have programmatic control over their uses;
- Providers of services are entities that receive funds from financing agents and deliver health care services. They are the end users of funds;
- Functions or AIDS Spending Categories (ASC) are actual goods and services provided using the funds (e.g., care and treatment, prevention, mitigation, education, other);
- Beneficiary populations or target groups (e.g., men who have sex with men, injecting drug users, commercial sex workers, prisoners, migrants, youth, other).

The boundaries of functionally defined health care system delimit the subject area of NASA. The approach is 'functional' in that it refers to the goals or purposes of health care such as disease prevention, health promotion, treatment, rehabilitation and long-term care. Overall, NASA in China has been structured around core set of functions:

- Prevention, including communication for social and behavior change, voluntary counseling and testing, condom provision and other programs for high risk groups, key vulnerable, "accessible" and general population, as well as prevention of mother-to-child transmission (PMTCT), and other preventive activities;
- Care & treatment, including provider initiated testing and counseling (PITC), ART, prevention and treatment of OI, laboratory monitoring of HIV patients, psychological support, and other activities;
- Interventions targeting orphans and vulnerable children;
- Program management & administration, including planning, coordination of HIV programmes, monitoring and evaluation, upgrading and construction of infrastructure and other activities;
- Human resources, including training and rewarding of the personnel working in HIV field;
- Social protection of different types provided to PLHIV;
- Enabling environment, including advocacy, reduction of stigma and discrimination, and human rights programs;
- HIV-related research.

NASA functional classifications and definitions are comprehensively presented elsewhere [15].

NASA process and collection of spending flows requires significant collaboration among government agencies and international organizations. Technical working team in China was trained on using standard NASA framework to ensure the accuracy of findings. Commitment of the national and international partners in China made it possible to conduct national AIDS spending assessment in Dehong Prefecture of Yunnan Province. Quantitative data presented in the assessment were collected through routine financial reporting of all prefectural/city and county level institutions and organizations, working in HIV field in Dehong Prefecture of Yunnan Province. In most cases, we employed a bottom-up approach to calculate the total amounts of funds for all spending categories. The funding units (funding per spending category) from each service provider institution were

aggregated to the level of funding throughout Dehong Prefecture. For a list of financing sources, financing agents and service providers see the Supplementary Material (Tables 11-12).

All results in the report are presented in 2010 US dollars, using official average exchange rate.[1]

Note, that national AIDS spending assessments for the period of 2010 don't include overall spending of public health care settings on "Safe medical injections" and "Universal precautions".

Total estimated expenditure on AIDS also excludes private households' out-of-pocket expenditure. Data collection covered spending on AIDS response funded from public and external sources.

Data triangulation was conducted to integrate and analyze data from multiple sources through data collection, verification, comparison and interpretation, in a bid to avoid defects of data sources, reduce the risk of incorrect interpretation and ensure the reliability of conclusions.

Also, we examined HIV spending per capita in Dehong for 2010.

Qualitative data was collected through literature reviews of available research and surveillance information reports.

In order to fully seek the opinions of the stakeholders on the draft version of the 2010 NASA in Dehong Prefecture of Yunnan Province, NASA technical working group convened consultation meetings with the representatives from National Center for AIDS/STD Prevention and Control, Chinese Center for Disease Control and Prevention, and experts from UNAIDS country office in China to share their views on findings. After the meeting, the technical working group brought together the various opinions, carried out analysis, and incorporated the opinions and recommendations into this report.

Main outputs, challenges, and recommendations on next steps from NASA exercise in Dehong Prefecture of Yunnan Province are presented in further section of this report.

[1] US$ 1 = ¥6.7696 Chinese Renminbi Yuan

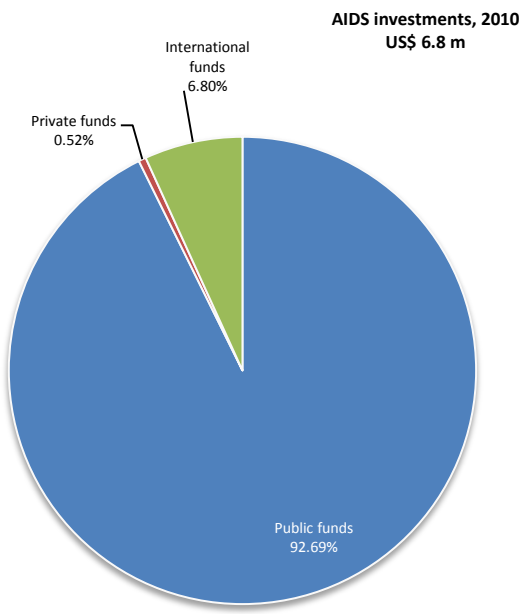
RESULTS

Financing sources – Who invests in AIDS response?

Total estimated national investments on AIDS in Dehong Prefecture of Yunnan Province accounted for about ¥ 45.8 million or US$ 6.8 million in 2010 with US$ 5.6 per capita spending.

In 2010, AIDS response in Dehong Prefecture profoundly relied on domestic public investments (93%) and international aid (7%) (Figure 4). Central government allocations constituted the largest share of total domestic public investments (91%). Funds were transferred from the central government to provincial governments and then down to prefecture/city and county level governments. The share of prefecture/city and county level governments' revenue in total domestic public investments was not large (9%).

Figure 4: AIDS investments versus sources of funding, Dehong Prefecture of Yunnan Province, China NASA 2010



The Global Fund to Fight AIDS, Tuberculosis and Malaria was the main international donor in Dehong Prefecture in 2010, which contributed the largest share in total donor funding for AIDS (84%).

International aid in Dehong Prefecture was also provided by the Government of Australia, the Government of the United Kingdom, and the Clinton Foundation. The Government of Australia supported the HIV/AIDS Asia Regional Program (HAARP); the Government of the United Kingdom sustained the China HIV/AIDS Roadmap Tactical Support (CHARTS) Project. The efforts of international partners comprised both governmental and nongovernmental programs that were focused on the following funding priorities: prevention services for high-risk groups, prevention and support of people living with HIV and other activities.

Private spending on AIDS was not entirely estimated in Dehong in 2010, except for some minor amounts: (1) out-of-pocket payments of private households on OI prophylaxis and treatment, and PMTCT activities in public sector health care provider institutions; (2) spending of health care provider

institutions on coordination and management of AIDS interventions covered by their extra budgetary funds, which in their turn were received from charged services not related to HIV and AIDS.

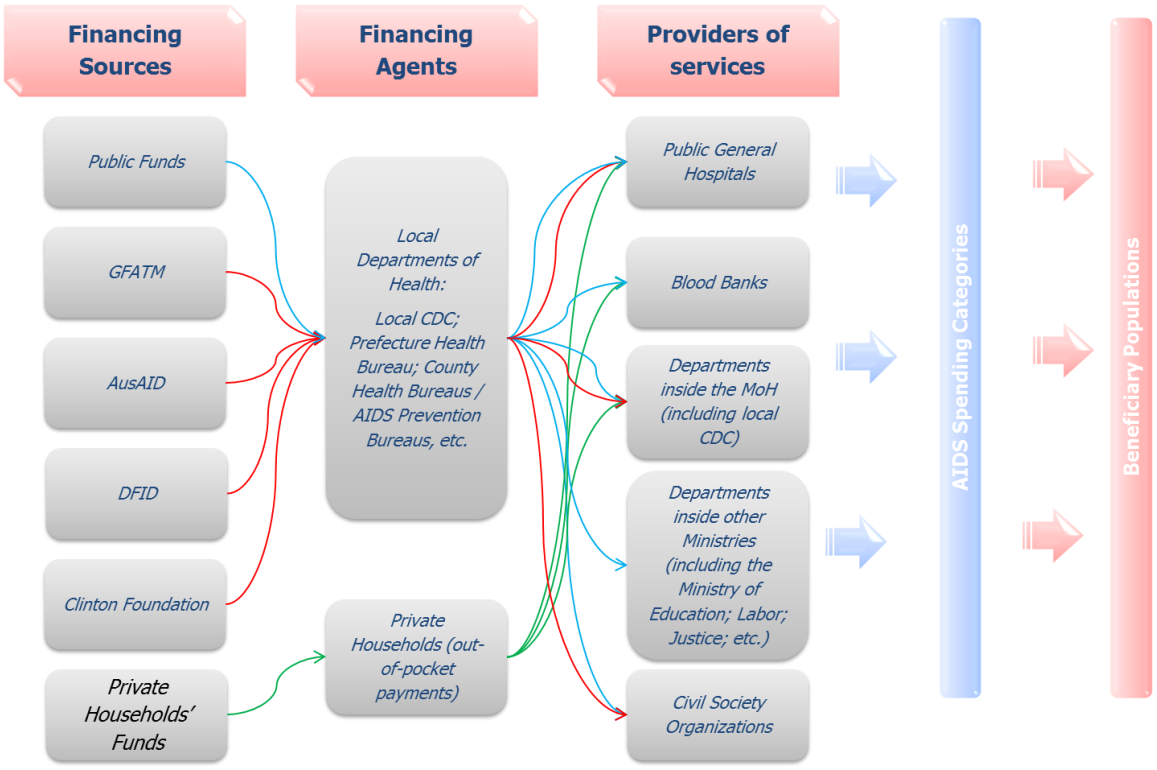
The share of private spending on AIDS accounted for about 0.5% of total investments on AIDS in Dehong Prefecture in 2010. Overall, out-of-pocket expenditures of private households on HIV related services might be underestimated and require further investigations.

Financing agents and providers of services – Who decide how to spend the money on AIDS? And who delivers HIV-related services?

Major AIDS investments, including domestic public funding sources, international aid, and expenditure of public profit-making health care provider institutions, were found to be entirely channeled through public sector health care institutions and organizations in Dehong Prefecture in 2010. Altogether public local health authorities as a major financing agent (FA.01.01.03.01 Local/municipal Departments of Health) channeled 99.7% of total estimated AIDS investments. Public local health authorities, comprising prefecture/city and county health bureaus and local HIV/AIDS authorities, have been transferring AIDS investments to various service provider institutions.

HIV financing flows from funding sources to financing agents and further to service providers in Dehong Prefecture in 2010 are presented on the Figure 5. For a list of financing sources, financing agents and service providers see the Supplementary Material (Tables 11-12).

Figure 5: AIDS financing flows, Dehong Prefecture of Yunnan Province, China NASA 2010



Similarly to financing agents, key service providers in Dehong Prefecture in 2010 in terms of AIDS investments spent and bulk of services provided were the local public health care institutions and organizations, namely public general hospitals and clinics (58.6%); HIV/AIDS authorities (35.9%); blood banks (0.6%); and other governmental organizations, related to education, justice and labor (2.2%); whereas civil society organizations accounted for about 2.7% of total estimated expenditure on AIDS (Figures 14-17 of the Supplementary Material).

In 2010, public service providers in Dehong Prefecture were profoundly funded by domestic public sources of funding (95%), whereas civil society organizations were highly dependable on international aid (95%).

For more details around providers of services versus funding sources (Figures 16-17), and providers of services versus key interventions areas (Figures 14-15) see the Supplementary Material.

AIDS spending categories – What services have been delivered? What are the sources of funding for specific HIV activities?

A comprehensive overview of key findings around *total estimated spending on AIDS from all sources versus AIDS spending categories* is presented on Figure 6.

Similarly, a snapshot with key findings around *AIDS spending categories versus international funding sources* is presented on Figure 7.

In 2010, most of AIDS investments in Dehong Prefecture were allocated on care & treatment (US$ 3.6 m or about 53%); prevention (US$ 1.3 m or about 20%); programme management & administration (US$ 1.7 m or about 24%).

Majority of funding on *care & treatment* were domestic public sources (97% of total funding on care & treatment). Admittedly, key interventions were profoundly supported by domestic public sources:

- ART (30% of total funding on care & treatment; or 16% of total expenditure on AIDS);
- OI outpatient and inpatient prophylaxis and treatment (8% and 42% of total funding on care & treatment respectively; or 4% and 22% of total expenditure on AIDS respectively);
- specific HIV-related laboratory monitoring (13% of total funding on care & treatment; or 7% of total expenditure on AIDS).

Additionally to the listed key care & treatment interventions covered by domestic public sources, the following HIV-related services were introduced and provided due to international aid support in Dehong Prefecture in 2010:

- psychological treatment and support services (66% of international expenditure on care & treatment);
- home-based care (11% of international expenditure on care & treatment).

Although the share of international expenditure in total expenditure on care & treatment altogether accounted for about 3%, psychological treatment, support services, home-based care notably prioritized mainly within international aid programmes and activities.

Substantial amounts of total estimated investments on AIDS were spent on *HIV programme management & administration* (24%). Majority of funding on programme management & administration was channeled from domestic public sources of funding (91%). Key interventions were the following:

- planning, coordination, and programme management (38% of total expenditure on programme management; or 9% of total expenditure on AIDS);
- upgrading and construction of infrastructure (26% of total expenditure on programme management; or 6% of total expenditure on AIDS);
- monitoring & evaluation (14% of total expenditure on programme management; or 3% of total expenditure on AIDS).

Total spending on *preventive activities* was about US$ 1.3 million or about 20% of total estimated expenditure on AIDS. The largest share of investments on HIV prevention was channeled on:

- high risk groups, i.e. IDUs, SW, MSM (40% of total expenditure on prevention; or 8% of total expenditure on AIDS);
- PMTCT (27% of total expenditure on prevention; or 5% of total expenditure on AIDS);
- risk-reduction for key vulnerable populations, i.e. migrants and mobile populations, truck drivers, etc., and "accessible" populations, i.e. people attending STI clinics, etc. (9% of total expenditure on prevention; or 2% of total expenditure on AIDS);
- VCT for general population (5% of total expenditure on prevention; or 1% of total expenditure on AIDS);
- communication for social and behavioral change for general population (5% of total expenditure on prevention; or 1% of total expenditure on AIDS).

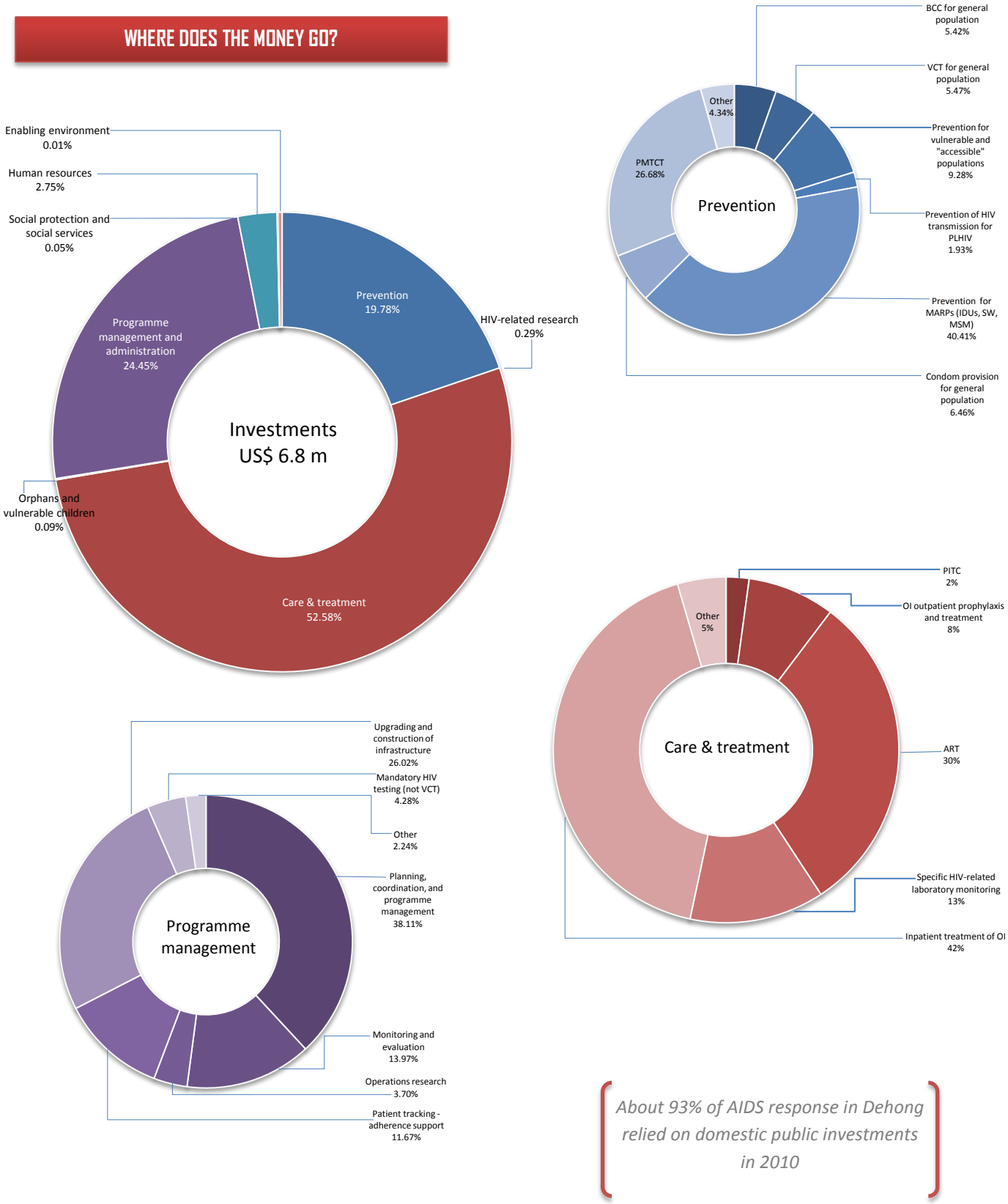
Majority of resources for prevention were also mainly funded by domestic public sources - 84%, whereas 16% was covered by international aid. Key preventive prioritized areas supported by international aid were (Figures 8-9):

- high risk groups, i.e. IDUs, SW, MSM – 68% of total donor funding;
- risk-reduction for key vulnerable populations, i.e. migrants and mobile populations, truck drivers, etc., and "accessible" populations, i.e. people attending STI clinics, etc. – 21% of total donor funding;
- PMTCT – 7% of total donor funding;
- prevention of HIV transmission for PLHIV – 2% of total donor funding.

International aid played a crucial role in funding support to key prevention programmes in Dehong Prefecture in 2010, accounting for about:

- 36% of total investments on harm reduction programs for IDUs (Figures 8-9, 11);
- 36% of total investments for risk-reduction for key vulnerable populations, i.e. migrants and mobile populations, truck drivers, etc., and "accessible" populations, i.e. people attending STI clinics, etc. (Figures 8-9, 10);
- 14% of the total funds for prevention of HIV transmission for PLHIV (Figures 8-9);
- 13% of total investments on prevention programs for MSM (Figures 8-9, 10);
- 12% of total investments on prevention programmes for SW (Figures 8-9, 10).

Figure 6: Total estimated investments on AIDS response in Dehong Prefecture of Yunnan Province, China NASA 2010



About 93% of AIDS response in Dehong relied on domestic public investments in 2010

Figure 7: International investments on AIDS response, Dehong Prefecture of Yunnan Province, China NASA 2010

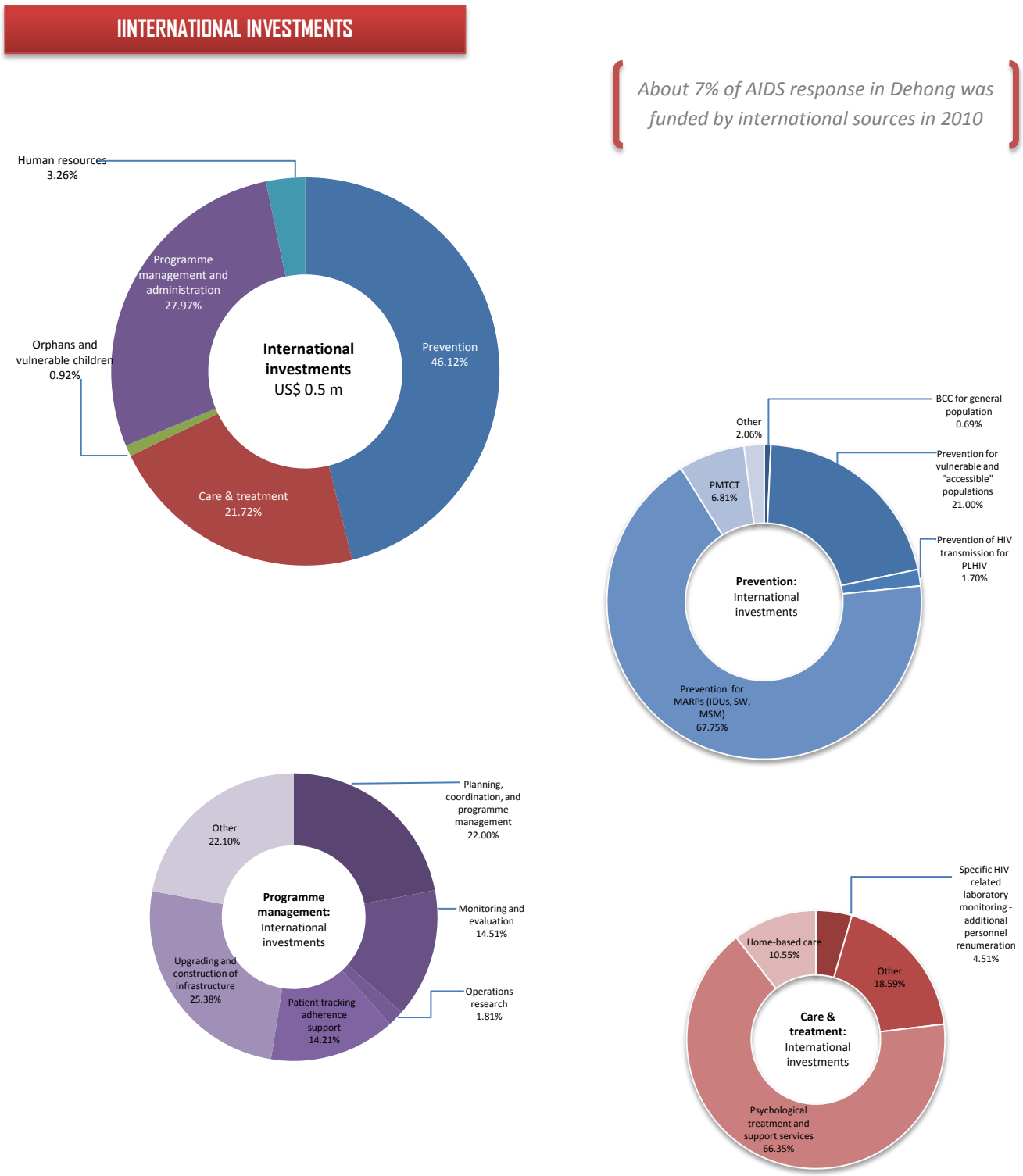


Figure 8: Prioritized prevention programmes versus funding sources (US $) in Dehong Prefecture of Yunnan Province, China NASA 2010

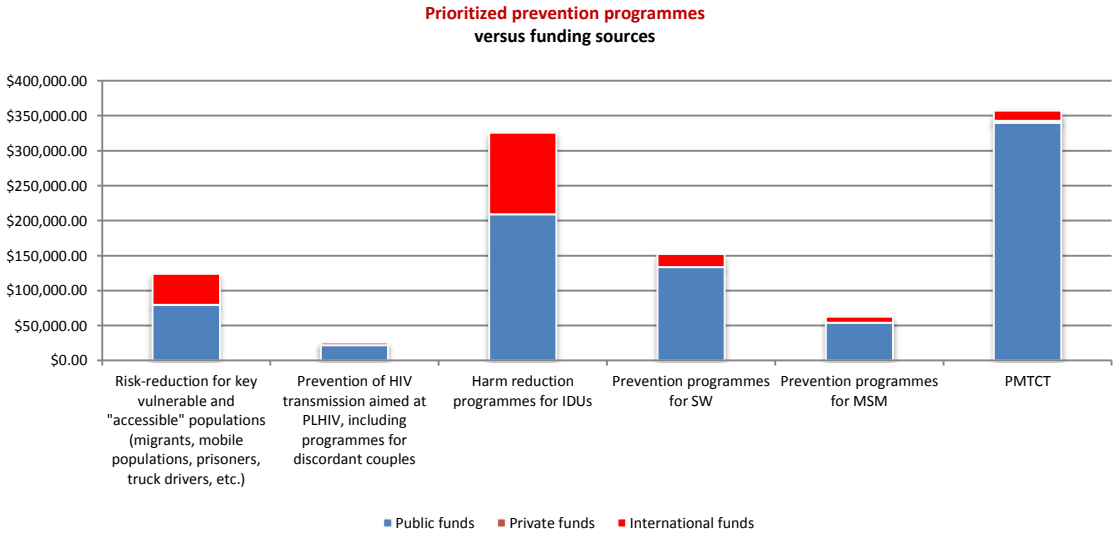


Figure 9: Prioritized prevention programmes versus funding sources (%) in Dehong Prefecture of Yunnan Province, China NASA 2010

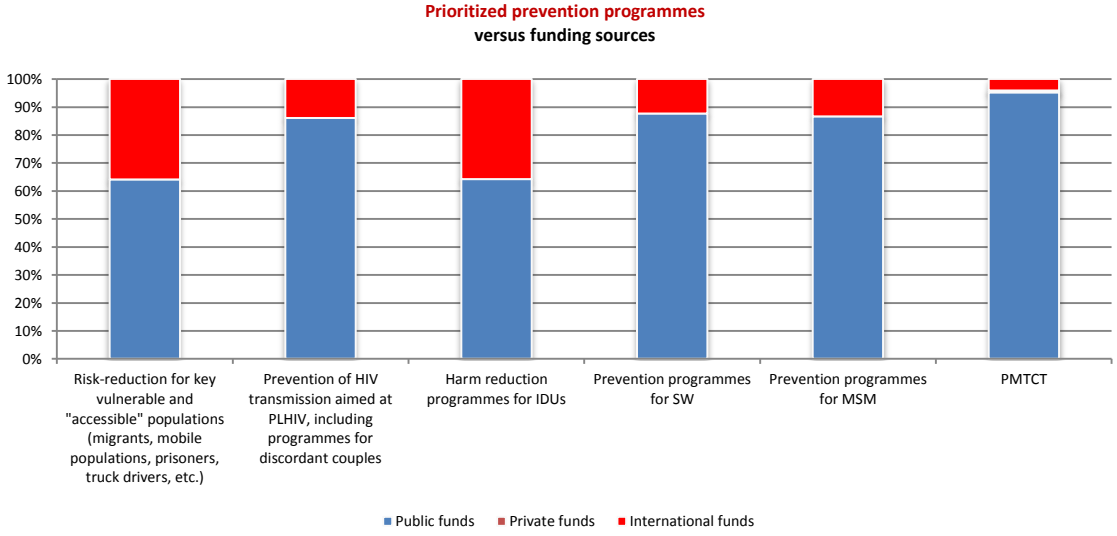
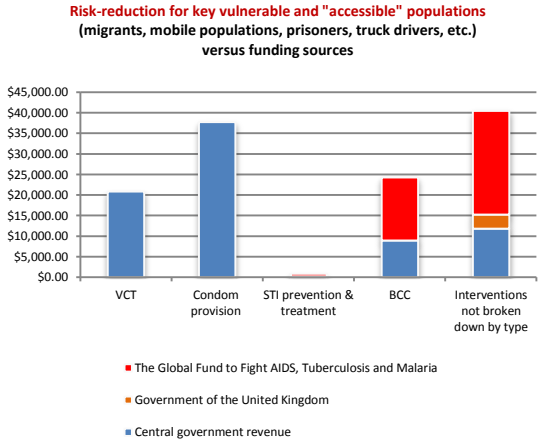
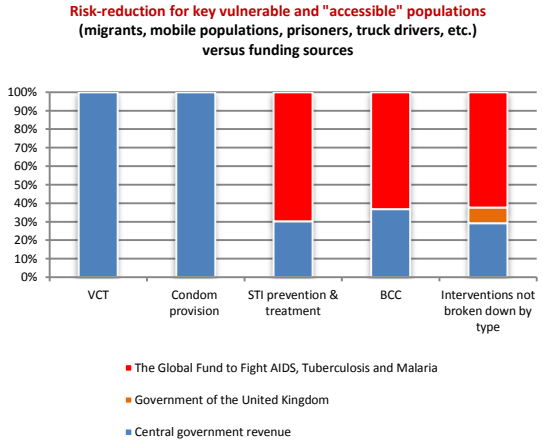
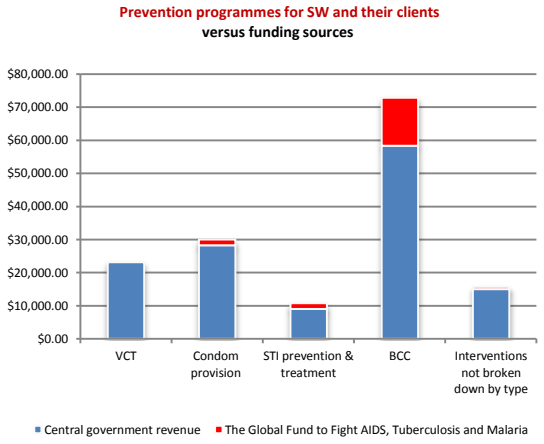
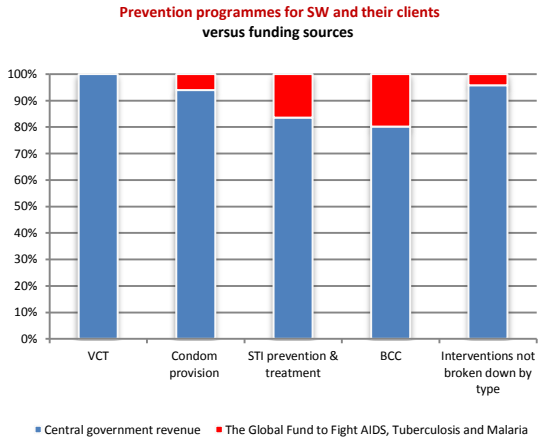


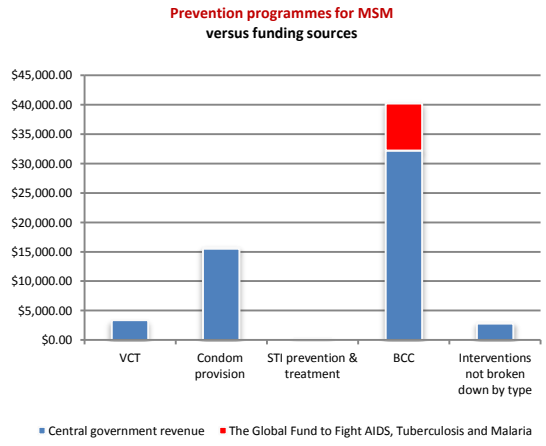
Figure 10: Prevention programmes for key vulnerable and "accessible" populations; SW and their clients; MSM versus funding sources, Dehong Prefecture of Yunnan Province, China NASA 2010











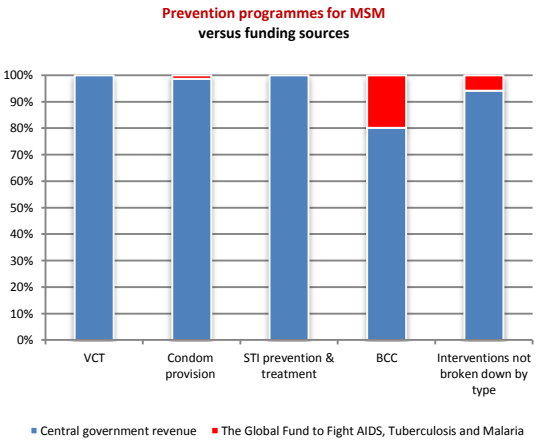


Figure 11: Harm reduction programmes for IDUs versus funding sources, Dehong Prefecture of Yunnan Province, China NASA 2010

An overview of HIV prevention, care & treatments spending priorities versus sources of funding also see in the Supplementary Material (Figures 12-13).

For more details around AIDS spending categories versus their funding sources (Tables 2-10); AIDS investments versus key groups of beneficiary populations (Figure 20); key groups of beneficiary populations versus sources of funding (Figures 18-19) also see the Supplementary Material.

DISCUSSION

Monitoring the flows of resources for AIDS response provides valuable information for improving operations and planning, as well as provides the basis for reallocation of resources while supporting evidence-based decision making. Significant attention is being paid to financing AIDS response in recent years in China. National AIDS spending Assessment in Dehong Prefecture of Yunnan Province offers national policy makers an overview of HIV activities that merit their priority attention in 2010.

NASA findings suggest that about ¥ 45.8 million or US$ 6.8 million was spent on AIDS response in Dehong Prefecture of Yunnan Province in 2010. Once adjusted for the size of the population of Dehong Prefecture, the per capita spending from all sources of funding was about US$ 5.6 in 2010, which is comparable to the average per capita spending on HIV reported from other upper-middle income countries with the similar countries' disease burden, measured as the share of adult HIV prevalence and prevalence among MARPs [18].

Domestic public spending accounted for a significant part of AIDS response in Dehong Prefecture (93%), and is an extremely valuable source of funding for combating HIV epidemic in long run. While preventive activities accounted for about 20% of total spending on AIDS in Dehong Prefecture, the most significant part of funding was channeled to care & treatment (53%).

HIV counseling and testing, prevention of mother-to-child transmission (PMTCT), prevention programmes for high risk groups (IDUs, sex workers, men who have sex with men), prevention programmes for key vulnerable populations (migrants, mobile populations, truck drivers, etc.), prevention of HIV transmission aimed at people living with HIV and AIDS (PLHIV), as well as care & treatment programmes, including specific HIV-related laboratory monitoring, antiretroviral treatment (ART), opportunistic infections (OI) prophylaxis and treatment were profoundly funded by domestic public sources of funding.

Whereas, international donors and civil society organizations working in Dehong Prefecture channeled majority of their investments on prevention programmes for high risk groups (IDUs, SW, MSM), prevention programmes for key vulnerable populations (migrants, mobile populations, truck drivers, etc.), prevention of HIV transmission aimed at PLHIV, as well as some care & treatment programmes, including psychological treatment and support services, home-based care for PLHIV, and activities to provide adherence support.

HIV resources allocations vary significantly by the type of epidemic. Generally countries with low-level and concentrated epidemics allocate a higher proportion of their funds to prevention, while countries with generalized epidemics allocate a larger share to care & treatment. Although HIV epidemics in China remains low prevalence with high prevalence among specific sub-populations, certain geographic areas, like Dehong Prefecture of Yunnan Province, with a large amount of infected people represent the features of generalized epidemics with high estimated prevalence in general population

(26, 28) and respectively majority of investments in AIDS spent on care & treatment, and in much lesser extent on preventive activities.

There are many risk factors fuelling HIV transmission in China. The allocation of HIV prevention funding in Dehong Prefecture is primarily aimed on high risk groups (IDUs, SW, MSM) – 40%, on key vulnerable (migrants, mobile populations, truck drivers, etc.) and "accessible" populations (people attending STI clinics, etc.) – 9%, prevention of HIV transmission aimed at PLHIV – 2%. IDUs, SW, and clients of SW make up the majority of high risk groups in Dehong Prefecture, with high estimated HIV prevalence. Majority of recent HIV cases are due to sexual partnerships with people in one of the high risk groups. It appears that current funding allocation is appropriate. Increases in the proportion of funding to the general and/or migrant populations may have a limited impact due to the size of the populations, difficulty in achieving successful impact, and the counter-effect from decreases in resources to high risk groups and consequent increases in infections among these populations.

Fall in reported and estimated HIV incidence among high risk groups proves the relative effectiveness of prevention campaigns and relevance of previous resource allocation patterns, although, there is evidence on improvements that could be further made to increase effectiveness of AIDS response in Dehong Prefecture. Adequate coverage and targeted prevention funding allocations could potentially increase the effect of prevention interventions. We speculate that significant funding gap still exists in a number of key areas, which could be put further under consideration. This includes:

- *HIV voluntary counseling and testing among different sub-groups.* According to the information provided by HIV/AIDS authorities of Dehong Prefecture, the coverage of HIV voluntary testing and counseling is specifically low among MARPs, key vulnerable populations, and, potentially, among general population. In the period of study HIV testing rate among IDUs was 35%, and among SW was 50%. There should be an effort made to promote voluntary counseling and testing, along with improvement of voluntary testing schemes, which could support early diagnostics and consequently increase the coverage of eligible patients on ART, which is currently estimated on the level less than 60%.
- *Prevention programmes for MARPs and key vulnerable populations*. The evidence of low programmatic coverage suggests that prevention programmes for high risk groups could be further expanded in Dehong Prefecture of Yunnan Province, as optimal coverage is currently far from being reached. For instance: (1) Harm reduction programmes for IDUs: only 21% of IDUs were covered by preventive activities; (2) Prevention programmes for SW: only 50% of SW was covered by preventive activities.
- *Enabling environment*. In 2010, only 0.01% of total estimated investments on AIDS was invested in this area. International experience proves a great importance of prioritizing enabling environment programmes, which include vast advocacy campaigns supported by political commitment, legal aid, human rights, stigma and discrimination reduction programmes, etc. Improved enabling environment will reduce the barriers of people in particular high-risk groups and PLHIV to access and uptake specific HIV program, and thus increase the efficiency and effectiveness of interventions.

CONCLUSIONS

To our knowledge, this is the first comprehensive HIV expenditure tracking exercise conducted with application of NASA for the purpose in China. Pilot implementation of NASA showed its applicability for conducting HIV expenditure reviews in national context, and proved to be a useful tool in understanding the national AIDS response from financial aspect, and to assess the extent to which investment pattern matches epidemic pattern.

Current NASA findings indicate significant injection of government funding and demonstrated important commitment in tackling HIV response in Dehong prefecture of Yunnan Province – the region highly affected by HIV epidemics. Although about 93% of AIDS response was funded by national government in Dehong Prefecture in 2010, prevention programmes for high risk groups (IDUs, sex workers, men who have sex with men), and key vulnerable populations (migrants, mobile populations, truck drivers, etc.), prevention of HIV transmission aimed at PLHIV, psychological treatment and support services, home-based care for PLHIV are the key areas which are considerably dependent on international aid.

With significant numbers of individuals infected and in need of treatment in Dehong Prefecture [26], further increase in investments for care and treatment is expected in future years. Our study demonstrates that major domestic public investments were channeled on care & treatment (53%) in Dehong Prefecture in 2010, rather than preventive activities (20%), with significant amounts spent on OI outpatient prophylaxis and treatment (8% of total spending on care & treatment) and OI inpatient prophylaxis and treatment (42% of total spending on care & treatment), ART (30% of total spending on care & treatment), as well as on specific HIV-related laboratory monitoring (13% of total spending on care & treatment). With substantial amounts spent and foreseen future increase in funding needed for care & treatment it appears reasonable to put this area under the spot light, and to take a critical look at optimizing care & treatment programmes, including application of the principles of Treatment 2.0[2], which seek to simplify the way HIV treatment is currently provided and scale up access, i.e. optimize drug regimens, provide access to point-of-care and other simplified platforms for diagnosis and monitoring, reduce costs, adapt delivery systems, mobilize communities. This will enable obtaining sufficient evidence on programmes effectiveness in terms of the returns on the investment made to achieve the objectives of universal access and decrease morbidity and mortality. Efficiency improvements can yield considerable savings of resources and expansion of services.

Overall, NASA findings suggest that allocations of AIDS investments in Dehong Prefecture of Yunnan Province in 2010 match epidemiological pattern:

- the greatest share of total estimated AIDS investments spent on care & treatment (53%) due to the high number of infected people who are diagnosed, and on treatment;

[2] http://www.unaids.org/en/media/unaids/contentassets/documents/unaidspublication/2011/20110824_JC2208_outlook_treatment2.0_en.pdf

- matching epidemiological pattern, among all preventive activities programmes for high risk groups (IDUs, SW and their clients, MSM) were prioritized in 2010 with HIV spending channeled both from public and international sources of funding (40% of total expenditure on prevention or 8% of total estimated expenditure on AIDS).

Additionally, this paper argues that to achieve better results in tackling AIDS epidemics in Dehong Prefecture, attention must be drawn to assess efficiency and scale up the coverage of the populations at highest risk of HIV transmission in Dehong Prefecture, which are currently rather low and might be inadequate.

Studies suggest[3] a high degree of stigmatization of people living with HIV exists in general population in China. However, our findings show that minor investments and minor activities related to enabling environment, advocacy, programmes to reduce stigma and discrimination of PLHIV, as well as human rights programmes were implemented in Dehong Prefecture in 2010. This programme area share is quite insignificant and in total estimated investments on AIDS it accounted for about 0.01%.

Obviously, efficient allocation and reallocation of AIDS resources in Dehong Prefecture might be further addressed and assessed with cost-effectiveness evaluations and investigations, applying dynamic modeling based on relevant behavioral and epidemiologic pattern, with inputs of NASA findings on current resource allocation.

Clearly, funding security of national AIDS response faces risks with withdrawal of international aid in future years and a pressing need appears for greater innovation in sourcing sustainable funding of national AIDS response in the years to come [1, 2]. Besides, civil society organizations, working with high risk groups, key vulnerable populations and PLHIV in Dehong Prefecture are wholly supported by international aid. This fact draws attention in terms of development of future strategy on funding mechanism and quality assurance mechanism to sustain primary preventive programmes for populations at highest risk.

In recent years, China unveiled an ambitious new health-care reform plan, entailing a doubling of government health spending as well as a number of concrete reforms. The reform is based on three fundamental tenets: strong role of government in health, commitment to equity, and willingness to experiment with regulated market approaches [30, 31]. Within this framework, the reform offers a number of laudable changes to the health system, including an increase in public health financing, an expansion of primary health facilities and an increase in subsidies to achieve universal insurance coverage [30, 31]. China's current efforts and strategy to improve health care financing and provide universal access of the population to health care services, as well as commitment and willingness to solely finance national AIDS response after international grants withdrawal is heading in the right direction, still much remains to be improved [30, 31]. We recommend to introduce and include national AIDS spending assessment into the national system of monitoring and evaluation and on the annual basis systematically conduct HIV expenditure reviews in country's regions hardest hit by HIV. Systematic comparisons of regional NASA findings might be interesting and meaningful in terms of evidence in measuring equity in providing HIV services and revealing potential funding gaps.

[3] http://www.unaids.org.cn/en/index/page.asp?id=178&class=2&classname=Key+Data

The data and experience obtained in conducting NASA in Dehong Prefecture of Yunnan Province will help build capacity for future HIV resource tracking activities in China. Even though, further efforts will still be needed to strengthen the capacity of national experts.

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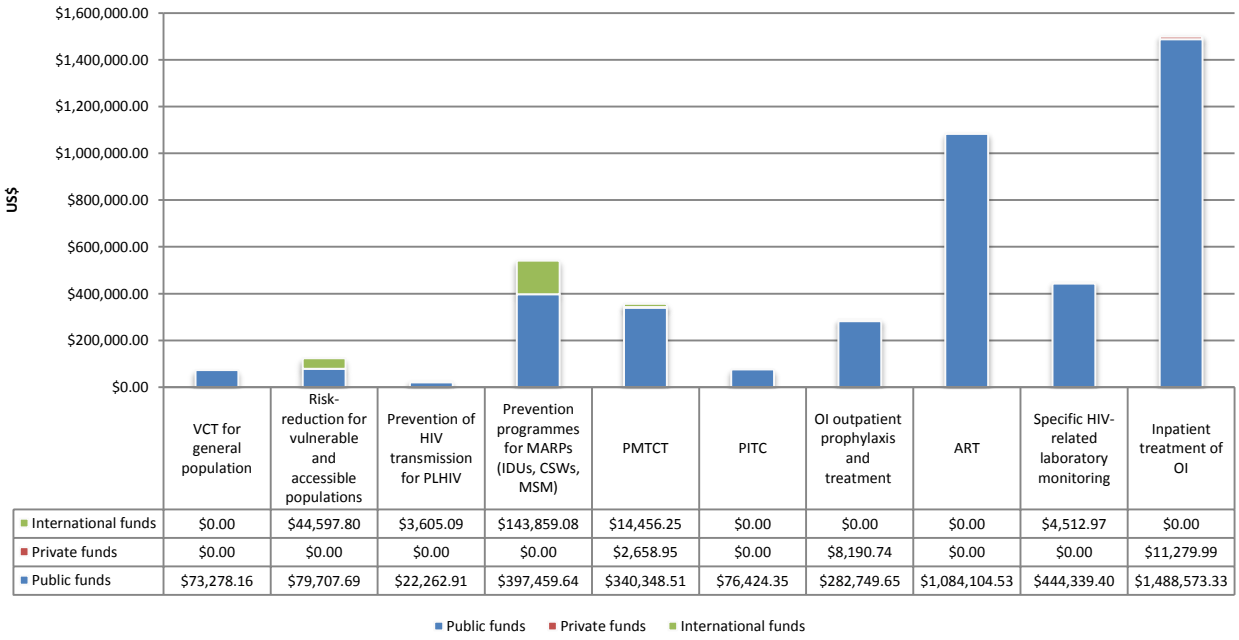
SUPPLEMENTARY MATERIAL

Figure 12: HIV prevention, care & treatments spending priorities versus sources of funding (US $), Dehong Prefecture of Yunnan Province, China NASA 2010



	VCT for general population	Risk-reduction for vulnerable and accessible populations	Prevention of HIV transmission for PLHIV	Prevention programmes for MARPs (IDUs, CSWs, MSM)	PMTCT	PITC	OI outpatient prophylaxis and treatment	ART	Specific HIV-related laboratory monitoring	Inpatient treatment of OI
International funds	$0.00	$44,597.80	$3,605.09	$143,859.08	$14,456.25	$0.00	$0.00	$0.00	$4,512.97	$0.00
Private funds	$0.00	$0.00	$0.00	$0.00	$2,658.95	$0.00	$8,190.74	$0.00	$0.00	$11,279.99
Public funds	$73,278.16	$79,707.69	$22,262.91	$397,459.64	$340,348.51	$76,424.35	$282,749.65	$1,084,104.53	$444,339.40	$1,488,573.33

Figure 13: HIV prevention, care & treatments spending priorities versus sources of funding (%), Dehong Prefecture of Yunnan Province, China NASA 2010

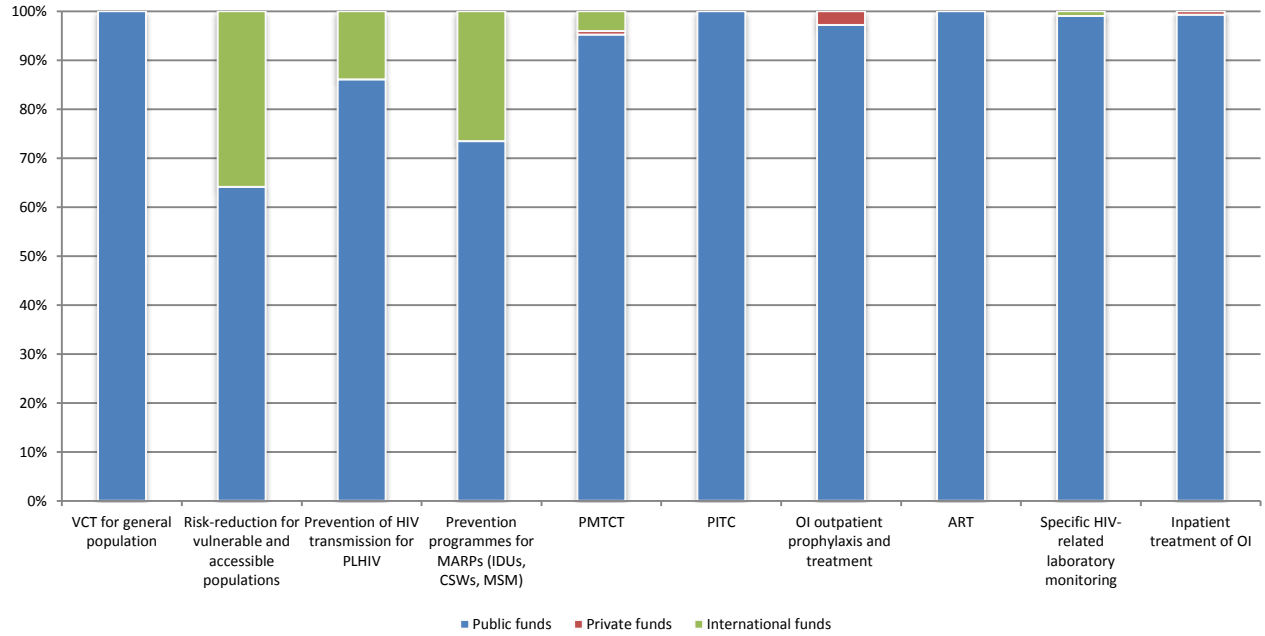


Figure 14: Providers of services in the HIV field versus key intervention areas (US$), Dehong Prefecture of Yunnan Province, China NASA 2010

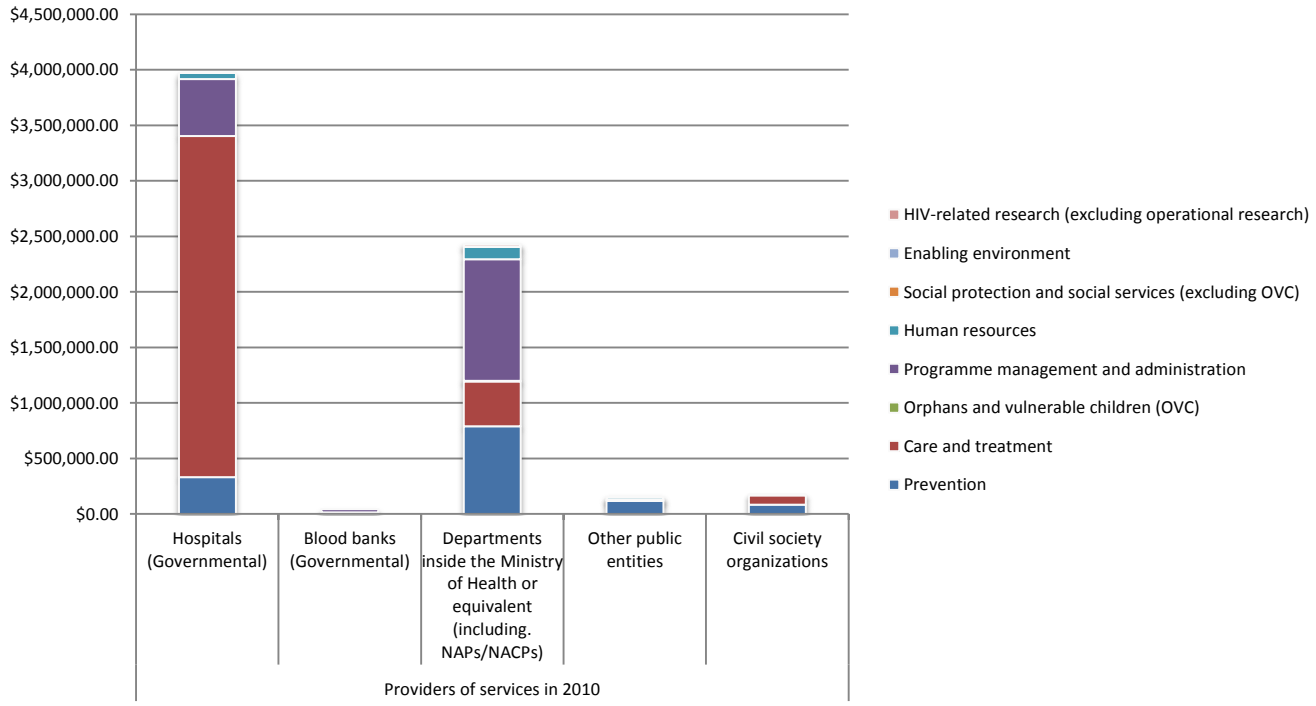


Figure 15: Providers of services in the HIV field versus key intervention areas (%), Dehong Prefecture of Yunnan Province, China NASA 2010

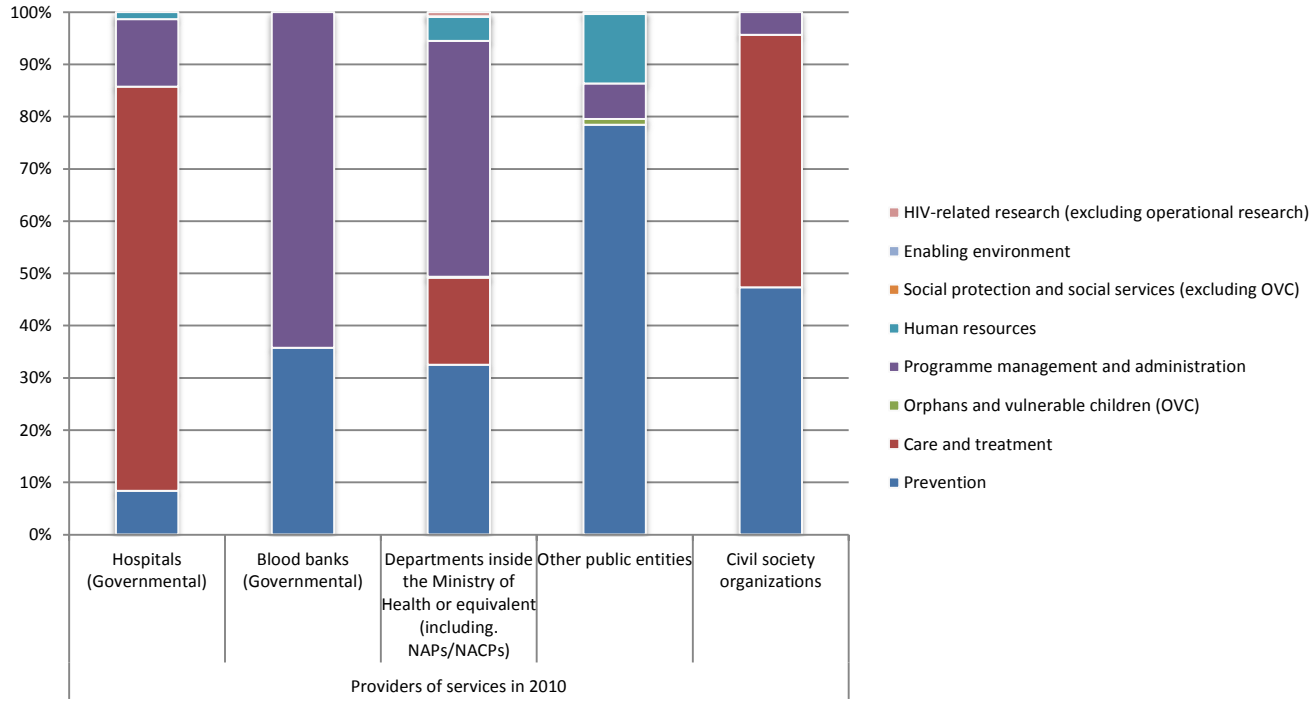
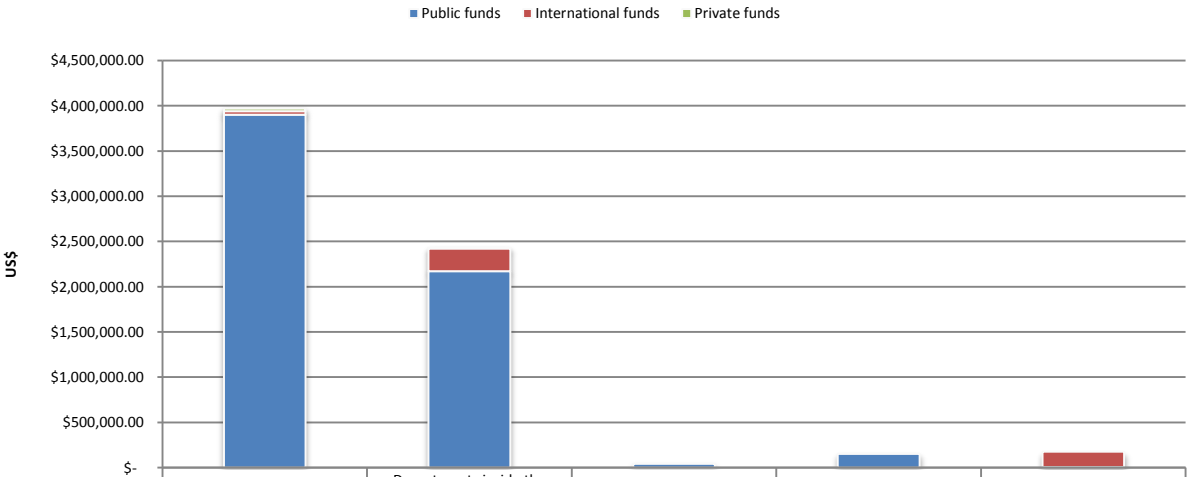
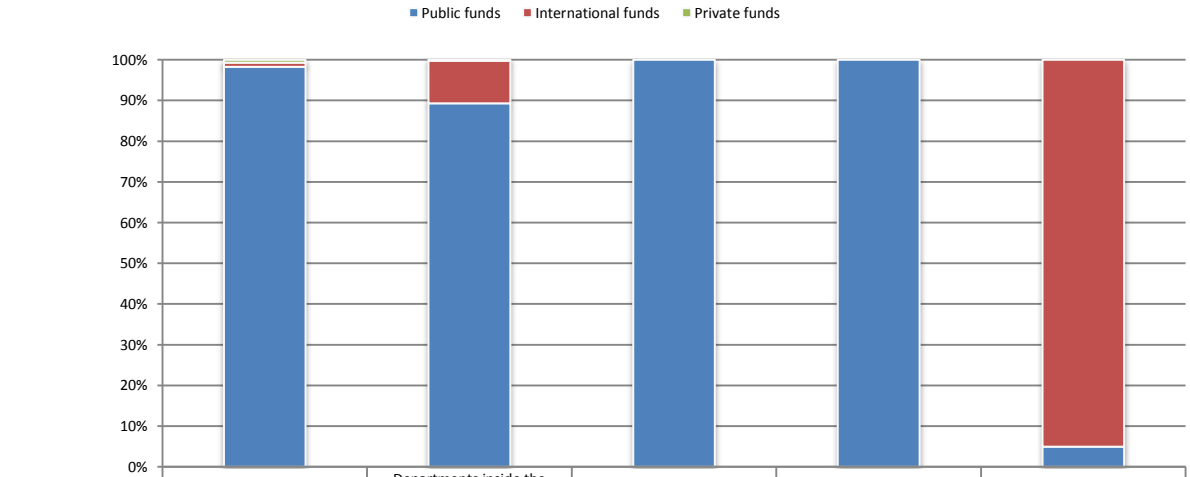


Figure 16: Providers of services in the HIV field versus funding sources (US$), Dehong Prefecture of Yunnan Province, China NASA 2010



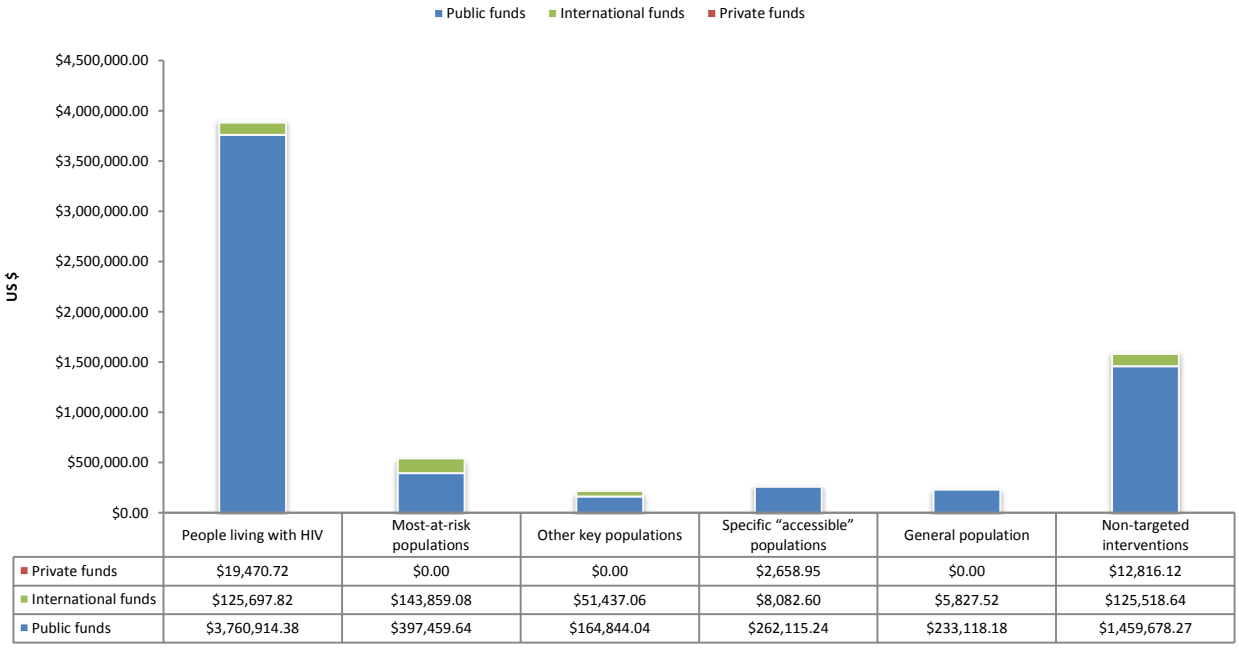
	Hospitals (Governmental)	Departments inside the Ministry of Health or equivalent (including. NAPs/NACPs)	Blood banks (Governmental)	Other governmental organizations (education, justice, labour, other)	Civil society organizations
Private funds	$28,741.58	$6,204.21	$-	$-	$-
International funds	$39,851.84	$252,989.54	$-	$-	$167,581.34
Public funds	$3,901,740.00	$2,171,267.53	$44,349.80	$152,049.59	$8,722.82

Figure 17: Providers of services in the HIV field versus funding sources (%), Dehong Prefecture of Yunnan Province, China NASA 2010



	Hospitals (Governmental)	Departments inside the Ministry of Health or equivalent (including. NAPs/NACPs)	Blood banks (Governmental)	Other governmental organizations (education, justice, labour, other)	Civil society organizations
Private funds	$28,741.58	$6,204.21	$-	$-	$-
International funds	$39,851.84	$252,989.54	$-	$-	$167,581.34
Public funds	$3,901,740.00	$2,171,267.53	$44,349.80	$152,049.59	$8,722.82

Figure 18: Beneficiary populations versus sources of funding (US $), Dehong Prefecture of Yunnan Province, China NASA 2010



	People living with HIV	Most-at-risk populations	Other key populations	Specific "accessible" populations	General population	Non-targeted interventions
Private funds	$19,470.72	$0.00	$0.00	$2,658.95	$0.00	$12,816.12
International funds	$125,697.82	$143,859.08	$51,437.06	$8,082.60	$5,827.52	$125,518.64
Public funds	$3,760,914.38	$397,459.64	$164,844.04	$262,115.24	$233,118.18	$1,459,678.27

Figure 19: Beneficiary populations versus sources of funding (%), Dehong Prefecture of Yunnan Province, China NASA 2010

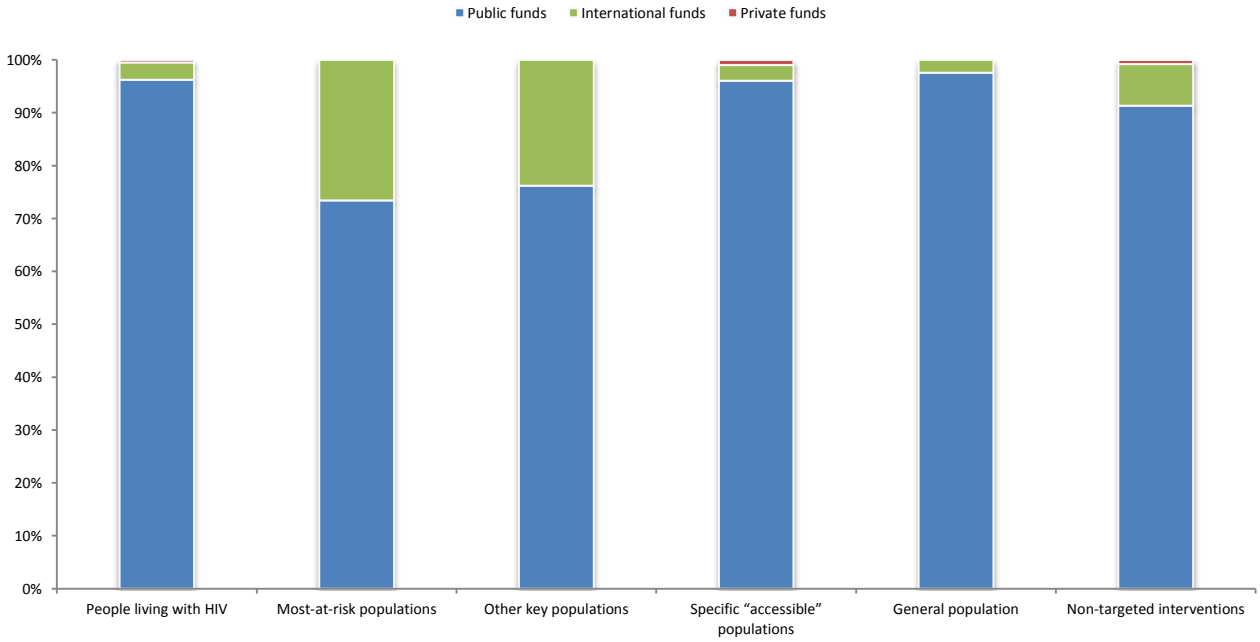


Table 2: Total estimated HIV expenditure by key intervention area and funding sources (US$), Dehong Prefecture of Yunnan Province, China NASA 2010

Key intervention areas	Funding sources, US$			
	Public	**Private**	**International**	**Total**
Prevention	$1,124,566.52	$2,658.95	$212,345.74	$1,339,571.20
Care and treatment	$3,442,349.52	$19,470.72	$100,017.57	$3,561,837.81
Orphans and vulnerable children (OVC)	$1,624.91	$0.00	$4,234.37	$5,859.28
Programme management and administration	$1,514,616.27	$12,816.12	$128,799.93	$1,656,232.32
Human resources	$171,036.25	$0.00	$15,025.11	$186,061.36
Social protection and social services (excluding OVC)	$3,692.98	$0.00	$0.00	$3,692.98
Enabling environment	$590.88	$0.00	$0.00	$590.88
HIV-related research (excluding operational research)	$19,652.42	$0.00	$0.00	$19,652.42
Total	**$6,278,129.75**	**$34,945.79**	**$460,422.72**	**$6,773,498.25**

Figure 20: Total estimated HIV expenditure by key groups of beneficiary populations (%), Dehong Prefecture of Yunnan Province, China NASA 2010

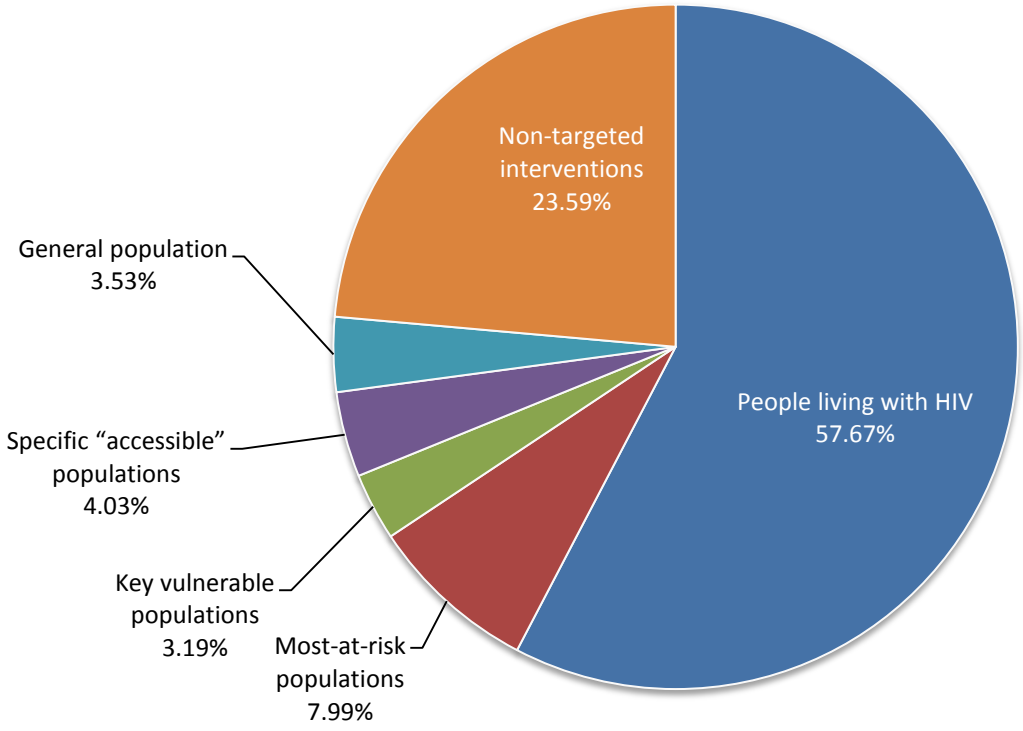


Table 3: HIV expenditure on prevention by AIDS spending category and funding sources (US$), Dehong Prefecture of Yunnan Province, China NASA 2010

Prevention by AIDS spending category	Funding sources, US$			
	Public	**Private**	**International**	**Total**
Communication for social and behavior change	$71,204.35	$0.00	$1,455.03	$72,659.39
Community mobilization	$792.07	$0.00	$4,372.49	$5,164.56
Voluntary counseling and testing (VCT)	$73,278.16	$0.00	$0.00	$73,278.16
Risk-reduction for vulnerable and "accessible" populations	$79,707.69	$0.00	$44,597.80	$124,305.50
Prevention – youth in school	$9,111.32	$0.00	$0.00	$9,111.32
Prevention – youth out-of-school	$7,533.68	$0.00	$0.00	$7,533.68
Prevention of HIV transmission aimed at people living with HIV (PLHIV)	$22,262.91	$0.00	$3,605.09	$25,868.00
Prevention programmes for MARPs (IDU, SW, MSM)	$397,459.64	$0.00	$143,859.08	$541,318.72
Prevention programmes in the workplace	$4,431.58	$0.00	$0.00	$4,431.58
Condom social marketing	$443.16	$0.00	$0.00	$443.16
Public and commercial sector male condom provision	$86,567.60	$0.00	$0.00	$86,567.60
Prevention, diagnosis, and treatment of sexually transmitted infections (STI)	$14,771.92	$0.00	$0.00	$14,771.92
Prevention of mother-to-child transmission (PMTCT)	$340,348.51	$2,658.95	$14,456.25	$357,463.71
Blood safety	$15,839.99	$0.00	$0.00	$15,839.99
Post-exposure prophylaxis (PEP)	$369.30	$0.00	$0.00	$369.30
Prevention activities not broken down by intervention	$444.63	$0.00	$0.00	$444.63
Total	**$1,124,566.52**	**$2,658.95**	**$212,345.74**	**$1,339,571.20**

Table 4: HIV expenditure on care & treatment by AIDS spending category and funding sources (US$), Dehong Prefecture of Yunnan Province, China NASA 2010

Care & treatment by AIDS spending category	Funding sources, US$			
	Public	**Private**	**International**	**Total**
Provider-initiated testing and counseling (PITC)	$76,424.35	$0.00	$0.00	$76,424.35
OI outpatient prophylaxis and treatment not disaggregated by type	$282,749.65	$8,190.74	$0.00	$290,940.38
Antiretroviral therapy not disaggregated neither by age nor by line of treatment	$1,084,104.53	$0.00	$0.00	$1,084,104.53
Nutritional support associated with antiretroviral therapy	$1,146.45	$0.00	$0.00	$1,146.45
Specific HIV-related laboratory monitoring	$444,339.40	$0.00	$4,512.97	$448,852.37
Psychological treatment and support services	$20,811.86	$0.00	$66,366.54	$87,178.41
Home-based care	$617.47	$0.00	$10,549.22	$11,166.69
Traditional medicine and informal care and treatment services	$9,806.04	$0.00	$0.00	$9,806.04
Outpatient care services not disaggregated by intervention	$1,491.67	$0.00	$18,588.84	$20,080.51
Inpatient treatment of opportunistic infections (OI)	$1,488,573.33	$11,279.99	$0.00	$1,499,853.31
Care and treatment services not disaggregated by intervention	$32,284.77	$0.00	$0.00	$32,284.77
Total	**$3,442,349.52**	**$19,470.72**	**$100,017.57**	**$3,561,837.81**

Table 5: HIV expenditure on programme management & administration by AIDS spending category and funding sources (US$), Dehong Prefecture of Yunnan Province, China NASA 2010

Programme management & administration by AIDS spending category	Funding sources, US$			
	Public	Private	International	Total
Planning, coordination, and programme management	$593,274.79	$9,625.38	$28,329.89	$631,230.06
Administration and transaction costs associated with managing and disbursing funds	$0.00	$0.00	$17,546.09	$17,546.09
Monitoring and evaluation	$212,676.38	$0.00	$18,687.07	$231,363.45
Operations research	$58,972.76	$0.00	$2,335.44	$61,308.20
Serological-surveillance (serosurveillance)	$1,720.34	$0.00	$173.27	$1,893.61
HIV drug-resistance surveillance	$0.00	$0.00	$7.09	$7.09
Drug supply systems	$6,916.80	$0.00	$10,738.15	$17,654.96
Patient tracking – adherence support	$174,962.92	$0.00	$18,299.31	$193,262.23
Upgrading and construction of infrastructure	$395,133.10	$3,190.74	$32,683.61	$431,007.45
Mandatory HIV testing (not VCT)	$70,959.19	$0.00	$0.00	$70,959.19
Total	**$1,514,616.27**	**$12,816.12**	**$128,799.93**	**$1,656,232.32**

Table 6: HIV expenditure on orphans & vulnerable children (OVC) by AIDS spending category and funding sources (US$), Dehong Prefecture of Yunnan Province, China NASA 2010

OVC by AIDS spending category	Funding sources, US$			
	Public	Private	International	Total
OVC Education	$1,624.91	$0.00	$0.00	$1,624.91
OVC Services not disaggregated by intervention	$0.00	$0.00	$4,234.37	$4,234.37
Total	**$1,624.91**	**$0.00**	**$4,234.37**	**$5,859.28**

Table 7: HIV expenditure on human resources by AIDS spending category and funding sources (US$), Dehong Prefecture of Yunnan Province, China NASA 2010

Human resources by AIDS spending category	Funding sources, US$			
	Public	Private	International	Total
Monetary incentives for human resources not broken down by staff	$60,042.10	$0.00	$7,115.19	$67,157.29
Training	$110,994.15	$0.00	$7,909.92	$118,904.07
Total	**$171,036.25**	**$0.00**	**$15,025.11**	**$186,061.36**

Table 8: HIV expenditure on social protection and social services by AIDS spending category and funding sources (US$), Dehong Prefecture of Yunnan Province, China NASA 2010

Social protection & social services by AIDS spending category	Funding sources, US$			
	Public	Private	International	Total
Social protection through monetary benefits	$3,692.98	$0.00	$0.00	$3,692.98
Total	**$3,692.98**	**$0.00**	**$0.00**	**$3,692.98**

Table 9: HIV expenditure on enabling environment by AIDS spending category and funding sources (US$), Dehong Prefecture of Yunnan Province, China NASA 2010

Enabling environment by AIDS spending category	Funding sources, US$			
	Public	Private	International	Total
Advocacy	$295.44	$0.00	$0.00	$295.44
Provision of legal and social services to promote access to prevention, care and treatment	$295.44	$0.00	$0.00	$295.44
Total	**$590.88**	**$0.00**	**$0.00**	**$590.88**

Table 10: HIV expenditure on HIV-related research by AIDS spending category and funding sources (US$), Dehong Prefecture of Yunnan Province, China NASA 2010

HIV-related research by AIDS spending category	Funding sources, US$			
	Public	Private	International	Total
Biomedical research	$15,064.70	$0.00	$0.00	$15,064.70
Epidemiological research	$1,680.31	$0.00	$0.00	$1,680.31
Social science research not disaggregated by type	$2,907.41	$0.00	$0.00	$2,907.41
Total	**$19,652.42**	**$0.00**	**$0.00**	**$19,652.42**

Table 11: Financing sources versus financing agents, Dehong Prefecture of Yunnan Province, China NASA 2010

FS.01.01.01
Central government revenue
Ministry of Finance
FA.01.01.03.01
Department of Health (or equivalent local sector entity)
Dehong Prefecture CDC
Dehong Prefecture Health Bureau
Drug Dependent Institution of Yunnan Province
Lianghe County AIDS Prevention Bureau
Lianghe County CDC
Lianghe County Health Bureau
Longchuan County AIDS Prevention Bureau
Longchuan County CDC
Longchuan County Children and Women Hospital
Longchuan County Health Bureau
Mangshi County Health Bureau
Ruili County AIDS Prevention Bureau
Ruili County Children and Women Hospital
Wanding AIDS Prevention Bureau
Yingjiang County AIDS Prevention Bureau
Yingjiang County CDC
Yingjiang County Children and Women Hospital
Yingjiang County Health Bureau

FS.01.01.02
State/provincial government revenue
Provincial Budgets
FA.01.01.03.01
Department of Health (or equivalent local sector entity)
Dehong Prefecture Health Bureau

FS.01.01.03
Local/municipal government revenue
City/County Budgets
FA.01.01.03.01
Department of Health (or equivalent local sector entity)
Dehong Prefecture Health Bureau
Lianghe County AIDS Prevention Bureau
Lianghe County CDC
Longchuan County AIDS Prevention Bureau
Longchuan County Health Bureau
Ruili County AIDS Prevention Bureau
Ruili County CDC
Ruili County Children and Women Hospital
Yingjiang County AIDS Prevention Bureau
Yingjiang County CDC
Yingjiang County Children and Women Hospital
Yingjiang County Chinese traditional Hospital
Yingjiang County Hospital

FS.02.02
Households' funds
Households' funds
FA.02.04
Private households' (out-of-pocket payments)

Private households' (out-of-pocket payments)
FS.03.01.01
Government of Australia
HIV/AIDS Asia Regional Program (HAARP)
FA.01.01.03.01
Department of Health (or equivalent local sector entity)
Longchuan County AIDS Prevention Bureau
Ruili County AIDS Prevention Bureau
Yingjiang County AIDS Prevention Bureau
FS.03.01.21
Government of the United Kingdom
China HIV/AIDS Roadmap Tactical Support (CHARTS) Project
FA.01.01.03.01
Department of Health (or equivalent local sector entity)
Dehong Prefecture CDC
FS.03.02.07
The Global Fund to Fight AIDS, Tuberculosis and Malaria
GFATM
FA.01.01.03.01
Department of Health (or equivalent local sector entity)
Dehong Prefecture CDC
Lianghe County AIDS Prevention Bureau
Longchuan County AIDS Prevention Bureau
Longchuan County CDC
Ruili County AIDS Prevention Bureau
Ruili County CDC
Wanding AIDS Prevention Bureau
Yingjiang County AIDS Prevention Bureau
Yingjiang County Hospital
FS.03.03.25
The Clinton Foundation
Clinton Foundation
FA.01.01.03.01
Department of Health (or equivalent local sector entity)
Dehong Prefecture CDC

Table 12: Providers of services, Dehong Prefecture of Yunnan Province, China NASA 2010

PROVIDERS OF SERVICES

PS.01 Public Sector Providers

PS.01.01.01 Hospitals (Governmental)

1. Dehong Prefecture Children and Women Hospital
2. Dehong Prefecture Hospital Corporation
3. Lianghe County Children and Women Hospital
4. Lianghe County Hospital
5. Lianghe County Township Hospital
6. Longchuan County Children and Women Hospital
7. Longchuan County Hospital
8. Longchuan County Township Hospital
9. Mangshi County Children and Women Hospital
10. Mangshi County Hospital
11. Ruili County Children and Women Hospital
12. Ruili County Hospital
13. Ruili County Township Hospital
14. Wanding County Children and Women Hospital
15. Wanding County Hospital
16. Yingjiang County Children and Women Hospital
17. Yingjiang County Chinese traditional Hospital
18. Yingjiang County Hospital
19. Yingjiang County Township Hospital

PS.01.01.06 Blood banks (Governmental)

20. Dehong Prefecture Blood Bank

PS.01.01.14.02 Departments inside the Ministry of Health or equivalent (including. NAPs/NACPs)

21. Dehong Prefecture CDC
22. Dehong Prefecture Health Bureau
23. Dehong Prefecture Health Supervision Bureau
24. Lianghe County AIDS Prevention Bureau
25. Lianghe County CDC
26. Longchuan County AIDS Prevention Bureau
27. Longchuan County CDC
28. Longchuan County Health Supervision Bureau
29. Mangshi County AIDS Prevention Bureau
30. Mangshi County CDC
31. Ruili County AIDS Prevention Bureau
32. Ruili County CDC
33. Ruili County Health Bureau
34. Wanding AIDS Prevention Bureau
35. Wanding County CDC
36. Yingjiang County AIDS Prevention Bureau
37. Yingjiang County CDC
38. Lianghe County Health Supervision Bureau

PS.01.01.14.03 Departments inside the Ministry of Education or equivalent

39. Dehong Prefecture Education Bureau
40. Lianghe County Education Bureau

PS.01.01.14.07 Departments inside the Ministry of Labor or equivalent

41. Dehong Prefecture Labor Commission (Ministry of Labor and Social Security)
42. Dehong Prefecture Labor Bureau (Ministry of Labor and Social Security)

PS.01.01.14.08 Departments inside the Ministry of Justice or equivalent

43. Dehong Prefecture Justice Bureau

PS.01.01.14.99 Government entities n.e.c.

44. Dehong Prefecture Family Planning Commission (National Population and Family Planning

Commission)
45. Dehong Prefecture Civil Affairs Bureau (Ministry of Civil Affairs)
46. Dehong Prefecture Promotion Bureau (Ministry of Industry and Information Technology）
47. Dehong Prefecture Transportation Bureau (Ministry of Transport)
48. Dehong Prefecture Commercial Bureau (Ministry of Commerce）
49. Dehong Prefecture Culture Bureau (Ministry of Culture)
50. Dehong Prefecture Travel Bureau (Ministry of Transport)
51. Ruili County Inspection and Quarantine Bureau
52. Longchuan County Foreign Affairs Office (Ministry of Foreign Affairs)
53. Ruili County Culture Bureau (Ministry of Culture)
54. Ruili County Security Bureau (Ministry of Public Security)
55. Ruili County Family Planning Commission (National Population and Family Planning Commission)
56. Ruili County Food and Drug Supervision Bureau (State Council)
57. Dehong Prefecture Party School （Party School of the Central Committee)
58. Dehong Prefecture Inspection and Quarantine Bureau
59. Lianghe County Party School (Party School of the Central Committee)
60. Dehong Prefecture Security Bureau (Ministry of Public Security)

PS.02 Private Sector Providers

PS.02.01.01.15 Civil society organizations

61. Lianghe County Youth League Committee (Chinese Communist Youth League)
62. Dehong Prefecture Youth League Committee (Chinese Communist Youth League)
63. Dehong Prefecture Red Cross
64. Lianghe County Women Union
65. NGO-1 德宏州劳教所曙光小组
66. NGO-2 德宏州医疗集团爱心园
67. NGO-3 美沙酮《绿色新世力》小组
68. NGO-4 潞西市红丝带家园
69. NGO-5 潞西市 MSM 活动站
70. NGO-6 潞西市妇女健康咨询活动室
71. NGO-7 潞西市橡胶家园同伴互助小组
72. NGO-8 陇川县跌撒孤儿之家
73. NGO-9 陇川县红丝带家园
74. NGO-10 盈江县关爱之家小组
75. NGO-11 盈江县红袋鼠工作室
76. NGO-12 盈江县红丝带家园
77. NGO-13 盈江县草根组织-"迎新互助"小组
78. NGO-14 团结村卫生室感染者小组
79. NGO-15 树化玉同伴关爱与发展小组
80. NGO-16 瑞丽红丝带家园
81. NGO-17 瑞丽市"海岸线"草根组织
82. NGO-18 瑞丽市"地平线"草根组织
83. NGO-19 树化玉同伴关爱与发展小组
84. NGO-20 梁河县九保阿昌族乡九保村"爱心佳缘"
85. NGO-21 梁河县"关爱家园"
86. NGO 22 梁河县芒东镇翁冷村"同心家园"
87. NGO-23 梁河县平山乡妇女联合会
88. NGO-24 德宏"双子座"同志关怀工作室
89. NGO-25 陇川县蓝天同伴小组
90. NGO-26 盈江县携手起跑线同伴小组
91. NGO-27 盈江县边陲驿站
92. NGO-28 陇川县英爱红丝带家园