2016

Strategic Direction Summary

Cambodia

Country Operational Plan

v2.0
May 5, 2016

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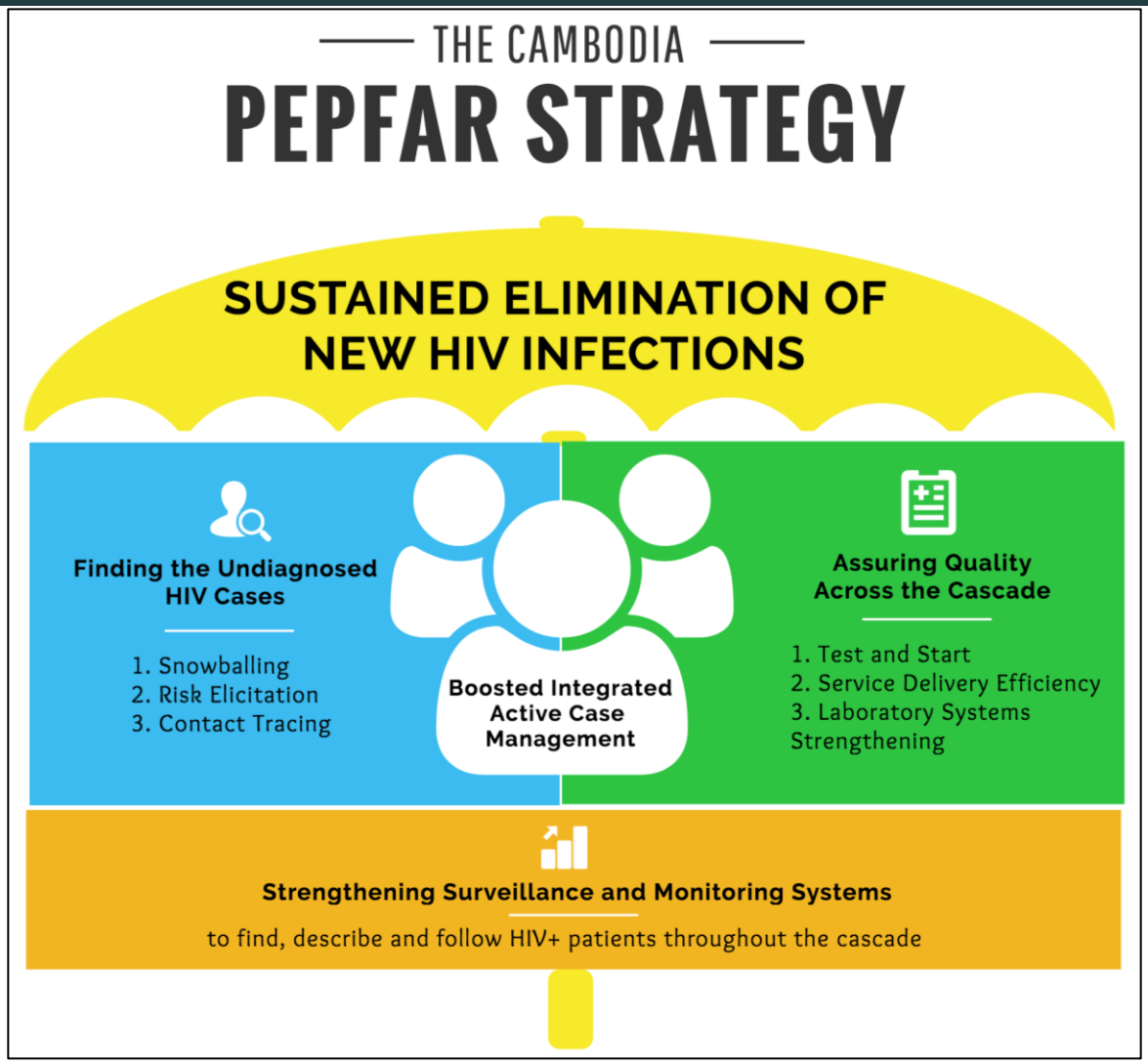
NOTE ON DATA: There are places in the SDS where data may not be consistent due to uses of modeled data, programmatic data and data available through surveys and surveillance. Throughout the SDS, the team has endeavored to be consistent in use of data to the extent possible and to note the data source so that it is clear why figures may not match.

GOAL STATEMENT



The Government of Cambodia has established itself as a global leader in the fight against HIV/AIDS, cutting adult infection rates in the general population by more than half in the past 15 years and providing HIV treatment to over 80 percent of eligible individuals since services were established in 2003. In the early 2000s, Cambodia achieved epidemic control nationally. Since 2013, Cambodia has aimed to eliminate new HIV infections by achieving the 90-90-90 targets (90 percent of people living with HIV diagnosed, 90 percent of those diagnosed on anti-retroviral treatment, and 90 percent of those on treatment are virally suppressed) by 2020 and going further to achieve 95-95-95 (and fewer than 300 new HIV infections annually) by 2025 – coming close to achieving an AIDS Free Generation. While there has been significant success, there are remaining areas of concern, particularly at the sub-national level where ART coverage is still low in some settings, and within certain high-risk groups where prevalence is still high.

The goal of the PEPFAR program in Cambodia is to assist in achieving sustained elimination of new HIV infections through the provision of targeted technical assistance (TA). This includes supporting the country in achieving its 90-90-90 and 95-95-95 targets. Under the umbrella of sustained elimination of new HIV infections, PEPFAR is supporting work in three

related areas: finding the last HIV positive individuals (i.e. those not yet diagnosed); assuring quality across the cascade; and strengthening surveillance and monitoring systems. At the center of the work is Cambodia's Boosted, Integrated Active Case Management (B-IACM) approach – designed to identify, reach, intensify and retain individuals along the testing and service continuum from their first interaction with an HIV outreach worker through to enrollment in ART; enabling tracking of individuals, reducing loss-to-follow up, and encouraging targeted testing strategies such as partner tracing.

The Cambodian national HIV response is unique in that it is the only PEPFAR program in the world poised to achieve an AIDS-free generation in the near term. Virtual elimination of new HIV infections must be built on a strong platform for long-term sustainability to ensure that success is not ephemeral. For the past decade, the response has largely been funded by external contributions, primarily from the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund) and PEPFAR. Funds from development partners have declined in recent years and are expected to continue declining. PEPFAR accounts for approximately 25 percent of funding for the HIV response, Global Fund accounts for approximately 48 percent of the response and the government accounts for the remainder. Domestic spending remained level for the past decade until 2015, when the government committed funds for the procurement of ARVs for the first time. In order to ensure continued success, Cambodia must ensure an efficient response, increase domestic resource allocation and build strong health systems.

In the COP16 implementation period, the PEPFAR program will build on the geographic and programmatic pivots undertaken as part of COP15 to further strengthen its support for Cambodia to achieve a sustainable AIDS-free generation. This includes:

- Supporting the national government to appropriately lead, manage, implement and oversee the national program;
- Refining and sustaining evidence-based and efficient prevention efforts with key populations (KPs) as funding from development partners declines;
- Supporting the national and sub-national government in improving programmatic efficiencies by using HIV testing strategies that result in greater yield, implementing Test and Start (once it is approved), scaling up viral load testing, and shifting to new service delivery models;
- Supporting a Cambodian government plan for a long-term, sustainable HIV response and advocating for increased government commitment of resources;
- Ensuring readiness to assess and address each individual new case through partner tracing and active case management;
- Strengthening key information systems needed to assure transparency, accountability and better use of data to find and retain the remaining undetected HIV cases; and
- Piloting new, innovative and efficient prevention, care and treatment approaches in priority provinces to catalyze Cambodia's achievement of 90-90-90 and improve Cambodia's long-term sustainable response to the epidemic.

Against the backdrop of declining HIV budgets, a persistent concentration of HIV in high-risk groups, competing health and development priorities, and new evidence-based interventions for HIV prevention, the Cambodian government and its development partners must adapt to a changing resource and epidemiological context in order for Cambodia to remain an innovative leader in the global fight against HIV and ensure that it successfully achieves an AIDS-free generation. The PEPFAR team in Cambodia has in place a transition plan to steadily

increase country ownership as our resources gradually decline. If successful, lessons learned in the Cambodian context may chart a path for others to follow. PEPFAR remains the leading bilateral partner in supporting Cambodia in this effort.

1.0 EPIDEMIC, RESPONSE, AND PROGRAM CONTEXT

1.1 SUMMARY STATISTICS, DISEASE BURDEN AND COUNTRY OR REGIONAL PROFILE

Cambodia's population is 14.7 million and, as of 2015, an estimated 72,607 people were living with HIV (Table 1.1.1). Estimates suggest that HIV prevalence peaked at 1.7% in 1998 and has been declining ever since, with an overall estimated prevalence for adults of 0.64% in 2015. Epidemic control[1] was reached in the early 2000s (Figure 1.1.2). In 2015, it is estimated that among adults there were 2,402 AIDS-related deaths, and 651 new HIV-infections. With targeted, effective interventions and high-levels of ART coverage among PLHIV, Cambodia is poised to become the first low-income country to achieve virtual elimination of HIV transmission by 2025; recognizing that in the interim Cambodia may transition to a lower-middle income status country. Virtual elimination is defined in the *Strategic Plan for HIV/AIDS and STI Prevention and Control in the Health Sector in Cambodia* as fewer than 3 new infections per 100,000 population a year and a mother-to-child transmission rate of 5% or less.

Standard Table 1.1.1: Key National Demographic and Epidemiological Data

Table 1.1.1 Key National Demographic and Epidemiological Data

	Total		<15				15+				*Source, Year*
			Female		Male		Female		Male		
	N	%	N	%	N	%	N	%	N	%	
Total Population	14,676,591	100	2,274,245	15.5	2,143,730	14.6	5,280,838	36.0	4,977,778	33.9	Intercensal survey 2013
HIV Prevalence (%)		0.64**		NA		NA		0.67		0.61	AEM estimates for 2015, as per 2014 exercise
AIDS Deaths (per year)	2,402**		NA		NA		989		1,413		AEM estimates for 2015, as per 2016 exercise
# of PLHIV	72,607		NA		NA		35,788		32,711		AEM estimates for 2015, as per 2016 exercise adjusted to include children
Incidence Rate (Yr)		0.02**		NA		NA		NA		NA	UNAIDS GAP Report, 2014
New Infections (Yr)	651										AEM estimates for 2015, released 2016
Annual births	388,364	-									WPP, 2016
% of pregnant women with at least one ANC visit	380,993	98%	-	-			-	-			Linked Response Database, 2015
Pregnant women needing ARVs	657*	0.28%									Linked Response

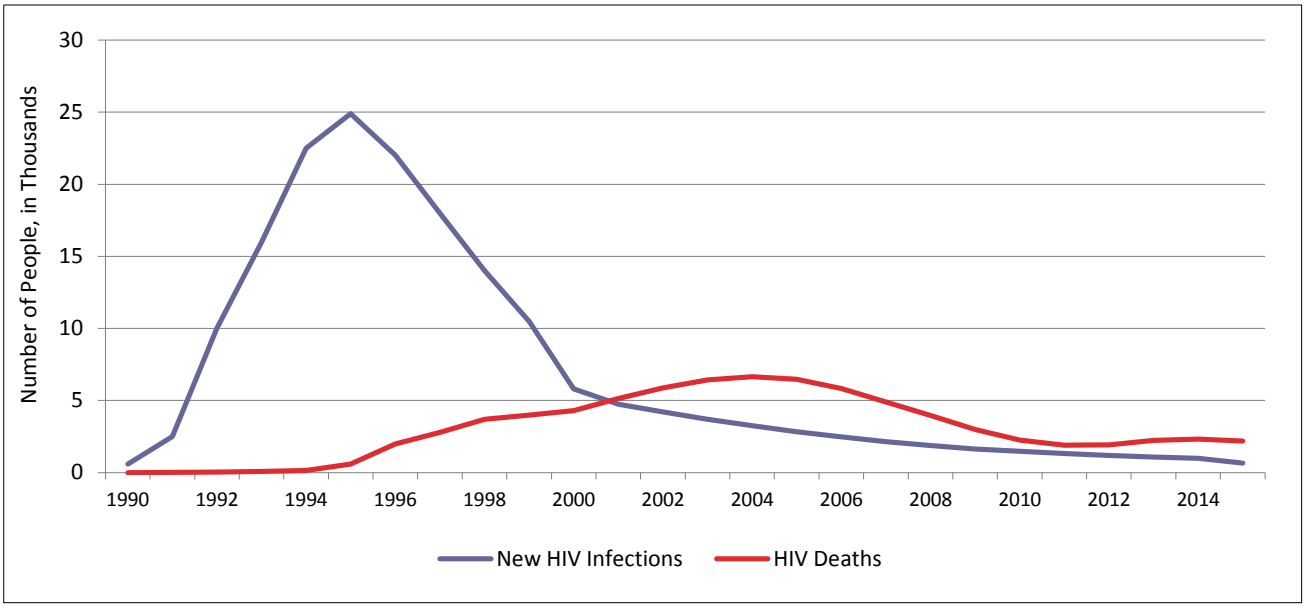
[1] Defined as the point where the number of new HIV-infections has declined and falls below AIDS-related deaths.

											Database, 2015 & ANC SS 2014
Orphans (maternal, paternal, double)	23,855		NA		NA		NA		NA		2014, NCHADS HIV estimation report 2012
Notified TB cases (Yr)	43,738		NA		NA		NA		NA		WHO Global TB report, 2014
% of TB cases that are HIV infected	953	2.7%	NA	NA	NA	NA	NA	NA	NA	NA	HIV+ patients, TB patients screened WHO, 2014
% of Males Circumcised	NA	NA			NA	NA			NA	NA	NA
Estimated Population Size of MSM*	19,281	-									KHANA & NCHADS for 2015
MSM HIV Prevalence	-	2.3%									IBBS 2014
Estimated Population Size of FEW	40,136	-									KHANA & NCHADS for 2015
FEW HIV Prevalence	-	4.0%-13.5%									HSS 2010
Estimated Population Size of PWID	1,300	-									MOH, National Strategic Plan on Reduction of Harm Related to Drug Use 2016-2020, March 2016
PWID HIV Prevalence	-	24.8%									2012 IBBS
Estimated Size of Priority Pop Transgender	2,749	-	-	-	-	-	-	-	-	-	KHANA & NCHADS for 2015
Priority Pop Prevalence Transgender	-	5.7%	-	-	-	-	-	-	-	-	2016 IBBS preliminary findings

*Defined as # of mothers known HIV+ at delivery, Boosted Linked Response for 2015

**Estimate for adults only

Chart 1.1.2: Epidemic Control in Cambodia

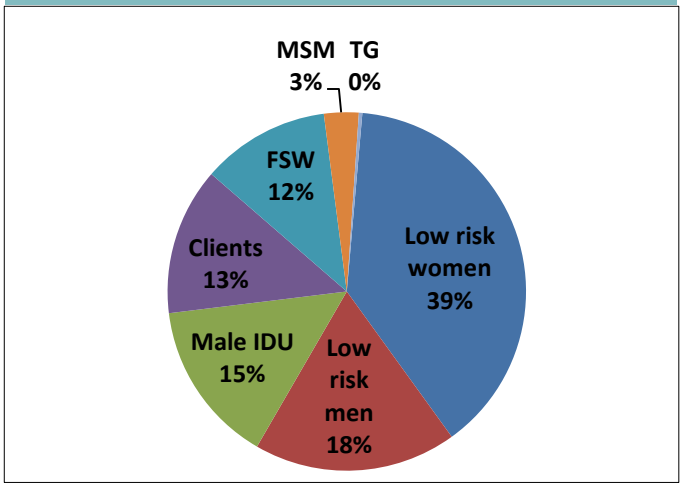


Source: SPECTRUM, 2015

Cambodia has achieved substantial progress in reducing the spread of HIV, with an overall reduction of 97% in the estimated annual new HIV-infections, from 24,900 in 1995 to 651 in 2015 (Table 1.1.1). Although the overall HIV prevalence in Cambodia is currently estimated at 0.64%, higher prevalences are found in key populations: 2.3% among men who have sex with men (MSM), 4.0% among low risk and 13.5% among high-risk female entertainment workers (FEW), 5.7% among transgender (TG), and 24.8% among people who inject drugs (PWID). However, none of these populations is particularly large; the latest size estimation exercises suggest that there are an estimated 19,000 MSM, 40,000 FEW, 2,700 TG, and 1,300 PWID.

While the 2015 AEM model suggests that the majority of the estimated 651 annual new infections are through heterosexual transmission in persons with no identifiable risks, there is evidence that risk elicitation in Cambodia may be inadequate. In addition to the 57% of new infection in males and females with unknown risk factors there are an estimated 12% in FEW, 13% in their clients, and 15% in PWID (Figure 1.1.3). Reports in February 2016 of a cluster of at least 14 infections in Kandal province suggest that some newly identified cases may be related to previous, but not current, sex work or former clients. A previous cluster of at least 242 newly identified HIV-infections in Battambang province in 2014 also suggests that there may be a proportion of new HIV-infections resulting from use of unsafe injections and infusions by unlicensed medical practitioners.[2]

Figure 1.1.3: Estimated distribution of new HIV infections in 2015 (N=651)



Source: AEM, 2014 version

There is substantial geographic variation in the epidemiology of HIV in Cambodia, with PLHIV thought to be largely concentrated in a small number of provinces, particularly Phnom Penh, Siem Reap, Battambang, Banteay Meanchey, Kandal, and Kampong Cham (see Figure 1.4.2). The majority of high-risk key populations also live in urban centers in these provinces, but with high rates of migration that further complicate the picture.

In 2011 the National Centre for HIV/AIDS, Dermatology and STIs (NCHADS) launched Cambodia 3.0, which originally strived to achieve elimination of new HIV infections by 2020. However, due to the changing priorities of several development partners, programmatic and capacity challenges, and decreasing external funding from the Global Fund and PEPFAR, the deadline for elimination of new infections has been extended to 2025. In order to reach this goal, NCHADS is finalizing the *Strategic Plan for HIV/AIDS and STI Prevention and Control in the Health Sector in Cambodia 2015 – 2020*, which outlines three main strategies:

1) *Boosted Continuum of Prevention to Care and Treatment (CoPCT):* key population prevention and links to services,

[2] Morbidity and Mortality Weekly Report (MMWR), 2016.

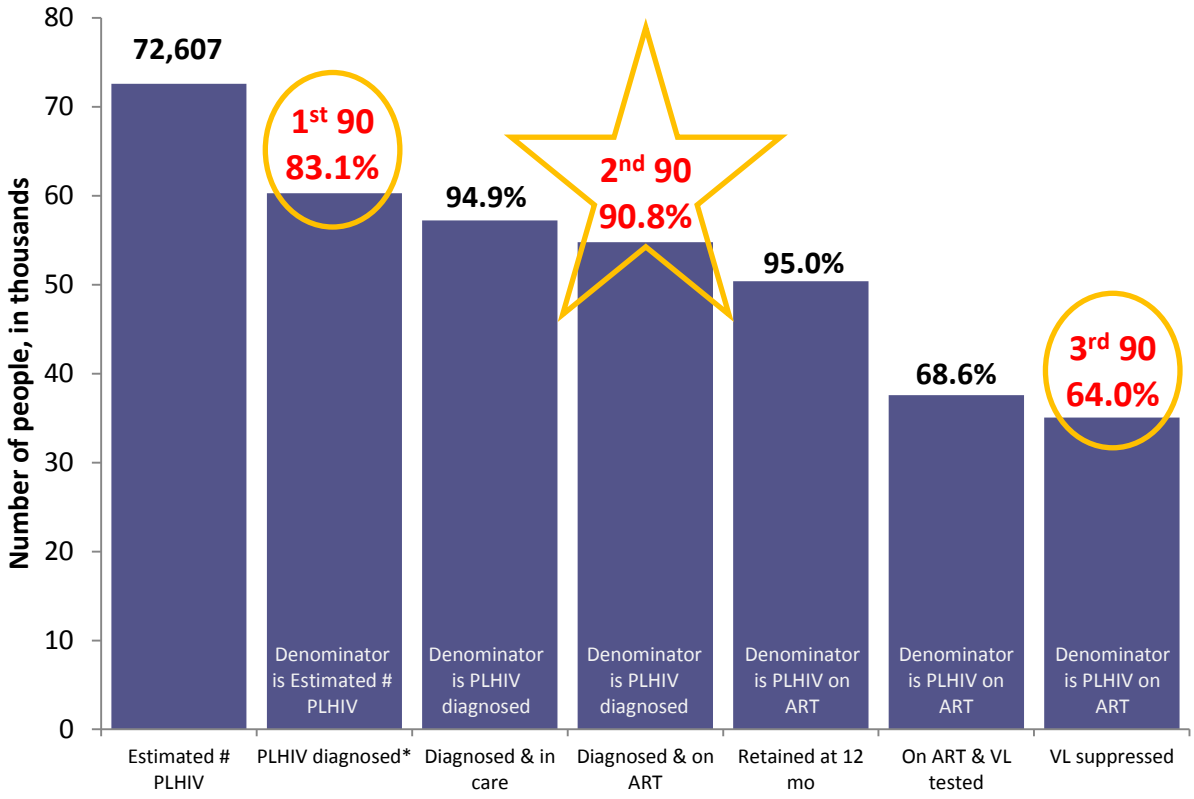
2) *Boosted Continuum of Care (CoC):* retention and improvement of quality for patients in care, and

3) *Boosted Linked Response (LR):* elimination of new infections among children while addressing the needs of their mothers.

The cornerstone activity bringing together all of these three strategies, along with a new strategy to identify, reach, intensify and retain key populations, is called Boosted Integrated Active Case Management (B-IACM). This approach is intended to strengthen the tracking of individuals across the cascade through case management coordinators (CMCs) and assistants (CMAs), strengthened information systems, routine case coordination meetings, and improved use of individual level data. To date this activity has been introduced in 15 operational districts (ODs), with plans to scale up to all ODs over the next year (with 3 different models for a) Phnom Penh, b) urban ODs, and c) rural ODs). In essence, this is a frame shift for NCHADS from focusing interventions for specific populations, to focusing attention on specific individuals.

An analysis of the current national HIV impact cascade in Cambodia suggests that the first two phases of Cambodia's HIV strategy have been effective in helping Cambodia reach the first and second of the 90-90-90 targets (Figure 1.1.4). It is estimated that 83% of all PLHIV have been diagnosed and 91% of diagnosed PLHIV are on ART. Although the third 90 is currently low (64% of PLHIV on ART have documented viral load suppression), the installation of a second viral load machine in mid-2015 and a third viral load machine in mid-2016 is expected to provide sufficient capacity to allow attainment of the third 90 by end of FY17. Of individuals who were viral load tested in 2015, 93% were virally suppressed.

Figure 1.1.4: National HIV Impact Cascade – Adult & Pediatric, 2015



Sources: PLHIV estimate from NCHADS estimates based on AEM exercise released 2016, PLHIV in care and on ART from NCHADS as of Q4 2015, VL data = Jan – Dec 2015. *PLHIV diagnosed is calculated as: # of pre-ART + ART patients at end of 2014 plus new positive diagnoses from 2015 VCCT data minus deaths in 2015 from pre-ART and ART. ** Retained at 12 mo is calculated as: Active patients on ART at end of Q4, 2014, minus deaths and loss to follow up for four quarters in 2015, as proportion of ART cohort as of end of 4th quarter, 2014.

Partial cascade data for KPs were made available for the first time in 2015 (Table 1.1.2 below). Review of these data on a limited number of HIV-positive KP served by a Cambodian NGO working in HIV/AIDS, KHANA, suggest that the cascade for all four of the priority KP groups in Cambodia is lagging behind the general population in attainment of the 90-90-90 goals: 88% of HIV positive MSM clients were on ART and 44% of those were retained on ART at 12 months; 39% of HIV positive FEW were on ART and 70% of those were retained; 76% of HIV positive PWID were on ART and 64% retained; and 59% of HIV positive TG were on ART and 78% were retained. These data are unlikely to be representative of KP nationally. We would expect greater losses across the cascade for KP outside of the KHANA program. Additional strengthening of strategic information systems is needed to allow tracking of viral suppression among KP, and to improve the representativeness of these data.

Cambodia's Strategic Plan also identifies important remaining challenges: the need to sustain capacities, and services dedicated to HIV and sexually transmitted infections (STI); early diagnosis and treatment of HIV and TB/HIV co-infected clients; finding "hidden" KP and providing better access to stigma-free services in a supportive legal and policy environment; stronger follow-up along the cascade; sharper epidemiological targeting and more effective interventions; and greater synergy within the health sector, and across other sectors.

Continued prevention efforts will be critical to sustain Cambodia's successes. The 2014 Demographic and Health Survey (DHS) found that 42% of women and 36% of men have been tested for HIV at some time, which is substantially higher than 2010 when only 25% of both women and men had ever been tested. In contrast, condom use among men with 2 or more sex partners in the past 12 months has declined sharply to 30% in 2014, from 83% in 2005. The behavioral surveillance survey (BSS) conducted in 2013 reported that 68% of entertainment workers and 87% of MSM had undertaken an HIV test. The 2012 PWID Integrated Biological and Behavioral Survey (IBBS) found that only 59% of PWID reported consistent condom use with female paid sex partners. Such data suggest concerning gaps in prevention efforts, and perhaps a waning public concern about the threat of HIV. In addition, gaps in strategic information are a critical challenge, including: inability to monitor individuals across the cascade due to the lack of an unique identifier system; challenges with interoperability between HIV and other program data (e.g. TB, maternal and child health); infrequent use of mapping and non-standardized methods for key population size estimations, infrequent data collection for KPs, and lack of epidemic and response profiles. Addressing such challenges will be critical for Cambodia to achieve an AIDS-free generation by 2020 as well as a sustainable national response.

Cambodia is currently a low-income country with a per capita GNI of $1,020[3]. It is rapidly approaching lower-middle income status with an economic growth forecast of 6.9% for 2016[4]. While government funding for health care has increased significantly, it remains at only 1.4% of GDP[5]. Government expenditures on health as a share of total government expenditures were 6.5% in 2012. Out-of-pocket expenditures are high at over 60% of all health expenditures. Additionally, spending on pharmaceuticals accounts for 40% of total health expenditures, double the spending on salaries and other staff costs[6]. These health spending indicators will need to change as resources from development partners decline.

[3] Atlas Method, World Bank, 2014
[4] The World Bank, Cambodia Data, 2016
[5] *The Kingdom of Cambodia health system review*, Health Systems in Transition, Vol. 5 No. 2 2015
[6] National Health Accounts, 2013

Standard Table 1.1.2: Cascade of HIV diagnosis, treatment and viral suppression (12 months)

Table 1.1.2 Cascade of HIV diagnosis, treatment and viral suppression (12 months)									
				HIV Treatment and Viral Suppression			HIV Testing and Linkage to ART		
	Total Population Size Estimate (#)	HIV Prevalence (%)	Total PLHIV (#)	On ART (#)	Retained on ART 12 Months (#)	Viral Suppression 12 Months	Tested for HIV (#)	Diagnosed HIV Positive (#)	Initiated on ART (#)
Total population	14,676,591[1]	0.64[4]	72,607[9]	54,769[12]	50,393[13]	93%[15]	545,126[16]	4,679[16]	3,975[19]
Population less than 15 years	4,417,975[1]	N/A	5,051[10]	4,003[12]	3,648[13]	82%[15]	3,426[17]	218[17]	367[19]
Pregnant Women	388,364[2]	0.28%[5]	657[1]	648[11]	NA	-	303,067[18]	657[11]	648[11]
MSM	19,281[3]	2.3%[6]	445[3]	392	172[14]	NA	NA	NA	NA
FEW	40,136[3]	4.0%[7]	1,612[3]	633	443[14]	NA	NA	NA	NA
PWID	1,300[20]	24.8%[8]	270[3]	186	119[14]	NA	NA	NA	NA
Priority Pop Transgender	2,749[3]	5.7%[8]	157[3]	93	73[14]	NA	NA	NA	NA

1. Intercensal survey 2013; 2. WPP for 2016; 3. KHANA & NCHADS for 2015; 4. AEM estimates for 2015, as per 2014 exercise; 5. ANC Sentinel Survey 2014; 6. MSM IBBS 2014; 7. HSS 2010; 8. IBBS 2016 preliminary findings; 9. Spectrum for 2015 (per 2016 exercise); 10. AEM & Spectrum for 2015; 11. Defined as # of mothers known HIV+ at delivery, Boosted Linked Response for 2015; 12. NCHADS, Q4 2015; 13. Retained on ART 12 months = On ART at end of Q4 2014 - (#ART patients lost + #ART patients died in 4 quarters of 2015); 14. % on ART and retained were obtained from KHANA data on subset of KP, and then applied to national data; 15. VL lab database, % of all tests with <1,000 copies/ml. Approximately 67% of all ART patients tested for VL through Dec 2015; 16. Sum of PMTCT + partners+ TB + STI + Gen pop + VCCT. Sources: HMIS for 2015, VCCT FY15 (incl TB on VCCT report); 17. Patients <15 from VCCT FY15 only (incl TB on VCCT report); 18. Boosted Linked Response 2015; 19. NCHADS, ART data, FY15; 20. MOH, National Strategic Plan on Reduction of Harm Related to Drug Use 2016-2020, March 2016

1.2 INVESTMENT PROFILE

2015 marked a turning point for Cambodia with public domestic resources rising to 24 percent of the total HIV/AIDS response investments up from 16 percent in 2014[7]. The current HIV/AIDS response in Cambodia continues, however, to be predominantly funded by external resources. The proportional increase of Royal Government of Cambodia (RGC) funding is the result of a one-time contribution of $1M for 2015, $1.2M for 2016 and $1.5M for 2017 for ARV procurement, coupled with a 33 percent reduction in external investments. The RGC also pays for almost all drugs used for the treatment of opportunistic infections, such as cotrimoxizole.

The history of HIV/AIDS investments in Cambodia started with a government led and funded response in the early 1990s. With the initiation of Global Fund and USG funding of HIV activities in the early 2000s, the government redirected domestic resources towards other health priorities. Cambodia came under the PEPFAR umbrella in 2006.

In response to the evolution of the HIV epidemic in Cambodia and guidance provided by the Office of the Global AIDS Coordinator (S/GAC), over the past four years PEPFAR has been transitioning out of direct service-delivery activities and focusing on providing technical assistance (TA) to the Cambodian government at national and subnational levels and to local non-governmental and civil society partners. The Cambodian government has always led the implementation of clinical care and treatment services through the public-health sector; PEPFAR works to support the existing system. Until 2013, PEPFAR supported approximately 90% of the direct service delivery for prevention among key populations. In 2016, PEPFAR's shift towards TA resulted in reduced direct support of the key population service delivery, currently down to 53%, and coincided with NCHADS' signing the Global Fund HIV grant in October 2015. This represented a further evolution of the symbiotic relationship between Global Fund and PEPFAR in support of the national response. Global Fund now funds the majority of key population service delivery at the community and HIV/AIDS facility-based services, while PEPFAR provides TA and testing of innovative service models to enhance the quality, impact and efficiency of Cambodia's national response to HIV/AIDS.

Nevertheless, the U.S. government (USG) remains by far the largest bilateral contributor to the HIV/AIDS response in Cambodia and the Global Fund is the largest overall contributor in the HIV sector on an annual basis. When taken together, these two development partners contribute almost 75% of the total resources for HIV. The national HIV/AIDS program uses Global Fund resources to procure 83% of anti-retroviral (ARV) medications, the majority of test kits and lab reagents, to support facility-level service delivery for the majority of individuals on treatment and in pre-ART care, and to undertake half of the prevention activities related to HIV/AIDS. The PEPFAR program contributes significant assistance to the Global Fund program through active engagement in the Country Coordinating Committee (CCC) and technical working groups, support to develop and evaluate pilot programs prior to national scale-up, and assistance in ongoing monitoring of the national program.

In addition to the U.S. government and the Global Fund, other development partners active in Cambodia in the HIV sector include WHO, UNICEF, UNAIDS, and CHAI. Together, these organizations account for approximately 2.5% of the funding for HIV. Furthermore, there are a number of development partners that work in health systems strengthening, not specific to HIV, including the World Bank, Australian Department of Foreign Affairs and Trade (DFAT),

[7] Estimates are based on 2014 NHA plus ARV one-off contribution for 2015.

the German Embassy, Korea International Cooperation Agency (KOICA), Japan International Cooperation Agency (JICA), and the French Embassy. PEPFAR, leveraging USG non-PEPFAR resources, works in coordination and collaboration with these development partners in the areas of health financing and social health protection, strategic information and health information systems, and supply chain strengthening to ensure harmonization with these broader health-related efforts.

Standard Table 1.2.1: Investment Profile by Program Area

Table 1.2.1 Investment Profile by Program Area 2015*

Program Area	Total Expenditure	% PEPFAR**	% Global Fund	% Host Country	% Other
Clinical care, treatment and support	$12,181,387	10.6%	52.6%	35.7%	1.1%
Community-based care, treatment and support	$4,794,763	34.1%	39.8%	24.8%	1.2%
PMTCT	$1,070,098	32.9%	64.6%	-	2.5%
HTS	$1,282,440	80.8%	12.4%	-	6.7%
Blood Safety	$1,244,680	36.2%	63.8%	-	-
Infection Control	$619,192	20.5%	79.5%	-	-
Priority population prevention	$65,437	-	-	-	100%
Key population prevention	$6,908,076	52.5%	22.7%	19.5%	5.3%
Laboratory	$1,855,137	23.2%	75.0%	1.7%	-
SI, Surveys and Surveillance	$1,799,240	49.0%	39.0%	1.8%	10.2%
HSS	$7,575,212	1.0%	63.8%	34.5%	0.7%
Total	$39,395,722	25%	48.1%	24.3%	2.6%

*Expenditures from 2015. Sources: Direct correspondence from Global Fund, NCHADS, UNAIDS, CHAI and WHO; PEPFAR EA, 2015; Host country based on 2014 National Health Accounts and ARV contribution for 2015.Global Fund Health System Strengthening Grant, 2015-2016; Global Fund Health System Strengthening Grant, 2015-2016, not specific to HIV but will benefit HIV.

Standard Table 1.2.2: Procurement Profile for Key Commodities

Table 1.2.2 Procurement Profile for Key Commodities, 2015

Commodity Category	Total Expenditure	% PEPFAR**	% Global Fund***	% RGC	% Other
ARVs	$7,183,216	-	83%	17%	-
Rapid test kits	$1,029,308	1%	99%	-	-
Other drugs*	$369,388	-	8%	92%	-
Lab reagents	$765,881	2%	98%	-	-
Condoms ****	$183,111	-	100%	-	-
Viral Load commodities	$660,961	-	100%	-	-
Other commodities	$561,550	-	100%	-	-
Total	$8,753,416	0.2%	85%	14%	-

*Government funds all drugs for opportunistic infections
**Source: PEPFAR Expenditure Analysis, 2015
***Sources: Global Fund Cambodia correspondence, 2015
**** Does not include socially marketed condoms that are now self-sustained through sales.

Standard Table 1.2.3: USG Non-PEPFAR Funded Investments and Integration

Table 1.2.3 USG Non-PEPFAR Funded Investments and Integration					
Funding Source	**Total USG Non-PEPFAR Resources**	**Non-PEPFAR Resources Co-Funding PEPFAR IMs**	**# Co-Funded IMs**	**PEPFAR COP Co-Funding Contribution**	**Objectives**
USAID MCH	$5,500,000	$675,000	4	$840,000	Improve social protection services; Strengthen interoperability between health information systems; Improve health financing
USAID TB	$6,000,000	$1,825,000	4	$840,000	Improve social protection services; Strengthen interoperability between health information systems; Strengthen supply chain systems; Improve health financing
USAID Malaria	$4,500,000	$325,000	1	$140,000	Strengthen supply chain systems
USAID FP	$5,000,000	$925,000	4	$840,000	Improve social protection services; Strengthen interoperability between health information systems; Strengthen supply chain systems; Improve health financing
Dept. of Defense (PACOM)	During COP2015, PACOM supported the construction of 5 regional blood banks. There are two additional proposal pending with PACOM; one for $760,000 to support incinerators at nine regional locations and another for $144,700 to support an expansion of the laboratory facilities at NCHADS and NIPH.			$0	
TOTAL		**$3,750,000**		**$840,000**	Note: There are 5 USAID HSS mechanisms that receive a combination of PEPFAR, MCH, TB, Malaria, and FP funding.

Standard Table 1.2.4: PEPFAR Non-COP Resources, Central Initiatives, PPP, HOP

Table 1.2.4 PEPFAR Non-COP Resources, Central Initiatives, PPP, HOP						
Funding Source	**Total PEPFAR Non-COP Resources**	**Total Non-PEPFAR Resources**	**Total Non-COP Co-funding PEPFAR IMs**	**# Co-Funded IMs**	**PEPFAR COP Co-Funding Contribution**	**Objectives**
PEPFAR Central Initiatives						
Key Population Challenge Funds	$426,053 (USAID)	$0	$426,053	1	$0	activities continuing but no new funds for this in COP15
Global Fund CCI	$110,770 (USAID)			1	$140,000 (Supply Chain)	strengthen capacity of CCC and in country mechanisms related to Global Fund. All other funds have been expended.
SI Central Initiative	unclear on any additional funds					design, pilot, evaluate and support implementation of a national unique identifier system. All current funds have been expended. Unclear

						if additional funds are available.
Injection Safety PPP	N/A	N/A		2	$122,130	Exact amount from PPP is still being worked out. This is part of the BD PPP on injection safety.
TOTAL	**$**	**$**	**$**		**$**	

1.3 NATIONAL SUSTAINABILITY PROFILE

Cambodia has achieved the goal of epidemic control nationally and in the majority of provinces, and is well on its way to achieving the national goal of 90-90-90 by 2020 and attaining virtual elimination (95-95-95 and less than 300 new infections per year) by 2025. These ambitious goals are taking place within an environment of decreasing external resources, the upcoming designation of Cambodia as a LMIC, and shifting global priorities and approaches for achieving and sustaining HIV epidemic control. There is a need to reconcile Cambodia's ambitious goals and the need to sustain the significant gains made to date, with a situation where 60% of total health expenditures are out-of-pocket and current low levels of funding from RGC (25% of the national HIV response and 17% of ARVs).

Strong and progressive technical policies have made Cambodia the leader in the reduction of HIV prevalence it is today. Yet this success is fragile as many of the key components of the national response and the systems that support them are still highly dependent on external resources. Priorities include finding the last new cases, and strengthening the capacity of the Cambodian government to ensure a sustained, high-quality and efficient response. On October 20, 2015, the Chargé of the US government, the Chairman of the National AIDS Authority, and the Country Director of UNAIDS co-convened a one-day meeting to complete the Sustainability Index and Dashboard (SID) and initiate a national dialogue on ensuring the sustainability of Cambodia's national HIV/AIDs response. Over 50 participants attended representing government, development partners, implementing partners, civil society and technical experts engaged in a participatory process to complete the Cambodia SID 2.0 tool, discuss the findings, and identify priorities. To continue this important dialogue, the Cambodia SID was presented to the Government-Donor Joint Technical Working Group on HIV/AIDS, which recommended a task force to develop a plan to address the findings of the SID and maintain the dialogue on sustainability. The SID 2.0 dialogue identified the following elements as fragile: commodity security and supply chain; domestic resource mobilization; engagement of the private sector; laboratory; quality management; human resources; and funding of civil society. These elements are critical to the long-term response. To ensure that Cambodia will be able to maintain and afford its own response in light of rapidly declining resources from development partners, these areas need to be addressed urgently.

Increasing domestic financing for health is a high priority for PEPFAR and will require a long-term commitment. PEPFAR is the main bi-lateral development program addressing health financing for HIV and leverages non-PEPFAR USG resources in collaboration with other development partners to support a national social health protection framework and social health insurance schemes. Over the last five years, the USG has been investing in a Cambodian government social health protection scheme for the poor, the Health Equity Funds (HEF), which reached nation-wide coverage in 2015. The scheme is performance-based and the government contributes 40% along with 60% from pooled development partners. The USG successfully

negotiated revisions to the benefits package to include HIV/AIDS as of January, 2016. The USG continues to advocate for PLHIV and some KPs to be covered under the HEF as a vulnerable population and has been actively ensuring that eligible PLHIV and KPs in both urban and non-urban areas obtain an "ID poor card" and are enrolled in HEF.

The use of economic tools has recently been strengthened in the national HIV/AIDS program. In 2014, WHO supported the National Health Accounts (NHA). In 2016, PEPFAR is collaborating with UNAIDS to implement the long overdue National AIDS Spending Assessment (NASA). There remains an incomplete picture of the costs of routine HIV service delivery or how the services are actually financed (i.e., financed through the hospitals or through the vertical program budget). According to the 2014 NHA, the Cambodia government was financing 16% of its national HIV response and 20% of the overall health budget. But with an additional RGC commitment to ARVs, coupled with reductions in GF and PEPFAR contributions in 2015, the government contribution has risen to 24%. Budget and expenditure tracking mechanisms are non-existent at district and hospital levels and health facility budgets are not rationalized but instead are based on historic trends and negotiations. The USG/Cambodia has partnered with the U.S. Treasury to improve program budgeting and tracking systems.

Cambodia is yet to conduct a UNAIDS HIV Investment Case and costing is done on an ad hoc basis. Recently, NCHADS requested CHAI to cost out Test and Start. That analysis focused on the roll out costs without estimating savings from infections and illness averted or a shift to a more efficient service delivery model. Working with NCHADS, CHAI, UNAIDS and other development partners, PEPFAR will support work to take the analysis further in order to build an investment case for Test and Start and more efficient service delivery models.

Under domestic programming and service delivery, the largest threat to sustainability is commodity security and supply chain. According to the NHA, about 60% of the health budget goes towards health commodities and drugs, yet, a 2012 World Bank study found significant inefficiencies within that system. Since 2012, the national HIV program has improved, although stock-outs and expiry of HIV rapid-test kits and lab reagents continue, resulting in poor performance under both PEPFAR and Global Fund. Poor stock management introduces technical inefficiencies for service delivery that requires ART patients to return every 1-2 months for ARVs. Though the Cambodian government has made a one-time commitment of $3.7M over the next three years for the procurement of ARVs, the future of ARV and HIV commodity security is unknown.

1.4 ALIGNMENT OF PEPFAR INVESTMENTS GEOGRAPHICALLY TO DISEASE BURDEN

A focus of COP15 was to align PEPFAR activities more closely with the burden of disease in Cambodia. The result of this realignment is that PEPFAR has deepened its engagement in six provinces: Banteay Meanchey, Battambang, Kampong Cham, Phnom Penh, Pursat, and Siem Reap. This group includes the four highest-burden provinces in terms of PLHIV, and five of the six provinces are in the top ten (see Figure 1.4.1)[8]. These provinces also account for 73% of estimated key populations of MSM, TG, EW and PWID[9] and 39% of

[8] Based on NCHADS estimates for all Cambodia's provinces, 2016.
[9] Taken from NCHADS/ KHANA estimates of key populations, 2015.

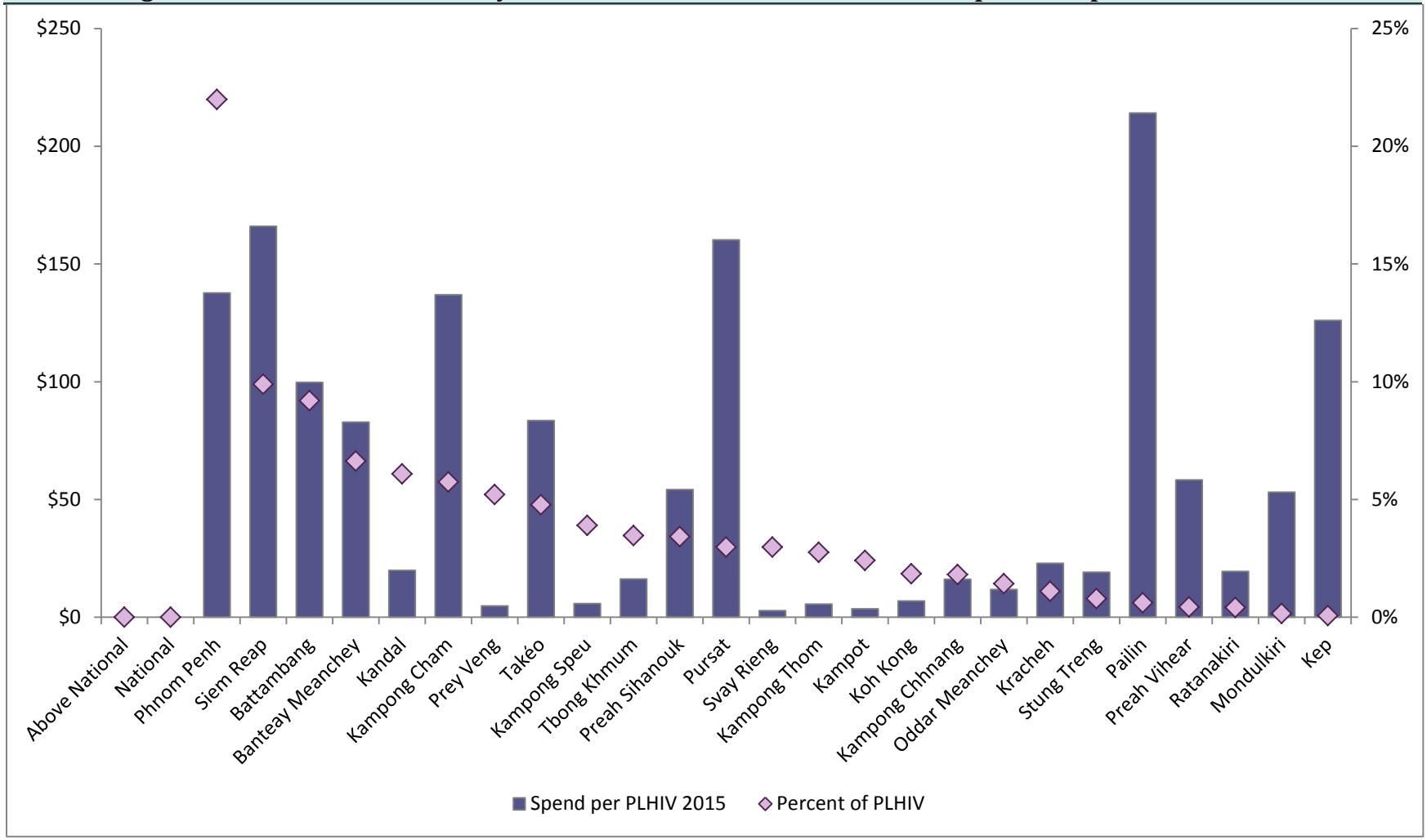
estimated ART need[10] (see maps in Figure 1.4.2). They are, therefore, important locations for achieving the goals of 90-90-90 and ultimately for sustained elimination of the virus.

This realignment has also meant that over the past twelve months PEPFAR has largely phased out support from nine other provinces; a process which will be finalized during COP16. These provinces are either outside of the ten high-burden provinces for PLHIV, have low estimated HIV prevalence and low numbers of KPs, or have high coverage of care and treatment. In addition, all of these provinces had low yield or high cost sites. Success in these provinces will still be important for the government of Cambodia to achieve its ambitious HIV goals. It is expected that the government will be able to apply the lessons learned in PEPFAR supported provinces to maximize programmatic efficiency in impact in all other provinces.

Several key data points were used to analyze the geographic alignment of PEPFAR investments in Cambodia, including expenditure analysis data by province, estimated numbers of PLHIV, FEWs, MSM and estimated HIV prevalence by province, and outlier and yield data related to site performance. With respect to 2015 expenditures by province, PEPFAR was well aligned with the HIV-burden. Of provincial-level expenditures, 89% were in the ten highest-burden provinces considered to account for 77% of the HIV-burden (in terms of numbers of PLHIV) in Cambodia[11] (see Figure 1.4.1). While these ten provinces have large estimated numbers of PLHIV, they have varying estimated levels of HIV prevalence, ranging from 0.40% in Prey Veng to 0.9% in Phnom Penh[12] (see Table 3.0.1). Finally, there were a number of sites within the PEPFAR program with very low numbers of individuals identified as HIV-positive within the past year, but with high-related costs due to large number of individuals tested. During COP16 a more targeted approach to finding the last remaining positives detailed in section 4.5 below will address this.

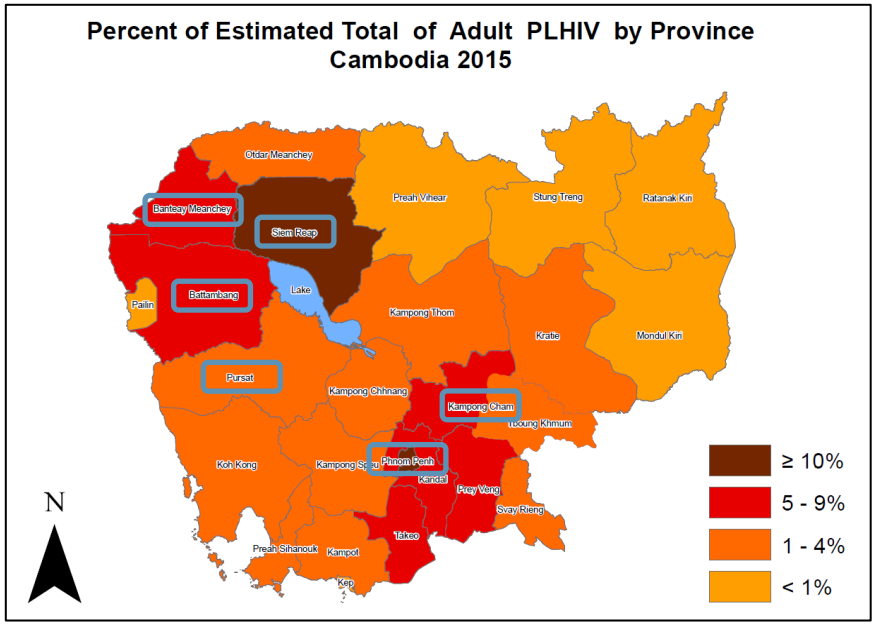
[10] This figure implies that all HIV+ individuals automatically receive ART in line with a ' Test and Start' approach. Data taken from NCHADS estimates for all Cambodia's provinces, 2016, based on AEM exercise released in 2016.
[11] *Ibid.*
[12] *Ibid.*

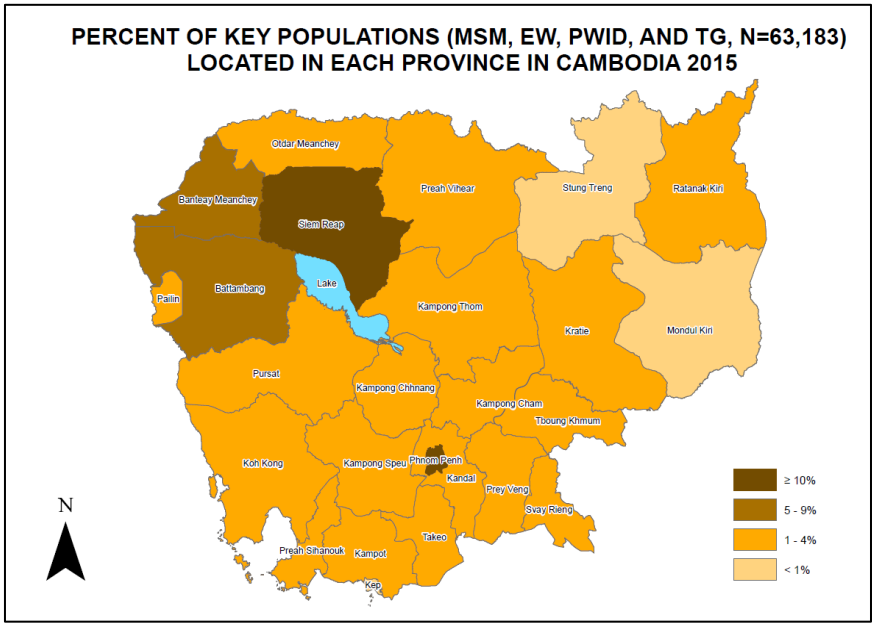
Standard Figure 1.4.1: Percent of PLHIV by Sub-National Unit and PEPFAR 2015 Expenditure per PLHIV

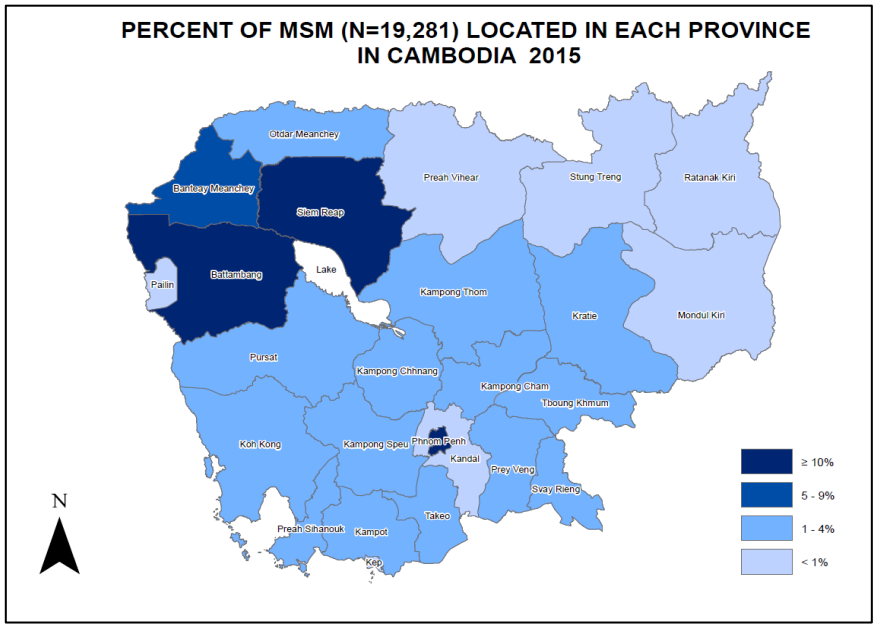


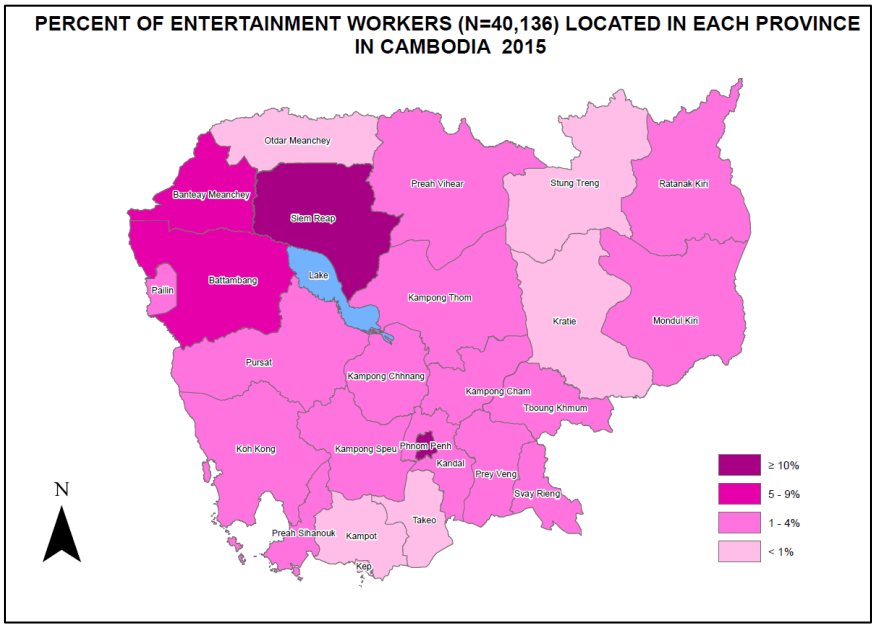
Percent of PLHIV by province is an estimate undertaken by NCHADS using the AEM/Spectrum approach and undertaken in February 2016.
This graph shows the PEFPAR expenditure per PLHIV . It takes into account all PEPFAR-expenditures except USG management and operations costs. It does not take into account other partner or RGC expenditures. It does not represent the unit cost, but rather assists PEPFAR to analyze its own investments geographically.

Figure 1.4.2: Estimated PLHIV by Province, Estimated MARPs by Province, and PEPFAR Expenditure by Province for 2015









1.5 STAKEHOLDER ENGAGEMENT

During COP16 planning, PEPFAR engaged with the host country government, Global Fund, other health development partners, civil society and the private sector through existing coordination structures such as the Country Coordinating Committee (CCC) and national TWGs on HIV, Health Partners' Meetings and Government-Donor Joint TWG on HIV/AIDS. During the regular meetings of these existing platforms, the PEPFAR team made presentations and provided updates about the COP16 development process.

In addition, PEPFAR Cambodia facilitated two formal consultative events on COP16 planning, led by NCHADS, with broad stakeholder participation. During the first meeting on January 25, the USG team presented on directions for COP16 and data from COP15 APR, and solicited detailed input on various aspects of the PEPFAR program. Stakeholders provided input on finding new infections, active case management and tracing, prevention, a sustainable response, geographic focus, HTC testing yields, transitioning adolescents and TB/HIV co-infection. This input has been systematically addressed in the COP16 development. The second COP16 consultative meeting was on March 21, when the PEPFAR team received feedback on draft COP16 documents, which were shared in advance, to ensure that this input was integrated into final documents.

Furthermore, the PEPFAR team continued to engage with NCHADS and Global Fund in the HIV grant implementation, which started on October 1, 2015. The team has endeavored to ensure that COP16 activities are aligned with the Global Fund and the programs of other development partners. Given that the PEPFAR program is closely intertwined with the Global Fund-funded activities, the USG team will remain highly active in the CCC and other coordination mechanisms over the coming cycle to ensure smooth implementation of both COP16 and Global Fund-funded activities.

In addition, USG staff facilitated several engagements with civil society partners, providing capacity building for advocacy and mutual accountability, eliciting feedback from quarterly POART findings and a webinar conducted by HRSA to enhance civil society active engagement with the PEPFAR process. Key populations were consulted on COP16 through supplementary focus group discussions with MSM, EWs, TG, and PWID representatives held in January and February 2016. Finally, USG has provided support to building capacity of key populations' engagement in Global Fund and PEPFAR processes through an activity funded jointly with Global Fund. Continuation of these efforts will be further explored in discussions with the new Global Fund Cambodia country team.

PEPFAR Cambodia is committed to regular, in-depth engagement with a broad range of stakeholders on COP16 and the national program as a whole. All individual officers have a program of regular interaction, including with civil society through Global Fund- and UNAIDS-led processes, government-led TWGs and through civil society specific engagement processes. PEPFAR will hold quarterly meetings to discuss COP implementation, quarterly reporting, the POART process and expenditure analysis (EA).

2.0 CORE, NEAR-CORE AND NON-CORE ACTIVITIES

PEPFAR reviewed its current activities in February 2016 taking into consideration stakeholder input received during several months of COP consultation meetings. Activities were then classified as core, near-core or non-core based on their relevance to achieving an AIDS-free generation, along with the PEPFAR goals of epidemic control, 90-90-90 and the sustained elimination of new HIV infections. The result was a modest shift in focus to ensure that sustainability including health systems work, Test and Start implementation, and finding new cases were prioritized.

The team identified a small number of non-core activities that although important, were either not within the U.S. government's comparative advantage or were not essential to the HIV-related programmatic goals mentioned above. Those activities designated as non-core will be phased out prior to the start of COP17. The PEPFAR Cambodia transition blueprint, developed in July 2015, envisages a gradual process whereby, over the next decade, activities critical to sustained HIV elimination will either be handed over to the government or another capable partner or the activities will be deemed completed.

Near-core activities are anticipated to be either transitioned or completed over the next 24 months. Many of the near-core activities identified are discrete activities, including studies, evaluations and the development of specific policy guidelines or training courses, which will be completed within a short to medium timeframe.

For a listing of activities that fall into core, near-core and non-core, see Appendix A.

3.0 GEOGRAPHIC AND POPULATION PRIORITIZATION

At the same time that Cambodia is increasing efforts to find every case in order to reach the virtual elimination goals, resources for the HIV program have started to decline. This dichotomy has necessitated refinements in the country's current prevention, care and treatment strategies and further prioritization of geographic locations and populations. These strategies are outlined in the *Strategic Plan for HIV/AIDS and STI Prevention and Control in the Health Sector in Cambodia 2015 – 2020* (as described in Section1.1). This strategy included three different models: for Phnom Penh, other urban ODs, and rural ODs. PEPFAR will continue work with NCHADS to define, for each of the three models, the optimal package of services for prevention, HIV testing, partner notification and contact tracing, case management, care and treatment service delivery and viral load transport, among others.

In response to not only changes in the national strategic plan but also S/GAC guidance for COP15, PEPFAR Cambodia undertook a major geographic pivot. The starting point for the COP15 pivot was to develop provincial level estimates of PLHIV, as these were necessary to undertake a geographic pivot, but had never been done before. Using the Spectrum national estimate for 2014 as the envelope, the PEPFAR team distributed the PLHIV based on provincial data on KP size and prevalence, ANC sentinel survey and PMTCT data, TB/HIV screening data, and pediatric ART data. The team then reviewed the resulting 2014 provincial PLHIV estimates, the KP size, and ART coverage for each province and selected 6 provinces, which accounted for 66% of all estimated PLHIV. As a result, in COP15, 9 of 15 provinces were phased out from the PEPFAR portfolio.

The data used to select provinces has been updated from 2014 to 2015 to review selection of provinces for COP16 (see Table 3.0.1). For COP16, given the geographic pivot initiated in COP15 is still new and that the updated data indicates that the six provinces represent 56% of all PLHIV and 73% of all key populations, the team and NCHADS felt that continuing on in the same 6 provinces for at least one more year would be critical to allow sufficient time for programming to have an impact in attaining the 90-90-90 goals.

Table 3.0.1: National Estimates of PLHIV and ART Coverage for 2015

Province	Estimated Total PLHIV (2015 NCHADS)	Estimated key population size (2015 KHANA)	ART Coverage (NCHADS data)	ART coverage for 2015 (%)	Additional patients required for 80% ART coverage
PhnomPenh	16,005	27,203	17,866	112%	N/A*
Siem Reap	7,123	7,101	4,133	58%	1,565
Battambang	6,661	5,806	4,913	74%	415
Banteay Meanchey	4,835	3,832	3,334	69%	534
Kandal	4,426	1,296	2,947	67%	593
Kampong Cham	4,162	1,230	2,669	64%	661
PreyVeng	3,778	972	2,481	66%	541
Takeo	3,465	951	2,519	73%	253
Kampong Speu	2,809	1,556	1,574	56%	673
Sihanouk Ville	2,466	1,625	1,917	78%	56
Tbong Khmum	2,521	1,031	1,397	55%	620
Pursat	2,164	973	1,198	55%	533
SvayRieng	2,155	1,072	1,323	61%	401
Kampong Thom	2,012	1,390	932	46%	678
Kampot	1,733	649	1,994	115%	N/A*
Koh Kong	1,338	774	900	67%	171
Kampong Chhnang	1,318	1,187	722	55%	333
Oddor Meanchey	1,045	646	330	32%	506
Kratie	797	722	474	59%	164
Stung Treng	572	466	353	62%	105
Pailin	442	774	361	82%	N/A*
Preah Vihear	313	602	253	81%	N/A*
Ratanakiri	302	773	115	38%	127
Mondulkiri	117	552	13	11%	80
Kep	48	0	51	106%	N/A*
TOTAL	**72,607**	**63,183**	**54,769**	**75%**	**3,317**

*N/A: not applicable because ART coverage >80%. Grey are the 6 PEPFAR supported provinces.

Of the 12 provinces with the greatest estimated number of PLHIV, Battambang, Banteay Meanchey, and Siem Reap remain important as they have significant key populations (9%, 6%, 11% respectively) and low to middling coverage of PLHIV on ART (74%, 69%, 58%) and moderate numbers of KP (Table 3.0.2). Therefore the work in these three provinces needs to be across the entire cascade of identify, reach, diagnose, treat and retain. Pursat and Kampong Cham are important as they have low coverage of estimated PLHIV on ART (55% and 64%) but only small numbers of KP (2% and 2%); therefore PEPFAR efforts would focus on outreach and testing strategies to find the hidden positives. The province of Phnom Penh also remains a

priority, in spite of the fact that ART coverage in Phnom Penh is estimated at 112%. There are several reasons for prioritizing work in Phnom Penh. First, Phnom Penh alone accounted for nearly a quarter of all estimated PLHIV and 43% of all key populations in Cambodia. Second, Phnom Penh is the largest urban center in the country and continues to attract migrants from other locations, particularly key population migrants who are attracted to the more KP-friendly environments in the city. Finally, PEPFAR undertakes demonstration projects in Phnom Penh for KP friendly services, unique-identifier, community HIV testing and test and treat, which can then be rolled out nationally through NCHADS. Table 3.0.4 shows the listing of community and facility locations supported by PEPFAR through our four implementing partners who work at site levels.

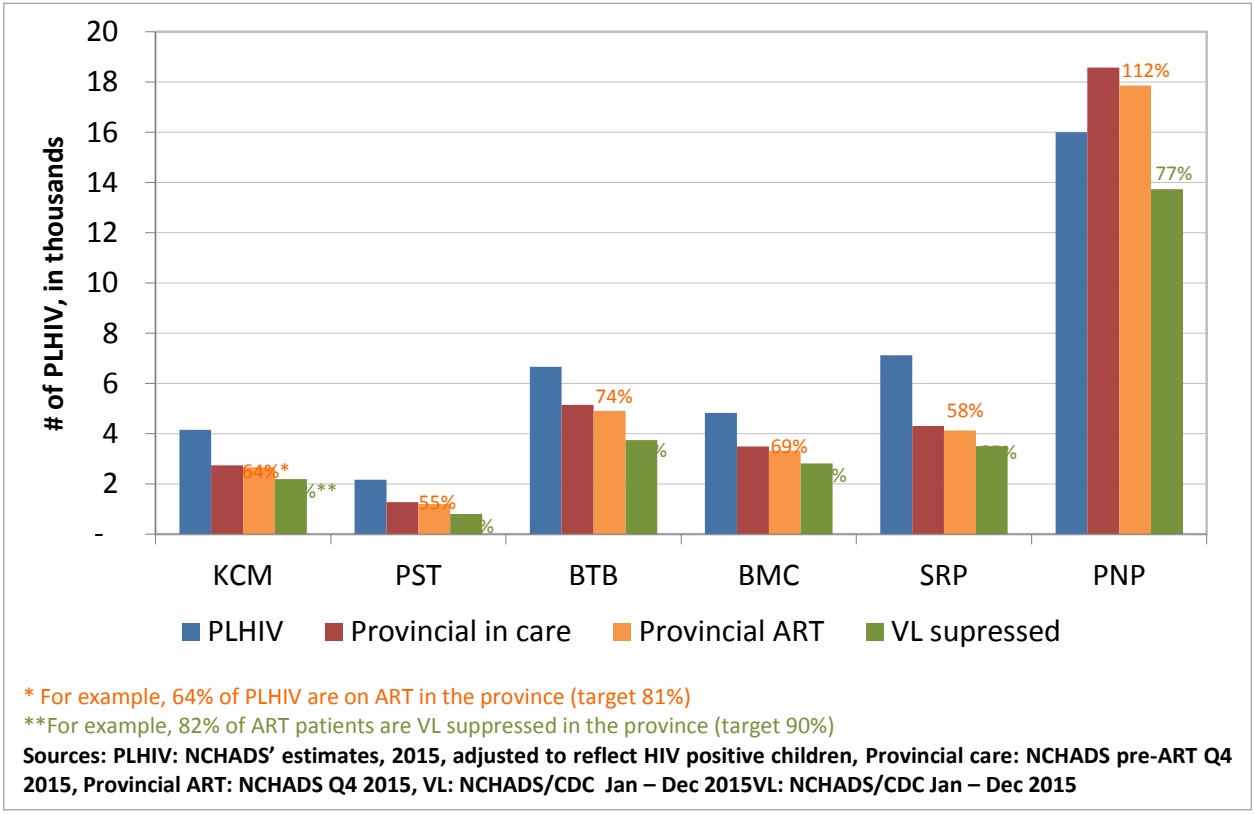
Table 3.0.2: Six PEPFAR Priority Provinces for COP16

SNU	# PLHIV in province (% of all PLHIV nationally)[13]	# PLHIV on ART (% of PLHIV in province)	# KP in province (% of all KP nationally)	Reach	Diagnose	Treat	Retain
PST	2,164 (3%)	**1,198 (55%)**	973 (2%)	Strategic case finding, CBC pilot evaluation, improve data	ACM, **testing of priority populations** (e.g. TB/STI), partners of PLHIV, quality of services	ACM, quality of services	ACM, expand VL, quality of services
KCM	4,162 (6%)	**2,669 (64%)**	1,230 (2%)	Strategic case finding, improve data	ACM, **testing of priority populations** (e.g., TB/STI), partners of PLHIV, quality of services	ACM, expand VL, quality of services	ACM, expand VL, quality of services
BTB	6,661 (9%)	**4,913 (74%)**	**5,806 (9%)**	whole package, Injection safety	whole package	whole package	whole package
BMC	4,835 (7%)	**3,334 (69%)**	**3,832 (6%)**	whole package	whole package	whole package	whole package
SRP	7,123 (10%)	**4,133 (58%)**	**7,101 (11%)**	Improve targeted KP prevention (esp. MSM & TG)	ACM, KP-friendly clinical services	Test & treat (KP), ACM, KP-friendly clinical services	ACM, expand VL, KP-friendly clinical services
PNP	**16,005 (22%)**	**17,8366 (112%)**	**27,203 (43%)**	Improve targeted KP prevention	ACM, KP-friendly clinical services	Test & treat (KP), ACM, KP-friendly clinical services	ACM, KP-friendly clinical services

[13] NCHADS estimates for 2015, adjusted to include estimated number of children.

In all six of the provinces where PEPFAR will focus in COP16, the scaling up of viral load testing will continue to be prioritized, as attainment of the third 90, though increasing rapidly, has yet to achieve targets (Figure 3.0.3).

Figure 3.0.3: Clinical Cascade in Six PEPFAR Priority Provinces, 2015



* For example, 64% of PLHIV are on ART in the province (target 81%)

**For example, 82% of ART patients are VL suppressed in the province (target 90%)

Sources: PLHIV: NCHADS' estimates, 2015, adjusted to reflect HIV positive children, Provincial care: NCHADS pre-ART Q4 2015, Provincial ART: NCHADS Q4 2015, VL: NCHADS/CDC Jan – Dec 2015VL: NCHADS/CDC Jan – Dec 2015

To further align PEPFAR's investments with high prevalence ODs, selection of individual facility and community sites was based on:

- location within the six priority provinces;
- yield analysis related to ART, PMTCT, and HTC from FY2014; and
- outlier data related to expenditures.

PEPFAR will finish phasing out support to Pailin province over the next 12 months as there are few KPs, a relatively low estimated prevalence, good treatment coverage (82%), and a high cost compared to the other PEPFAR supported provinces (Figure 1.4.1). PEPFAR continues to work to refocus low yield sites in high prevalence provinces to increase HIV-positives identified. These sites will be reviewed again during the COP17 process to determine whether yields have increased and if PEPFAR support should be continued.

In terms of population prioritization, there are four key, high-risk populations in Cambodia: FEW, MSM, TG women and PWID. Although female entertainment workers (FEW) have often been a major programmatic focus in the past, the low yield in HTC testing activities and high levels of safe sex behavior among FEW suggest that the current strategy is having some successes. However, efforts will be made to reach the high-risk and freelance sex workers for COP16 through the snowball approach in order to move beyond venue-based testing,

as well as increase efforts to get all newly diagnosed enrolled in and retained on ART. For COP16, increased attention will also be paid to improving the cascade of services for MSM and TG, as well as reaching "hidden" MSM who are suspected to have a higher HIV prevalence than those MSM currently engaged with prevention programs.

Table 3.0.4: PEPFAR Site Level Work by Implementing Partner, COP16

			Implementing Partner & Type of Activity			
Province	**OD**	**Facility**	**Flagship**	**NCHADS**	**NIPH**	**CENAT**
Banteay Meanchey						
	Mongkul Borei		Community			
		Cambodia-Japan Friendship Provincial Hospital		Facility	Facility	Facility
		Serei Sophon District Referral Hospital		Facility	Facility	Facility
	Ou Chrov		Community			
		Poipet District Referral Hospital		Facility	Facility	Facility
	Thma Puok					
		Thma Puok District Referral Hospital		Facility	Facility	Facility
Battambang						
	Battambang		Community			
		Battambang Provincial Hospital		Facility	Facility	Facility
	Maung Russei					
		Maung Russei District Referral Hospital		Facility	Facility	Facility
	Sampov Luon		Community			
		Sampov Luon District Referral Hospital		Facility	Facility	Facility
	Sangkae		Community			
	Thmar Koul					
		Thmar Koul District Referral Hospital		Facility	Facility	Facility
Kampong Cham						
	Kampong Siem		Community			
		Kampong Cham Provincial Hospital	Facility			
Phnom Penh						
	Cheung		Community			
		Chhouk Sar 1 Health Center	Facility			
	Kandal		Community			
		Chhouk Sar 2 Health Center	Facility			
		Kandal OD Health Facilty	Facility			

	Lech		Community			
		Pochentong District Referral Hospital	Facility			
	Sen Sok		Community			
	Tbong		Community			
		Mean Chey District Referral Hospital	Facility			
Pursat						
	Sampov Meas		Community			
		Pursat Provincial Hospital		Facility	Facility	Facility
Siem Reap						
	Angkor Chhum		Community			
	Siem Reap		Community			
		Angkor Hospital for Children	Facility			
		Siem Reap Provincial Hospital	Facility			

4.0 PROGRAM ACTIVITIES FOR EPIDEMIC CONTROL IN PRIORITY LOCATIONS AND POPULATIONS

4.1 TARGETS FOR PRIORITY LOCATIONS AND POPULATIONS

PEPFAR Cambodia is assisting the national government to attain the goals of 90-90-90 by 2020, and 95-95-95 by 2025 while transitioning to a sustainable national-led response. Although PEPFAR's work will be focused on 6 of the 25 provinces, the PEPFAR Cambodia team actively provides technical assistance to the national program across the full portfolio of activities, and thus will also be supporting attainment of these goals to a lesser extent in all provinces. In order to measure progress towards these goals, targets for MER 2.0 indicators have been set based upon PEPFAR program performance in 2014 and 2015, expected performance in 2016, and known critical programmatic considerations that might cause targets to be greater or less than in prior years. In addition, PEPFAR Cambodia will track government provincial data for several of the MER indicators to better assess how PEPFAR programmatic support is diffusing throughout the priority provinces, as well as several higher level metrics to track progress towards sustained elimination of new HIV infections, finding the last HIV-positive persons, assure quality across the cascade, and strengthening surveillance and monitoring systems. It is expected that with each passing year, these national, higher level metrics will become the most important measure of PEPFAR's contribution to Cambodia's sustained elimination of HIV.

As with other MER indicators, ART targets were set for FY17 using the experience of prior year program performance. In addition, however, it was assumed that 80% of HIV-positive individuals currently in care would be placed on ART in FY17 as Test and Start will be incorporated into national guidelines currently awaiting Ministry of Health approval. Nationally it is estimated that ART coverage will increase from 75% in 2015 (Table 3.0.1), to 83% in 2016, and 95% in 2017 (Table 4.1.1(a)), thus attaining the second of the 90-90-90 goals in 2016. This is estimated as being 58,744 PLHIV on ART, of whom 18,169 will be cared for in PEPFAR

priority provinces (Table 4.1.1(b)). Although FY17 expected ART coverage in PEPFAR priority provinces is lower than the national average, this is because the provinces were selected in part based on the low ART coverage and because in several of these provinces (Phnom Penh, Siem Reap, and Kampong Cham) PEPFAR does not work in all operational districts. On current projections, Siem Reap, Pursat and Kampong Cham are not projected to reach 80% ART coverage until after FY17. PEPFAR will continue to monitor these data and the provincial cascade with its government partners. And there will be a concerted push in FY18 to achieve 80% coverage for all priority provinces in FY18.

Table 4.1.1(a): ART Targets in Sub-national Units for Epidemic Control

Table 4.1.1(a) ART Targets in Sub-national Units for Epidemic Control, National						
SNU	**Total PLHIV 2016***	**Expected current on ART 2016****	**ART coverage 2016 (%)**	**Total PLHIV 2017***	**Expected current on ART 2017#**	**ART coverage 2017**
PhnomPenh	15,766	18,838	119%	15,461	20,380	132%
Siem Reap	6,786	4,453	66%	6,448	4,910	76%
Battambang	6,595	5,393	82%	6,508	6,065	93%
Banteay Meanchey	4,736	3,637	77%	4,632	4,071	88%
Kandal	4,259	3,144	74%	4,094	3,586	88%
Kampong Cham	4,048	2,859	71%	3,917	3,111	79%
PreyVeng	3,659	2,669	73%	3,537	2,987	84%
Takeo	3,419	2,652	78%	3,361	2,895	86%
Kampong Speu	2,730	1,707	63%	2,637	1,970	75%
Sihanouk Ville	2,430	2,067	85%	2,387	2,295	96%
Tbong Khmum	2,441	1,506	62%	2,354	1,657	70%
Pursat	2,085	1,315	63%	2,005	1,494	75%
SvayRieng	2,076	1,418	68%	2,000	1,567	78%
Kampong Thom	1,923	1,006	52%	1,834	1,127	61%
Kampot	1,718	2,148	125%	1,692	2,388	141%
Koh Kong	1,303	986	76%	1,271	1,160	91%
Kampong Chhnang	1,266	768	61%	1,212	848	70%
Oddor Meanchey	971	379	39%	902	453	50%
Kratie	771	497	64%	739	542	73%
Stung Treng	567	392	69%	559	453	81%
Pailin	440	411	93%	437	474	108%
Preah Vihear	312	284	91%	312	328	105%
Ratanakiri	268	140	52%	239	174	73%
Mondulkiri	103	18	17%	91	25	27%
Kep	49	57	116%	49	65	133%
TOTAL	**70,721**	**58,744**	**83%**	**68,678**	**65,025**	**95%**

*Based on NCHADS estimates adjusted to include children.

** Based on NCHADS' results for ART coverage for 2015 plus number of new patients on ART taken from four quarters of NCHADS' facility data for 2015.

These figures assume a successful introduction of Test and Start. The figures are based on NCHADS' results for ART coverage for 2015 plus twice the number of new patients on ART taken from four quarters of NCHADS' facility data for 2015, plus 80% of those 'active patients on pre-ART at the end of Q4, 2015'.

Table 4.1.1(b): ART Targets in Sub-national Units for Epidemic Control

Table 4.1.1(b) ART Targets in Priority Sub-national Units for Epidemic Control, PEPFAR Program

SNU	Estimated Total PLHIV (2016, NCHADS)	PEPFAR expected current on ART (FY16 Targets)	PEPFAR target current on ART (APR FY17) *TX_CURR*	PEPFAR newly initiated (APR FY17) *TX_NEW*	Estimated Total PLHIV (2017, NCHADS)	Expected PEPFAR-supported ART Coverage (APR FY17)
PhnomPenh	15,905	1,913**	2,306	330	15,676	15%
Siem Reap	6,923	3,758**	3,879	476	6,615	59%
Battambang	6,684	5,162	5,366	550	6,619	81%
Banteay Meanchey	4,772	3,638	3,903	430	4,676	83%
Kampong Cham	4,097	2,416**	2,098	322	3,978	53%
Pursat	2,104	1,282	1,465	212	2,029	72%
TOTAL	**40,485**	**18,169**	**19,017**	**2,320**	**39,593**	**48%**

*N/A: not applicable because ART coverage >80% in 2015. **PEPFAR works in a few select health facilities in these three provinces.

Although many of the 2,320 new patients on ART in PEPFAR priority provinces will be patients currently in care, 1,767 of these patients will be newly identified through HIV testing activities (Table 4.1.2). This includes an estimated 1,767 from VCCT (which includes those referred from community-based testing for confirmatory tests). It is expected that scale-up of B-IACM to all operational districts in PEPFAR priority provinces will assist in ensuring quality across the cascade for all individuals identified through these HIV testing activities.

Table 4.1.2: Entry Streams for Adult and Pediatrics Newly Initiating ART Patients in Priority Districts

Table 4.1.2 Entry Streams for Adult and Pediatrics Newly Initiating ART Patients in Priority Districts, PEPFAR Program

Entry Streams for ART Enrollment	Tested for HIV (APR FY17)	Identified Positive (APR FY17)	Newly initiated (APR FY17) *TX_NEW*
Adults			
VCCT (non-KP mobile)	42,005	1,941	1,767
Community testing of key populations	9,317	-	-
Transitioned in from Care due to switch to Test and Start	-	-	553
TOTAL	**51,322**	**1,941**	**2,320**

Table 4.1.3: Not Applicable (VMMC)

The PEPFAR target for testing of key populations has decreased from 29,851 in FY16 to 21,735 in FY17 (Table 4.1.4). FY17 targets for HIV testing of key populations are intentionally lower to address the low HIV testing yield. To increase testing yield among KPs, a tablet-based risk screening tool is being scaled up to reduce HIV testing of KPs at minimal risk of HIV transmission and increase testing among those KPs at high risk. In particular, targets for EW

will focus on those with seven or more clients per week and freelance sex workers as national studies have repeatedly shown that the majority of EWs are at low risk of HIV acquisition in Cambodia. PEPFAR will work with government and community partners, however, through initiatives such as B-IACM and strengthened strategic information systems, to ensure that individual key populations found HIV-positive would be supported throughout the cascade.

Table 4.1.4: Target Populations for Prevention Interventions to Facilitate Epidemic Control

Target Populations	Population Size Est. (Focus ODs in 6 Provinces)	Coverage Goal (in FY17)	FY17 Testing Target
TG	1,900	80%	1,521
MSM	12,493	50%	6,248
EW	30,054	45%	13,525
PWID	490	90%	441
TOTAL	**44,937**	**66%**	**21,735**

Table 4.1.5: Not Applicable (OVC)

Targets for the third 90, viral load suppression, in PEPFAR priority provinces have dramatically increased from 6,938 in FY16, to 14,547 in FY17, as a result of the planned addition of a third viral load machine to Siem Reap Provincial Hospital in mid-2016. In FY16, PEPFAR strived to support testing 6,938 of 18,169 patients on ART (38%), whereas in FY17, PEPFAR is striving to test 14,547 of 19,017 patients on ART (77%); over doubling its testing output in one year in PEPFAR provinces.

Challenges to reaching these targets include potential delays in approval and dissemination of national Test and Start guidelines. In addition, as a greater proportion of all PLHIV are identified and started on ART, HIV transmission will decrease and new HIV-positive individuals will become increasingly difficult and costly to identify. For example, programs for key populations that appear to have successfully reduced HIV transmission in known venues must now use more innovative techniques such as snowballing with vouchers and mobile technology to reach more "hidden" individuals.

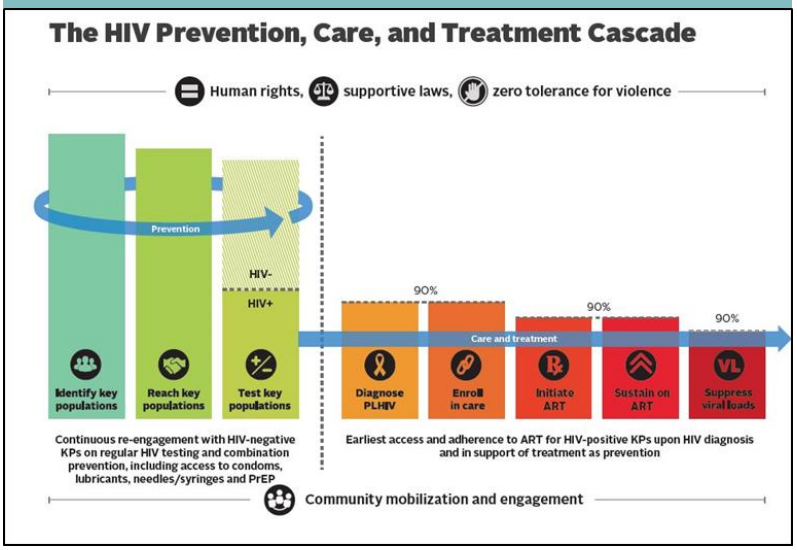
There are several data limitations to assessing progress in SNUs and key populations. In Cambodia, assessment of progress using just PEPFAR data is challenging as PEPFAR does not always work in all ODs within a province. Therefore use of government data is ultimately more useful for assessing progress towards the 90-90-90 goals and sustained elimination of new HIV infections. In COP16, PEPFAR plans to increase support for strengthening strategic information systems to ensure that national systems can accurately and efficiently track progress towards these goals. This work will include:

- Improving linkages between HIV databases to ensure individuals can be tracked throughout the whole cascade;
- Improving laboratory information systems to improve timeliness and use of laboratory data for patient management;
- Scaling up implementation of the unique health identifier and identification of opportunities for the HIV program to incorporate the unique health identifier;
- Improving interoperability of HIV with other program databases such as TB and MCH; and

- Improving classification of HIV transmission risk and identification of HIV clusters or outbreaks.

4.2 Program Area Summary: Priority Population Prevention

Figure 4.2.1: HIV Prevention, Care and Treatment Cascade for Key Populations



PEPFAR's support for prevention work that reaches out to priority populations is a critical component in the effort to find the remaining new HIV cases and for the entry into the 90-90-90 cascade (see figure 4.2.1). Cambodia's HIV epidemic is primarily driven by sexual transmission with the highest prevalence concentrated among four populations: FEW; MSM; TG women; and PWID (see Section 1.0). NCHADS has endorsed standardized packages of HIV prevention services tailored to the unique needs of each of the four key populations. PEPFAR's TA approach is largely dedicated to coaching implementers, financially supported by the Global Fund, in delivery of these standardized prevention service packages to the respective key population beneficiaries, and strengthening the effectiveness and quality of these implementers' prevention approaches through demonstration and evaluation of innovative approaches to identify and reach those at highest risk. The limited direct service delivery performed under PEPFAR's prevention program introduces and tests new models for prevention programming with KPs, with an independent assessment process for determining effectiveness.

Given declines in HIV prevalence and in resources for Cambodia's HIV/AIDS response, as well as recent challenges in identifying new HIV cases, NCHADS has adjusted strategies and guidelines to better reach hidden and hard-to-reach KPs. The aim is to maximize impact and efficiency of prevention programming by refining targeting, relevance, and frequency of services. The new sharpened approach stratifies the KPs into different levels of HIV-risk practices and factors, and prioritizes the set of prevention services that each will receive. For example, all TG and PWID are considered to be at the highest level of risk of HIV-infection, followed by underserved MSM; therefore, these populations will receive intensified services.

In contrast, although FEWs are the more numerous KPs in Cambodia, resources are saved by not delivering full packages of prevention and counseling and testing services to the roughly 29,000 female entertainment workers at lower risk. Rather, the sharpened approach focuses delivery of an intensified, streamlined set of prevention services to the estimated 5,000 FSWs having more than 7 clients per week and/or engaged in overlapping risk behaviors, such as drug use. Street-based and freelance, usually phone-based, FEWs would be prioritized as would operational districts and entertainment establishments identified as hotspots of higher risk behaviors for this group. To augment the PEPFAR work with FEW, the University of California

at San Francisco, with funding from the U.S. National Institute on Drug Abuse (NIDA), is conducting a five-year Cambodia Integrated HIV and Drug Prevention Implementation Study (CIPI) among FEWs to reduce stimulant use and prevent HIV transmission driven by a combination of amphetamine-type substance use and risky sex practices.

PEPFAR will support NCHADS and implementing partners to further refine interventions in prevention to preserve the epidemic control already achieved and accelerate progress towards virtual elimination of new infections by:

- Measuring progress on the HIV prevention, care and treatment continuum for KPs;
- Conducting and disseminating ongoing analyses to assist NCHADS in improving program effectiveness and efficiencies for the identification, reach, and retention of high-risk KPs;
- Linking key populations experiencing gender based violence or human rights abuses to relevant health, legal, and social services providers and a process for documenting and reporting these episodes;
- Advocating for increased overall domestic contribution to and long-term sustainability of HIV prevention work, consistent with the PEPFAR transition blueprint;
- Assisting NCHADS and implementers to translate data from the completed MSM and TG and upcoming FEW and PWID integrated biological and behavioral survey (IBBS) into evidence-based, focused, sustainable prevention services;
- Scaling up the use of new approaches, such as tablets, to reach KPs with targeted messages and to screen for risk, and social media for strategic behavior communications;
- Supporting NCHADS leadership and HIV service providers to implement test and treat for KPs (alongside all other populations), with immediate ART initiation for new HIV-positive cases regardless of CD4 count; and
- Enabling NCHADS to lead a Total Market Approach for condom sustainability that ensures KPs have easy access to and consistently use condoms.

4.3 Program Area Summary: Preventing Mother-to-Child Transmission

The Cambodia 3.0 strategy for the virtual elimination of new HIV infections includes several critical approaches in order to eliminate mother-to-child transmission of HIV. These include: 1) the use of lifelong ART regardless of CD4 for pregnant and breastfeeding HIV-infected women; 2) a case management approach to following pregnant women and their HIV-exposed infants (HEI) through testing at 6-8 weeks postpartum; and 3) prompt initiation of ART if an infant is found infected. The estimated number of new perinatal infections has been below 200 cases per year since 2011. Cambodia has achieved significant progress in its efforts to reach the objective of reducing the HIV transmission rate from mother to child from 13% in 2010 to 5% or less by 2020. In 2015, routine program data showed an estimated HIV positivity rate of 4% among infants who received early infant diagnosis (EID) testing. More efforts are needed to reach national targets for pregnant women's HIV testing and ART initiation, and EID in HIV-exposed infants. Nationally, the proportion of infants who have effectively received an EID (through DNA PCR), among the total number of HIV-exposed infants is still below the 90% target nationally

Table 4.3.1: Positivity Rate in HIV Exposed Infants

Year	PCR tests performed in infants	Identified HIV-positive infants	Positivity rate
2013	493	17	3%
2014	680	40	5.8%
2015	575	23	4%

(estimated at 86% in 2015). In 2015, while the percentage of pregnant women tested for HIV and receiving their result (during ANC and L&D) exceeded the target of 75% of all pregnant women (89% and 99.7% respectively), the percentage of HIV-positive pregnant women who received ARVs was 75%[14], well short of the 90% target. These point to recurrent programmatic challenges that still need to be sustainably and adequately addressed, including the shortage of HIV test-kits, in particular at rural health facilities, quality of PMTCT-related routine data, referral and linkage systems from HTC to HIV care, and HIV testing and counseling (HTC) quality assurance.

PEPFAR will continue to support NCHADS and the National Maternal Child Health Center (NMCHC) efforts to further expand HTC through finger-prick testing at the health center level. Together with NCHADS, MOH and the Global Fund, PEPFAR will further work on addressing the procurement and supply chain area. Within the Boosted, Integrated Active Case Management approach PEPFAR will continue to support NCHADS and NMCHC in their goal of improving HIV testing, linkage to and retention in care of pregnant women, as well as the adequate management of HIV-exposed infants. PEPFAR has participated in the process of updating the National PMTCT and Pediatric Guidelines, and it will actively support NCHADS and NMCHC in their efforts to align with and implement WHO's 2015 recommendations, including EID by PCR at birth, prolonged and exclusive breastfeeding (irrespective of the infant's HIV status), dual therapy for 'high-risk' HIV-exposure babies, and immediate ART (Option B+) initiation and continuation for women HIV-positive.

PEPFAR support in PMTCT will be at the above-site level, ensuring that the ODs and provinces are able to use PMTCT data in their planning and decision-making and working at the national level to ensure the overall goal of elimination of MTCT is achieved.

4.4 Program Area Summary: Biomedical Prevention

Blood Safety: PEPFAR has been working since 2010 to ensure a safe and adequate blood supply by providing TA to strengthen the Cambodian government's national strategy implementation. The strategy includes building the National Blood Transfusion Center's (NBTC) effectiveness in directing and managing the national blood safety program and in sustaining a competent workforce in hospital laboratories and blood banks.

In COP15, PEPFAR will accomplish several critical near-core activities on the road to transitioning support. This includes: developing and implementing a Quality Manual of blood services and blood policy, Standard Operating Procedures of blood donor selection, immuno-hematology testing, and donor retention; developing a Letter of Agreement between the National Blood Transfusion Center and the National Center of HIV/AIDS Dermatology and STD (NCHADS); and conducting a workshop to set up and monitor a referral mechanism to ensure blood donors who receive HIV-reactive result are confirmed and put in care and treatment program by NCHADS. A baseline assessment toward accreditation of NBTC was conducted and the gaps were addressed through a comprehensive work plan. Additionally, NBTC will complete a move to three new blood bank facilities (one central NBTC facility and two regional blood bank facilities), which were financed and constructed by the U.S. Pacific Command (PACOM) with equipment supplied by Global Fund in 2016.

In COP16, there will not be direct funding to implementing partners for blood safety work, but there will continue to be USG staff time committed to this area. This is needed to

[14] Records from National Maternal and Child Health program, NMCH.

ensure that the investments made to date are not lost, and that the contributions through PACOM are fully realized.

Injection Safety: Among Cambodia's general population, overuse of medical injections is common, and has been documented in multiple Demographic and Health Surveys. The 2014/2015 HIV outbreak in Roka commune, which was centered among members of a rural community not believed to be at high-risk of HIV exposure, highlighted the potential for these unsafe injections to contribute to HIV-incidence in Cambodia.

In response to this need, in COP15 PEPFAR launched a centrally-funded injection safety project that focused on two specific areas of need: training for formal sector healthcare workers in safe injection practices and waste management, and a community-based education/awareness campaign to reduce demand for injections. The training of formal healthcare workers is being implemented through the PEPFAR/Becton-Dickinson (BD) public private partnership (PPP), and will include expanding the current MoH Infection Control Training of Trainers (ToT) program to include broader training and technical assistance related to safe injection practices, rational use of injections, and appropriate sharps waste management. The education/awareness communication campaign will deliver a mass communication campaign aimed at raising public awareness about the risks of unnecessary injections and reducing demand for injections by patients. This initiative will be implemented in three PEPFAR-supported ODs that have been selected based on their high levels of HIV prevalence and higher than average use of injection medicines (DHS, 2010).

In COP16, funding will focus on sustaining the gains from this intervention by expanding the training to additional high-risk sites; developing and integrating into the national system a surveillance system for medical transmission; identifying potential clusters, analyzing data, and developing culturally acceptable interventions to increase HIV testing in high-risk areas. Expected outcomes include reduced use of injectable medicines and infusions in the target facilities, increased information-sharing by physicians and pharmacists with patients requesting injections when non-injectable alternatives are available, reduced demand for injectables and increased demand for non-injectable alternatives, reduced HIV incidence among individuals with no sexual or other behavioral risk factors for HIV, reduced bacterial infections and other adverse events associated with injections and infusions, community level behavior change resulting in declining overall and per-person prevalence of medical injections in subsequent DHS, and a national injection safety policy and regulation.

4.5 Program Area Summary: HIV Testing and Counseling

Cambodia is closing in on achieving UNAIDS' goal of 90% of all people living with HIV knowing their status. The country has increased rates of HIV testing and counseling in clinical settings in those ODs with high numbers of HIV-infected persons by making the routine offer of HIV diagnostic services the standard of care, and by introducing community-based rapid-test screening for HIV and syphilis in key populations. Ensuring early diagnosis of HIV and prompt entry into care and treatment are essential, yet challenges remain. The biggest hurdle faced by Cambodia's HIV counseling and testing program is that fewer new HIV-positive cases are being identified. Having already achieved a high-level of estimated PLHIV identified and on treatment, Cambodia is now at a point of working towards identifying the most difficult-to-find cases. A recent calculation for Cambodia came up with an expected HIV testing yield in the general population based on the estimated number of PLHIV minus the number on ART to be

0.12%. For KPs, this calculation is more complicated as the actual numbers of KPs on ART are unknown as many do not self-identify at VCT or ART sites.

HIV positivity rates among pregnant women tested are below the 2010 estimated prevalence captured through surveillance. This is to be expected as recent ANC surveillance data indicate that HIV prevalence among women attending ANC declined from 0.48% in 2010 to 0.28% in 2014. Nonetheless, the Cambodian MOH remains committed to universal HIV testing of pregnant women to achieve virtual elimination of mother-to-child transmission by 2020. To increase detection of HIV-positive spouses/partners of HIV-positive pregnant women, PEPFAR TA supports the national HIV/AIDS program's protocol for partner notification, tracing and testing.

HIV positivity rates among KPs accepting HIV testing services are also lower than the estimated prevalence in each of those groups as found through recent IBBSs. For example, despite an overall prevalence of 24.8% among PWID, only 3.4% of PWID tested through PEPFAR-supported programs were HIV positive. PEPFAR-supported studies conducted in 2015 provide insight into the low HIV testing yield. For example, only half the KPs had the two annual HIV tests recommended by NCHADS and 25% had never been tested, including 25% of MSM and 48% of PWID. In contrast, 17% of KPs, including 26% of TG, had 5 or more tests in the last year[15]. The reasons for not being tested include fear of discrimination and fear of knowing they are positive. Furthermore, it is likely that some KPs may access HIV testing at public facilities on a self-referred basis with their test results categorized as part of the general population, without disclosing risk factors (as discussed in section 1.0). Data also suggest that current outreach approaches cover relatively low-risk KPs, and that higher-risk individuals either refrain from testing or are not reached by existing interventions, and prevalence is declining in KPs. Recently launched PEPFAR-supported mobile technology and risk-screening tools, focus on increasing the positivity rate of KPs tested for HIV by reducing unwarranted tests. Compared to the 0.29% yield from routine community-based outreach testing of all KPs semi-annually as per NCHADS guidelines, the PEPFAR-supported pilot of an innovative snowballing approach to identify and test high-risk individuals showed promising results with a HIV testing yield of 3.3%. PEPFAR plans to scale up snowballing and risk-screening throughout the KP activities it is supporting.

Lack of privacy, confidentiality, and trust in peer provider testing skills are factors identified in a recent study of barriers experienced by MSM in accessing HIV-related outreach and clinical services. Adjustments to program modalities will mitigate these factors through improved privacy and confidentiality in test settings, enhanced professionalism of HIV testing providers, and increased use of social media to reach out to MSM and TG with key HIV testing messaging. PEPFAR will encourage MSM and TG-friendliness in select clinics run by NGOs with larger concentrations of MSM and TG. This is anticipated to improve HIV testing uptake by these groups, particularly hidden MSM of higher socioeconomic status and MSM and TG not connected to existing networks. PEPFAR will seek private-public partnerships to sustain MSM and TG services. Another approach will be to refine the frequency, timing and package of HIV services, including HTC, offered to street-based female and male sex workers and PWID to better meet the needs of these exceptionally hard-to-reach groups, as they are currently underserved and likely to include individuals who have HIV but have not yet been diagnosed.

[15]HIV Innovate and Evaluate Project, USAID, *Patterns of Utilization and Barriers for Key Populations to Use HIV Clinical Services at Health Facilities in Cambodia,*(2015).

HIV testing and counseling quality is a concern. A 2013 CDC assessment of Cambodia's active case management database showed 3% discordant results between HIV screening at HTC sites and confirmatory diagnosis at referral laboratories. Plus, there are no data on individuals receiving erroneous negative screening results. Recent SIMS monitoring of select facility and community-based rapid testing sites found that proper quality assurance proficiency testing is not being conducted. These all have serious implications for achieving the goals of virtual elimination of new infections. In response, PEPFAR will implement a quality assurance program at HTC point-of-care testing sites at both the community and health facility levels.

PEPFAR TA to the national reference laboratory at NCHADS and to the National Institute of Public Health (NIPH) will revitalize their oversight role in proficiency testing and quality assurance at point-of-care testing services within facilities and communities. PEPFAR will work with NCHADS on the development of a national quality assurance program for HIV screening at HTC sites. Twenty high-burden sites will pilot a training program and the implementation of quality assurance measures. NIPH will receive PEPFAR support for developing a proficiency testing (PT) program specific for HTC. NIPH and NCHADS will coordinate TA and retraining where problems are found.

Due to the low prevalence of HIV in Cambodia, in 2013 NCHADS adopted WHO guidelines for countries with HIV prevalence <5%, which recommends three consecutive rapid tests for confirmation of HIV infections. In order to facilitate procurement and distribution of rapid tests, NCHADS restructured the HTC program, by performing HIV screening using Determine tests in over 1,000 health centers throughout the country. Individuals with confirmatory screening results are referred to one of the 65 VCCT centers for confirmatory testing using the 3-test algorithm (Determine, Stat-Pak, and Unigold) tests. However, this shift in the HTC program has not been captured in the NCHADS SOP for HTC, issued in September 2013, which is used as the national guideline for the HTC program. The PEPFAR team will provide TA for a complete update on the national HTC guideline and SOPs, which, in addition to describing the HIV testing structure, will include elements of quality assurance for counseling, testing, and patient referral for care and treatment.

PEPFAR will provide TA at national, sub-national and site levels to contribute to higher uptake of HTC for those higher risk individuals and higher HTC yield in the six priority provinces.

4.6 Program Area Summary: Facility and Community-Based Care and Support

By the end of 2015, 57,651 HIV-positive individuals (including 4,583 children) were diagnosed and enrolled in 65 HIV care and treatment sites across Cambodia's 25 provinces, accounting for roughly 79% of all PLHIV. At PEPFAR-supported sites, 16,566 adult patients were on ART. At the community level, PEPFAR supported 17,334 HIV-positive adults and children to receive community and clinic-based care and support services during FY15. This result is significantly below the FY14 result, due to the transition of activities to Global Fund and the close-out of the community-based SAHACOM project. In FY15, PEPFAR continued the transition of direct service delivery to the MOH. As the majority of the national HIV/AIDS program's care and support services are funded by Global Fund, the national HIV program relies on PEPFAR to support TA in developing, monitoring, and strengthening program activities. By the end of FY15, PEPFAR had completed the phase out of 32 direct-service delivery care and support sites, in addition to the close-out of the SAHACOM project. Those sites were

transitioned to the Global Fund for the implementation of a new community-based care and support model, focusing on the estimated 30% of current PLHIV in care deemed to be in critical need of support services.

As Cambodia is committed to virtual elimination of HIV new infection by 2025, PEPFAR will continue to emphasize TA and capacity building across the prevention, care and treatment continuum, at the national, provincial and health facility levels. PEPFAR's TA strategy in the near term is to assist NCHADS in implementing the 'Test-and-Start', as well as the roll out of the Boosted-Integrated Active Case Management (B-IACM) approaches.

Key interventions and illustrative activities for COP16 consist of:

- The Boosted-Integrated Active Case Management System: PEPFAR will continue to work with NCHADS, UN agencies, civil society, and PLHIV to improve the finding of 'last' cases, and the referral process, from diagnosis of HIV-infection to entry into HIV care. PEPFAR will provide TA and training to scale up the active case-management system to track newly diagnosed patients, beginning with confirmatory HIV testing, immediate enrollment on ART with 'Test-and-Start' approach, and adherence reinforcement to improve retention in care and treatment services. The active case-finding strategy will target partners and children of HIV-positive individuals, including entertainment workers, to identify PLHIV at an earlier stage in the disease. PEPFAR will assist NCHADS in developing standard, simple systems; training healthcare workers; monitoring; and follow-up.
- Strengthening national, sub-national and health facility capacity, to implement and monitor 'Test-and-Start' to achieve 90-90-90 results: Once Test and Start is approved as policy, PEPFAR will support the prompt initiation of ART, maintain adherence to treatment, retention in treatment services, pilot more efficient service delivery models for stable patients, reduce clinical and lab monitoring to those essential for Test and Start needs (CD4, Viral load) in PEPFAR-supported health facilities.
- Ensuring optimal levels of adherence, retention and viral suppression: Retaining patients in care will be improved by strengthening the package of services, improving counseling on the need for regular monitoring visits, training and mentoring providers, and ensuring better linkages between facility and community-based services. PEPFAR will also support the process of developing and implementing a unique identifier system that would ensure that individuals are not 'lost' as they move between facility and community-based services.
- Supporting the roll-out of new Community Based Prevention and Care Services (CBPCS) in PEPFAR-supported provinces and other sites funded by the Global Fund: The new CBPCS was developed and piloted in PEPFAR-supported sites and is being scaled up with Global Fund resources since early 2016. The new model uses community support volunteers (CSV) to target those PLHIV in critical need, including those who are poor who need to be linked to the Health Equity Fund, those who are newly enrolled in ART, and those who show poor adherence and are most at risk of becoming lost-of-follow up. PEPFAR will continue to strengthen the capacity of the Cambodian Network of People Living with HIV (CPN+), at the provincial and the community levels, to strengthen care and support services and sustain relevant services after support from development partners phases out.
- Continuum of Care: PEPFAR will continue strengthening the implementation of the continuum of care for PLHIV, particularly in areas related to community-based care and linkage of PLHIV to pre-ART/ART services; support community support volunteers (CSV) on active case management; positive prevention and support to sero-discordant couples;

integration of HIV with FP and TB services, referrals and strengthening of referral networks; and linkage of pregnant PLHIV to PMTCT/ANC and safe delivery.

- Fostering greater local ownership and sustainability of community care and support: PEPFAR will be working with NCHADS on the integration of community-based care into the existing primary health care system, through the Village Health Support Group system. In addition, PEPFAR will advocate for Health Centre Management Committees (a new organizational structure resulting from the national Decentralization and Deconcentration initiative) to integrate community-based HIV care services into the Commune Investment Plan and Commune Development Plan.

4.7 Program Area Summary: TB/HIV

The second TB prevalence survey (2011) revealed that the prevalence rate of smear-positive TB in people 15 years and older in Cambodia was reduced by 38% during a period of nine years (2002-2011)[16]. Despite the dramatic decline in TB prevalence, Cambodia holds the fifth position of the 22 high-burden tuberculosis countries in the world. In the Global Tuberculosis Report 2015, the incidence and prevalence rates of all forms of TB for 2014 were estimated at 390 (95% CI: 353–428) and 668 (95% CI: 565–780) /100,000 population, respectively; and the estimated death rate was 58 (95% CI: 41–78) /100,000 population[17]. With an HIV prevalence among TB incident cases estimated at 3.0% (2.8-3.2)[18], more efforts are need to ensure strong and effective collaboration between HIV programs and TB control.

Nationally, Cambodia has achieved strong results regarding most TB/HIV performance indicators. In 2015, 82% of TB patients knew their HIV status; 99% of TB/HIV co-infected patients were given Cotrimoxazole Prophylaxis Therapy (CPT); and 98% of all TB/HIV patients registered had received ART during TB treatment. However, some provinces have shown relatively poor performance, including low uptake of Isoniazid Preventive Therapy (IPT), CPT and TB screening among HIV-positive individuals. Poor routine data monitoring processes, sub-optimal data quality, misunderstanding and misinterpretation of key TB/HIV-related policies and lack of coordination among TB and HIV programs limit the ability to effectively address TB/HIV collaborative activities nationwide. The Cambodian national 'Three I's' SOP objectives align closely with the 2011 WHO Intensified Case Finding (ICF)/IPT guidelines. Building upon lessons learned in the six PEPFAR-supported provinces, PEPFAR will support TB/HIV collaborative activities at the central level by providing TA to NCHADS and to the National Tuberculosis Program (CENAT) to monitor and supervise ICF and IPT provision, in the provinces with the highest number of PLHIV in care and with lowest performance in terms of TB/HIV indicators.

In 2012 and with PEPFAR support, CENAT established algorithms for testing of PLHIV with presumptive TB using Xpert® MTB/R if testing as the initial diagnostic test, and helped the national program to evaluate uptake of Xpert testing. With support from Global Fund and UNITAID, 38 GeneXpert machines have been installed at 25 sites, from 2010 to 2015. It is expected that ongoing efforts to further expand the implementation of GeneXpert will be faced with major systemic and operational challenges, including those related to human resources (lack of motivation and skills for maintenance, high staff turnover). PEPFAR will participate, together

[16] Second National Tuberculosis Prevalence Survey, Cambodia 2011 (http://www.cenat.gov.kh/en/content/second-national-tuberculosis-prevalence-survey-cambodia-2011)
[17] Global tuberculosis report 2015 (http://www.who.int/tb/publications/global_report/en/)
[18] Global tuberculosis report 2015 (http://www.who.int/tb/publications/global_report/en/

with other partners including WHO and Global Fund, to ensure optimal implementation, utilization, maintenance and evaluation of the GeneXpert platform. To help address TB/HIV monitoring-related challenges, and to ensure that all co-infected patient are receiving prompt TB treatment, ART and CPT, PEPFAR will work to support NCHADS and CENAT TO manage and the follow-up of TB/HIV co-infected patients, within the process of scaling-up the B-IACM. Plans are also underway to make sure that TB infection control-related activities receive funds and support, in addition to that provided by PEPFAR.

In COP16, PEPFAR will actively participate in the implementation of the recently updated National Pediatric Guidelines, including those aimed at improving TB case finding and management in children. PEPFAR support in TB will be at the above-site level, ensuring that the ODs and provinces are able to use TB data in their planning and decision-making and working at the national level on ensuring appropriate linkages between TB and HIV.

4.8 Program Area Summary: Adult Treatment

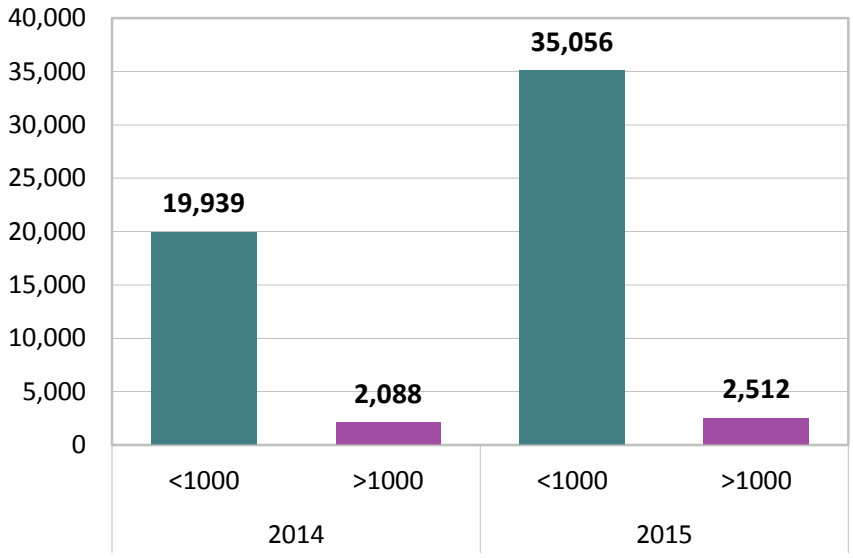
Cambodia achieved HIV epidemic control in the early 2000s, and is estimated nationally to have 82% of eligible[19] PLHIV on ART. Based on the 2015 sub-national unit (SNU) level PLHIV estimates, 6 out of 25 provinces show 75% or more of ART coverage, and 5 provinces have over 80% ART coverage. PEPFAR has been supporting adult treatment sites in 6 of the 12 provinces that account for over 80% of the total number of PLHIV nationwide.

Cambodia 3.0 includes the use of treatment as prevention (TasP) for sero-discordant couples and the provision of ART regardless of CD4 for some categories of PLHIV (including HIV-infected pregnant women, TB/HIV co-infected patients, and PLHIV with hepatitis B and chronic liver disease). In 2015, PEPFAR supported NCHADS in its process of updating the National Adult Care and Treatment Guidelines. PEPFAR supported the cost of contracting an international consultant to work with NCHADS and the Adult Treatment TWG, which includes several PEPFAR members, to review recommended changes to the guidelines, in line with the 2013 WHO consolidated guidelines and WHO's 2015 policy recommendations. When adopted, the 'Test-and-Start' approach will constitute a major shift in PLHIV care and treatment in Cambodia with a significant positive impact on patient outcomes and HIV transmission. Realizing the full benefits of 'Test-and Start", from both the individual and the programmatic perspectives, will require continued efforts to ensure high levels of HIV testing uptake, innovative and effective linkage to care strategies, high treatment coverage, sustained adherence to ART, and high rates of retention in care. PEPFAR will support the National HIV program in its efforts to offset, at least partially, the costs associated with 'Test-and Start', including additional ARV drug costs, through procurement and supply chain system strengthening and the implementation of innovative service delivery models, such as the differentiated care approach, task shifting and integration of HIV and related services.

PEPFAR will continue to focus its support on some of the high-burden provinces that have not yet reached an estimated 80% of PLHIV in care (including Battambang, Pursat, Siem Reap and Kampong Cham). PEPFAR has been supporting the process of designing and piloting the NCHADS B-IACM approach. This approach improves the version of the Integrated Case Management and Partner Notification, Tracing and HIV Testing for Cambodia (IACM-PNTT), which has been implemented at 14 high burden ODs. More streamlined and based on a new case based surveillance system for HIV, the B-IACM aims to ensure that the estimated 13,242 PLHIV

[19] CD4 count of 350 cells/ mm^3 is current national ART treatment eligibility guidelines.

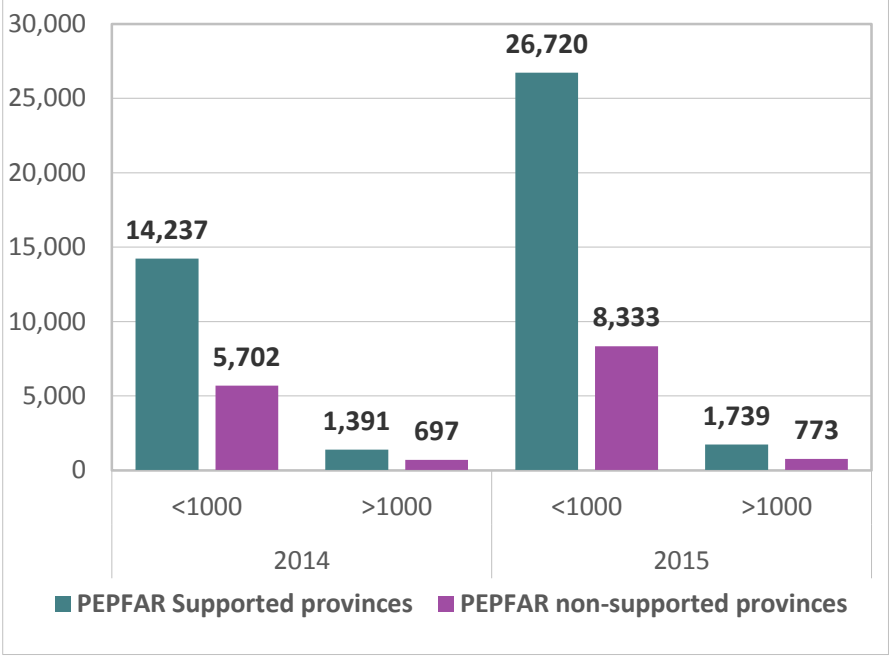
Figure 4.8.1: National Viral Load Tests Performed and Viral Load Suppression, 2014 compared to 2015



not yet diagnosed are identified, enrolled, and retained within the next five years, thus achieving the 90-90-90 targets by 2020.

PEPFAR will also continue to provide TA at the central level to NCHADS for achieving the 90-90-90 targets nationally, and ensuring high quality of care through support to guidelines development, SOPs, training, supervision and monitoring, and strategic planning. With PEPFAR support, viral load (VL) testing launched in the public sector in 2011 and has since seen a significant scale-up, culminating in a total of 37,568 VL tests performed nationwide in 2015 (an increase of 41percent from 2014). Similarly, VL routine monitoring has been significantly scaled up at PEPFAR-supported sites with 26,720 VL tests performed in 2015, an increase of 47 percent compared to 2014 (see figures 4.8.1 and 4.8.2). In order to provide one annual VL test per PLHIV on treatment, a second machine was deployed in 2015 using Global Fund resources and PEPFAR TA. In 2016, PEPFAR will continue working with NCHADS and other partners (UNICEF and CHAI) on finding effective and efficient ways to improve the VL testing flow, particularly in light of the addition of a third viral load machine in Siem Reap province. The third VL instrument will be installed in mid-2016, allowing NCHADS to perform approximately 48,000 VL tests a year by the end of calendar year 2016. This would result in a national VL testing coverage of approximately 68% of the 70,721 PLHIV in 2016. PEPFAR will sustain its

Figure 4.8.2: Viral Load Testing and Suppression: PEPFAR-Supported vs. Non-PEPFAR-supported provinces



support to activities that will help expand access to viral load testing to more patients in the coming years by increasing national testing capacity through introduction of additional testing platforms and demand generation activities, and strengthening sample transportation and coordination mechanisms. Furthermore, PEPFAR will work with NCHADS on the prompt return of results to the sites by exploring various effective and sustainable potential options, including the electronic transmission, and entry into the clinical care database. PEPFAR will also continue to provide TA to NCHADS to ensure that a sufficient level of expertise is maintained with regards to viral resistance testing.

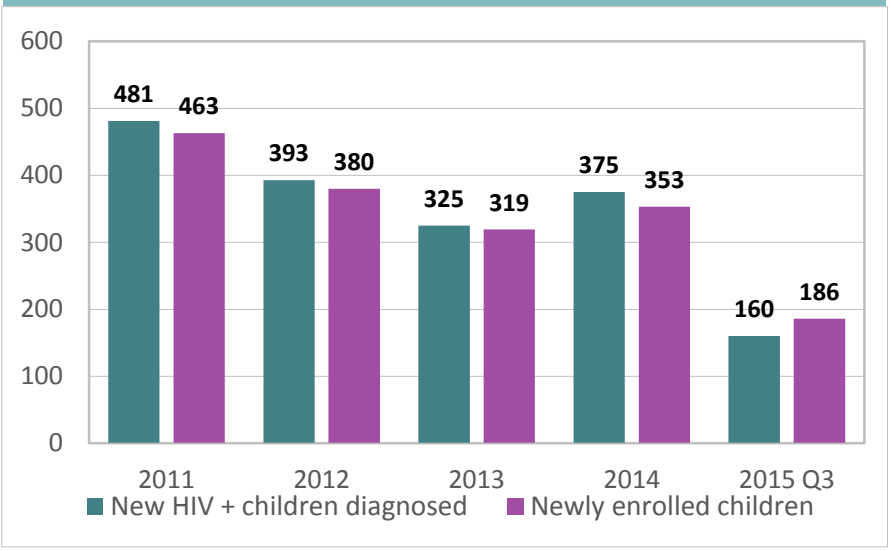
To ensure that high standards of quality of care and treatment are in place, PEPFAR will continue its support to the continuous quality assurance (CQI) and clinical mentoring processes (workshops, trainings, sites supervision and mentoring). PEPFAR also continues to support national and provincial treatment program supervisors to join the SIMS visits.

4.9 Program Area Summary: Pediatric Treatment

Cambodia is estimated to have approximately 83% of eligible HIV-positive children on ART and 79% of all estimated pediatric HIV-positive children (< 15 years old) were on treatment by the end of 2014. Approximately half of all children on ART receive treatment within Phnom Penh and two provinces (Siem Reap and Battambang). PEPFAR supports pediatric treatment sites in five provinces, including the two highest burden provinces. According to the UNAIDS 2014 Cambodia Country Data, the number of children aged 0 to 14 living with HIV was estimated at 5,200 [5,100-5,300], and based on the NCHADS ART quarterly report, by the end of the third quarter of 2015, the total number of children enrolled in care was estimated at 4,406, of whom 3,841 were on ART (87%). Owing to the success of the PMTCT program in reducing new perinatal infections, there is a decreasing trend of newly HIV-positive children diagnosed and also of those newly enrolled in HIV care (see figure 4.9.1). As a result, the cohort of HIV-infected children on ART is 'aging' (46% of children <15 by the end of 2014), and children older than 15 are graduating into adult treatment programs.

The Cambodia 3.0 strategy includes the use of lifelong ART regardless of CD4 for pregnant and breastfeeding HIV-positive women as well as a case management approach to following pregnant women and their HIV-exposed infants (HEI) through testing at 6-8 weeks postpartum and prompt initiation of ART if an infant is found infected (see Section 4.3 on PMTCT). In 2015, PEPFAR participated in the NCHADS process of updating the National Pediatric ART and OIs Guidelines, including specific guidance for adolescent care and treatment services.

Figure 4.9.1: Children (<15 years old), Newly HIV-Positive Diagnosed and Enrolled in ART



PEPFAR will continue to work at the central level with NCHADS on achieving the 90-90-90 targets nationally and maintaining high quality of care by continuing to work with the national program on guidelines development, standard operating procedures, training, monitoring, and strategy development. PEPFAR will also continue to support the B-IACM approach (described in above in the HTC and Adult Treatment sections narratives) and prioritize expansion of HIV DNA testing for all HIV-exposed infants and provider initiated testing and counseling in settings such as malnutrition wards; partner notification, tracing, and testing (which contains a component of HIV-testing of children for newly diagnosed PLHIV); and expanded ART eligibility criteria mentioned above. Despite the relatively high VL testing rate in children on ART (respectively 81% and 86% in 2014 and 2015), suppression rates remain sub-optimal in contrast to the suppression rates in persons 15 years and older (82% for those under 15 years compared to 94.4% for 15 years and above). PEPFAR will support NCHADS activities aimed at improving children's care and treatment activities, including those related to OIs management, adherence and counseling, and management of ART side-effects and drug-drug interactions.

5.0 PROGRAM ACTIVITIES IN SUSTAINED SUPPORT LOCATIONS AND POPULATIONS

5.1 PACKAGE IN SUSTAINED SUPPORT LOCATIONS AND POPULATIONS

During the COP15 process, the PEPFAR team made significant geographic shifts in the portfolio. As noted in section 1.4 above, PEPFAR will not make additional geographic changes as part of COP16. For those locations where PEPFAR phased out in COP15, the support has been technical assistance rather than direct service delivery. Therefore, PEPFAR has not been supporting procurement of ARVs, other drugs, test kits or lab supplies, and has not provided funding for staff salaries in any of these facilities in de-prioritized provinces. Discussions with NCHADS have indicated that facility based services will continue at these locations and PEPFAR does not need to provide a package to sustain services.

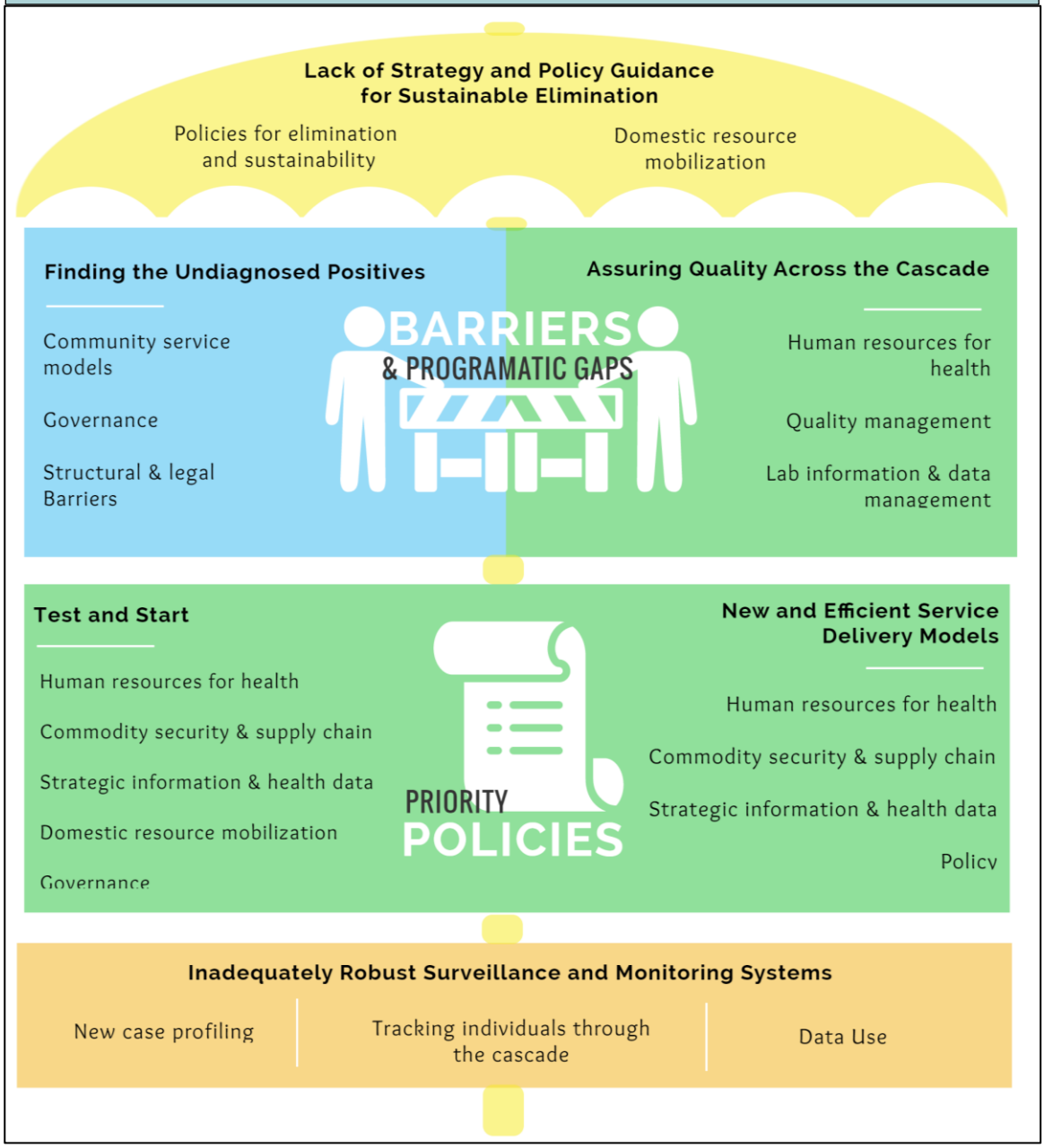
Table 5.1.1: Not Applicable

5.2 TRANSITION PLANS FOR REDIRECTING PEPFAR SUPPORT TO PRIORITY LOCATIONS AND POPULATIONS

This is not applicable for PEPFAR Cambodia in COP16.

6.0 PROGRAM SUPPORT NECESSARY TO ACHIEVE SUSTAINED EPIDEMIC CONTROL

Chart 6.1: PEPFAR Cambodia Programmatic Framework



6.1 CRITICAL SYSTEMS INVESTMENTS FOR ACHIEVING KEY PROGRAMMATIC GAPS

As Cambodia moves towards sustained elimination of new HIV infections PEPFAR will focus on those health systems barriers critical to finding the last remaining HIV positive persons and assuring quality across the cascade. All programmatic developments will need to be informed by and align with a long-term strategy for sustainable elimination. Thus, one key

programmatic gap addressed is the lack of an overarching, multi-stakeholder strategy for sustained elimination. In order for the vision for long-term sustainability of the national HIV response to become a reality, service delivery must be delivered in an optimally efficient and effective manner. Therefore, during COP16 PEPFAR is prioritizing systems investments that will enable the smooth roll out of Test and Start and 'new, efficient service delivery models'.

The key programmatic gaps identified for this year are aligned with the overall strategy for PEPFAR Cambodia, of 'finding the remaining undiagnosed positives', and 'assuring quality across the cascade', along with efficiently rolling out Test and Start and 'new service delivery models'. To ensure the long-term success of these efforts, PEPFAR will also address barriers to a long-term strategy for 'sustainable elimination'. The lack of robust and reliable surveillance and monitoring systems has been identified as a barrier cutting across the whole program. Hence we detail below the interventions planned to address that systemic need.

Cross-cutting interventions for strengthening surveillance and monitoring systems

Because Cambodia does not have a unique number for identifying HIV patients nor a common web-based electronic system to track individuals, it is difficult to follow individuals along the continuum of HIV care and between HIV and other programs, such as TB, MCH, and inpatient care. Therefore, the goal of strategic information system strengthening in Cambodia is to improve monitoring of HIV throughout the cascade and improve interoperability of HIV with other health programs.

PEPFAR is currently working with the HIV program to develop a model in one province for an HIV information system that would allow tracking of individuals between HTC, VCCT, ART, and laboratory services. In COP16 it is planned to scale up the introduction of this system to at least two more PEPFAR provinces. This system will also incorporate ongoing work to improve risk classification of new HIV patients, and improve HIV outbreak identification and response capacity. In addition, PEPFAR is providing technical support to all PEPFAR provinces to strengthen national staff capacity to collect, analyze, and disseminate quality data for program planning.

PEPFAR sees these as initial steps towards the eventual adoption of a health system-wide unique identifier and a common health information platform. PEPFAR is strengthening collection of HIV data in the broader HMIS, and working to optimize interoperability of HIV and TB information systems. By FY17, an assessment of health identifiers currently underway will have been completed, allowing stakeholders to identify the optimal system for unique health identification. PEPFAR funds will continue to leverage the work of the Social Health Protection Project (SHP), a non-PEPFAR USG-funded project which is scaling up a national patient registration system (PMRS). In addition, PEPFAR is working with the Department of Planning and Health Information to set health information standards and look at how the HIV program can best link with PMRS. Such strengthening of strategic information systems is a critical component for success of all of the other key PEPFAR work planned in FY17 and beyond.

6.1.1 Finding the undiagnosed positives

As Cambodia moves ever closer to the 90-90-90 goals and virtual elimination of new infections, finding the last remaining HIV positive persons becomes harder and more expensive. This situation is exacerbated by a lack of conclusive evidence about the origins of newly found infections that include both new infections and older previously hidden infections. AEM

modeling in 2015 suggests that heterosexual transmission is the driving force behind the epidemic with around 57% of all new infections in males and females with unknown risks, 12% in FEW, 13% in their clients, and 15% in PWID. Furthermore, much higher HIV prevalence rates are found in key populations, namely 2.3% among men who have sex with men (MSM), 4.0% among lower risk and 13.5% among high-risk female entertainment workers (FEW), 4.4% among transgender (TG), and 24.8% among people who inject drugs (PWID), compared with 0.67% prevalence in the general population.

Those high prevalence rates justify an emphasis on key populations for HIV testing services. But the previous NCHADS approach, with routine testing of all KPs twice a year, insufficient attention paid to the risk behaviors of those individuals, and some individual KPs tested three or more times in one year resulted in high costs and low testing yields. Therefore, during COP16 there will be a significant programmatic shift towards more strategic targeting of testing efforts. PEPFAR and Global Fund will support NCHADS to reduce costs and improve HTC yield by focusing efforts on KP sub-groups at greatest risk of HIV. This sharpened and prioritized approach will contribute to greater sustainability of the national HIV program.

The shift will be made possible by the following systemic improvements: Firstly, through better profiling of new cases and improved data collection and management of individual case data, PEPFAR and the national program will be better placed to ensure that testing approaches are targeted and directed at individuals and groups most likely to yield positive results. Secondly, PEPFAR will support the development of service delivery modalities that are responsive to the needs of those groups most affected by the virus. Those approaches will focus on the most at-risk key populations, in particular MSM, transgender women, and female sex workers with seven or more clients per week and those who work freelance. Lack of privacy, confidentiality, and trust in peer-provider testing skills are factors identified in a recent study of barriers experienced by MSM in accessing HIV-related outreach and clinical services. Adjustments to program modalities will mitigate these factors through improved privacy and confidentiality in test settings, enhanced professionalism of HTC providers, and increased use of social media to reach out to MSM and TG with key HTC messaging. PEPFAR will enhance MSM and TG-friendliness in select clinics with high numbers of clients from these KPs that are run by NGOs. This is anticipated to improve HTC uptake by these groups, particularly hidden MSM of higher socioeconomic status and MSM and TG not connected to existing networks. PEPFAR will seek private-public partnerships to sustain MSM and TG services. Another approach will be to refine the frequency, timing and package of HIV services, including HTC, offered to street-based female and male sex workers and PWID to better meet the needs of these exceptionally hard-to-reach groups, as they are currently underserved and likely to yield new positives.

At the same time PEPFAR will work to ensure its target populations are not discouraged from accessing services through other structural and legal barriers. For example, PEPFAR will work to ensure that the possession and sales of condoms are not used by law enforcement as cause for harassment, detention and arrest.

In developing these approaches PEPFAR will work closely with the national program to ensure that lessons learned are reflected in national policy guidelines, and that Cambodia's HTS approach incorporates global best practice with a strong focus on ongoing quality management. PEPFAR TA to the national reference laboratory at NCHADS and to the National Institute of Public Health (NIPH) will revitalize their oversight role in proficiency testing and quality assurance at point-of-care testing services within facilities and communities. PEPFAR will work

with NCHADS on the development of a national quality assurance program for HIV screening at HTC sites. Twenty high-burden sites will pilot training and implementation of quality assurance measures. NIPH will receive PEPFAR support for developing a proficiency testing (PT) program specific for HTC. NIPH and NCHADS will coordinate TA and retraining where problems are found.

Table 6.1.1. Key Programmatic Gap #1: Above-Site Finding the Undiagnosed Positives							
Key Systems Barrier	**Outcomes expected after 3 years of investment**	**Milestones**	**Proposed COP Activities**	**Budget Code(s)**	**Activity Budget Amount**	**Associated Implementing Mechanism ID**	**Relevant SID Element and Score (if applicable)**
Strategic information: Inadequate profiling of new cases makes it difficult to strategically target testing.	B-IACM/PNTT results in identification of 90% of PLHIV Improved understanding of risk in new infection More efficient targeting of HTC	Number of ODs using BIACM dashboards (quarterly) Proportion of new positives with no risk identified (quarterly) Number of newly confirmed positives (quarterly)	(2-1) Evaluate effective client profiling, partner tracing and index testing methods.	HVCT	$179,090	HIE	Epi and Health Data (4.84)
			(2-2) Evaluate innovative ways to identify new HIV+ KPs, including risk screening and snowballing approach.	HVOP	$179,090	HIE	
			(3-2) Support NCHADS, provinces and ODs in scale up and implementation of boosted integrated active case management/partner notification tracing and testing (B-IACM/PNTT) for adequate risk elicitation by updating national guidelines, writing SOPs, training, and monitoring.	HBHC HTXS HTXS	$50,000 $50,000 $370,000	NCHADS NCHADS Flagship	
			(4-1) Incorporate a unique identification number and improve interoperability with other linked health programs (TB, blood bank and MCH) and ultimately with MoH health management information system (in- and outpatient).	HVSI HVSI HVSI HVSI	$50,000 $250,000 $60,000 $45,000	CENAT HIPA MOH NCHADS	
			(4-4) Conduct and strengthen partner capacity to do client risk assessment, case profiling, size estimations and mapping of priority populations.	HVSI	$400,000	Flagship	
Struggling to reach and test **hidden/hard to reach key populations**	90% of HIV+ KP individuals know their status.	Review and analyze KP cascade, specifically reach and test (annually)	(2-3) Evaluate effectiveness of community-based prevention, care and support approaches to identify, enroll and retain KPs through the cascade.	HBHC	$170,090	HIE	Performance Data (4.49)
			(2-4) Demonstrate innovative and sustainable approaches to improve targeted reach, uptake of community-based testing, and confirmatory testing and tracking of HIV+ KPs with a focus on the most at risk key populations, in particular MSM, transgender women, and female sex	HVCT	$350,000	Flagship	

			workers with 7+ clients per week and those who work freelance, including greater use of social media for targeted reach.				
Policies: HIV Testing Services (HTS) policies insufficiently focused and implemented to find the remaining positives.	National HTS approach guided by up-to-date policies resulting in more efficient testing and higher yields.	Revised HTS SOPs as per WHO guidelines (quarterly) Implementation of policy (number of provinces) (quarterly) Number of ODs using the PMTCT dashboard (semi-annual)	(2-8) Assist national programs (NCHADS, NMCHC, CENAT) to revise national SOPs, tools, guidelines, and training materials to improve HTS.	HVCT	$20,000	NCHADS	Policies and Governance (7.95)
			(2-12) Increase HIV testing and ensure effective referrals for Test and Start among TB inpatients and outpatients.	HVTB	$100,000	Flagship	
			(3-4) Improve national policies and systems to identify, follow and retain HIV-exposed infants and HIV-infected children in HIV care and treatment, ensure transition of adolescents to adult services.	MTCT	$32,000	NCHADS	
			(3-7) Strengthen capacity of MOH (NMCHC, NCHADS, health facilities) to coordinate, lead, implement, and monitor PMTCT activities for AIDS free generation and virtual elimination of HIV through: 1) Financial and technical assistance for updating guidelines, SOPs, training documents; 2) Direct assistance in TOT and trainings; 3) Financial and technical assistance for monitoring, reporting (f/u register), analysis; 4) FP/ HIV integration to reduce un-intended pregnancies among PLHIV; 5) Training and monitoring activities for F/ u HIV positive mothers and HIV exposed infants; 6) onsite technical support to improve quality of PMTCT services.	MTCT	$50,000 $50,000 $50,000	Flagship NCHADS MOH	

			(3-8) Strengthen capacity of NTP (CENAT) and NCHADS to lead, implement, and monitor TB/HIV activities, focusing on the 3Is ("Intensified case finding", HIV testing of tuberculosis patients, tuberculosis-symptom screening and diagnosis among HIV-positive patients and treatment if co-infected, "Isoniazid preventive therapy", and "TB Infection control") through: 1)Training on TB/HIV counseling and diagnostic workshop and treatment of TB/HIV, 2)Monitoring activities for F/u HIV positive among TB patients to put in care and treatment, 3)update diagnostic and treatment protocol, 4)implement TB infection control package (impact evaluation), 5)provide onsite technical support at PEPFAR-supported health facilities to strengthen HIV testing among TB patients and TB testing and care among HIV patients.	HVTB	$100,000	CENAT	
Structural and legal barriers, including discrimination and stigma discourage KPs from going to government facilities for testing.	Improved enabling environmental and structural factors impacting the continuum of prevention, care, and treatment services for key populations. Key populations and NGO staff providing services to key populations have access to legal services Community members access HTS services without fear of discrimination.	Number of KPs provided with legal services (semi-annual)	(LINKAGES project) Document and address cases of abuse and human rights violations and other legal barriers among key populations that lead to stigma, discrimination and reduced condom availability. Link key populations experiencing gender based violence or human rights abuses to relevant health, legal, and social services providers and a process for documenting and reporting these episodes. Train men who have sex with men and transgender women to use data to develop and carry out advocacy work			Funded through KPCF with central funding	Policies and Governance (7.95)
TOTAL					$2,555,270		

6.1.2 Assuring quality across the cascade

Despite considerable improvements in the national cascade over the past many years, there is still a need to address critical quality issues in multiple areas, such as human resources, quality management, and laboratory and data systems.

To compensate for the lack of qualified workers performing key functions in the health system, from HIV testing to laboratories and clinics, external donors have provided funds for hiring contractors and monetary incentives. As those funds decline, inadequate staff planning by the MOH could lead to the decline or collapse of important services supported by the PEPFAR program. The focus on staff transition is needed in the immediate term, as the Global Fund has made the decision to phase out payments for contract staff and incentives with the expectation that key needed positions should be part of the public health infrastructure by the end of 2017. The PEPFAR team will therefore support RGC to develop a sustainable staffing approach to meet program needs. In addition, as shifts in staffing, roles, and responsibilities occur during this transition, PEPFAR will play a critical role in assisting NCHADS to update SOPs to reflect more efficient models of service delivery and provide mentoring, training, and supervision to ensure that quality of care is minimally affected by staffing transitions.

Furthermore, PEPFAR will continue refining CQI in PEPFAR-supported provinces, and work with NCHADS to identify how best to expand these activities nation-wide to ensure providers are providing quality services. In particular, PEPFAR will actively assist NCHADS to introduce the more efficient models of care in the recently revised adult, child, and PMTCT guidelines, and identify additional efficiencies identified in the roll-out of these new guidelines. Experiences with Test and Start in PEPFAR-supported provinces will be used to facilitate introduction of Test and Start nationwide, to ensure transfer of existing patients from care to treatment as rapidly as possible. Support for introduction of B-IACM in PEPFAR-supported provinces will strengthen Test and Start for newly identified PLHIV and reduce loss of patients in the HIV care and treatment cascade. Similarly, PEPFAR support will be used to improve the quality of care for HIV-TB co-infected PLHIV, through ensuring Test & Start, improved screening of TB in PLHIV, and HIV in patients with TB, and improved IPT coverage.

PEPFAR will also concentrate on improving laboratory and data systems. Despite considerable improvements in viral load coverage over the past year, moving from 20,000 tests in 2014 to approximately 37,500 tests in 2015, gains are at risk of not being be sustained in the long run due to fragilities in the health system. PEPFAR will support activities aimed at ensuring sustained quality at all steps of the VL routine testing. PEPFAR will continue to support the National Program and the provincial HIV program instances in ensuring VL routine testing demand creation among clinicians, as well as their adequate use and application of the new VL routine monitoring-related algorithm.

The laboratory system is of utmost importance to the program and to achieve the 90-90-90 goals. But specimen collection and transport systems have not been well-organized, limiting access of viral load testing for ART-enrolled patients, for example. The lack of infrastructure for logistical information systems leads to delays in results reporting and to inadequate patient management, as records are not well maintained. Procurement and distribution of reagents and consumables are inadequate and insufficient, leading to stock outs and unreliable test results. Maintenance contracts of clinical laboratory equipment and external quality assessment programs are supported exclusively by external development partners. The PEPFAR Cambodia team is working with the International Laboratory Branch of CDC for the implementation of a quality assurance program for HIV rapid tests and preparing two national program laboratories (NCHADS and NIPH) for application to ISO 15189 accreditation by an international agency. PEPFAR will make investments in clinics/laboratories information systems, within its broader

efforts to enhance the overall HIV-related information system, in order to facilitate the flow of information and timely return and utilization of results by patients clinicians.

In addition to efforts to strengthen laboratory data systems, PEPFAR will help to strengthen the overall HIV information systems through the development of improved database linkages, and national SOPs, tools, and guidelines to improve HIV surveillance and monitoring systems. Because current information system exist but are fragmented, such work is critical ultimately allow tracking individuals through the cascade, identify individual risk characteristics, improve HIV case surveillance, and respond to changes in epidemiology. In addition, many of the HIV program staff do not yet have sufficient capacity to use HIV data to guide their work. Therefore, PEPFAR will also strive to enhance national and subnational staff capacity to collect, report, analyze, and use quality data for program planning through: development of simplified forms, electronic systems, and tools; provincial and OD-level training activities; and on site supervision and mentoring.

Table 6.1.2. Key Programmatic Gap #2: Above-Site Assuring Quality Across the Cascade							
Key Systems Barrier	**Outcomes expected after 3 years of investment**	**Milestones (frequency)**	**Proposed COP Activities**	**Budget Code(s)**	**Activity Budget Amount**	**Associated Implementing Mechanism ID**	**Relevant SID Element and Score (if applicable)**
Service Delivery Efficiency: insufficiency of high quality and low cost services	Improved low-cost, high quality service delivery model MOH facilities have adopted improved injection safety practices Efficient service delivery model is implemented nation-wide Provincial data managers able to analyze program data and use for programmatic decision-making across the cascade (including VL suppression and tracking of VL failure)	Basic package defined, costed, and implemented. (semi-annual) Pilot completed, curriculum revised, tools developed (semi-annually) Roll out of improved service delivery model, % of ART clinics implementing improved service delivery model (semi-annually) % of sites using the dashboard OD cascades incorporate VL results and tracking of VL failures	(1-1) Build capacity of MoH and MoEF to identify and develop innovative health financing approaches and find costing efficiencies..	OHSS	$200,000	HFG	Service Delivery (4.44)
			(2-10) Assist MoH (Department of Hospital Services) to leverage other resources to expand the pilot medical injection safety program – roll out piloting model, use revised training curriculum, monitoring tools, and IEC materials.	HMIN	$37,500	HRSA/AIHA	
			(3-9) Support NCHADS to do clinical mentoring, training of clinical mentors and trainers, identify improved service delivery model and implement the new service delivery model. Strengthen capacity of national program to improve quality of care and treatment services through: 1) CQI; 2) Clinical mentoring targeting sites with low achievement scores and monitoring progress, 3) PHDP activities; 5) Intensified Case Finding for TB/ Hep B and treatment if co-infected. Activities to include standardized assessments, data entry and analysis, monitoring, meetings, training, and EQAs.	HTXS PDTX	$60,000 $15,000	NCHADS	
			(4-2) Help to develop national SOPs, tools, and guidelines to improve HIV surveillance and monitoring systems to allow tracking individuals through the cascade, identify individual risk characteristics, improve HIV case surveillance, and respond to changes in epidemiology.	HVSI	$100,000	NCHADS	
			(4-3) Enhance national and subnational staff capacity to collect, report, analyze,	HVSI	$30,000 $20,000	Flagship NCHADS	

			and use quality data for program planning.				
Service Delivery Efficiency (high quality, low cost)/Test & Start	>90% of pregnant women tested for HIV and 90% of HIV+ pregnant women on ART, and 90% of exposed infants tested and MTCT rate is <5%	% of provinces implementing revised PMTCT guidelines (semi-annual), % of pregnant women tested for HIV (national), % of HIV+ pregnant women on ART, and MTCT transmission rate	(3-7) Strengthen capacity of MOH (NMCHC, NCHADS, health facilities) to coordinate, lead, implement, and monitor PMTCT activities for AIDS free generation and virtual elimination of HIV through and positioned for validation of EMTCT: 1) Financial and technical assistance for updating guidelines, SOPs, training documents; 2) Direct assistance in TOT and trainings; 3) Financial and technical assistance for monitoring, reporting (f/u register), analysis; 4) FP/ HIV integration to reduce un-intended pregnancies among PLHIV; 5) Training and monitoring activities for F/ u HIV positive mothers and HIV exposed infants; 6) onsite technical support to improve quality of PMTCT services.	MTCT	$50,000 $50,000 $50,000	NCHADS MOH Flagship	Service Delivery (4.44)
Test & Start: inadequate implementation of new policy and guidelines	B-IACM implemented in all ODs 100% of presumptive & TB patients are tested for HIV and 100% of HIV/TB co-infected patients are on ART	Number of ODs implementing B-IACM (quarterly) Policy developed and implemented (semi-annually)	(1-4) Provide training and coaching to provincial leadership, health facility managers and other members of the B-IACM Group of Champions as well as technical assistance within health facilities to strengthen integration and mainstreaming of HIV-related services into wider health or community platforms.	OHSS	$105,000	Flagship	Service Delivery (4.44)
			(2-12) Increase HIV testing and ensure effective referrals for Test and Start among TB inpatients and outpatients.	HVTB	$100,000	Flagship	

			(3-8) Strengthen capacity of NTP (CENAT) and NCHADS to lead, implement, and monitor TB/HIV activities, focusing on the 3Is ("Intensified case finding", HIV testing of tuberculosis patients, tuberculosis-symptom screening and diagnosis among HIV-positive patients and treatment if co-infected, "Isoniazid preventive therapy", and "TB Infection control") through: 1)Training on TB/HIV counseling and diagnostic workshop and treatment of TB/HIV, 2)Monitoring activities for F/ u HIV positive among TB patients to put in care and treatment, 3)update diagnostic and treatment protocol, 4)implement TB infection control package (impact evaluation), 5)provide onsite technical support at PEPFAR-supported health facilities to strengthen HIV testing among TB patients and TB testing and care among HIV patients.	HVTB	$100,000	CENAT	
Laboratory Systems Strengthening							
Capacity building	Laboratories show improvements in meeting ISO requirements.	Laboratories are mentored through site visits quarterly # of sites with satisfactory PT results (semi-annual)	(3-10) Strengthen sample referral, confirmation of diagnostic tests, and evaluation of new methodologies. Monitor performance EQA programs (PT). Generate, distribute, and evaluate results of PT panels. Improve quality of laboratory practices by implementing international standards of quality and applying for ISO15189 accreditation. Support calibration and maintenance of equipment.	HLAB	$160,000	NIPH	Human Resources for Health (4.83) Laboratory (3.66)
Quality management: Limited quality management of lab functions.	90% of ART patients VL tested annually. Quality of samples, TAT of results, and efficient data management at ART	(Move to finding the last cases of HIV infections) % of patients tested for VL, and % of patients VL suppressed (disagg for adults & children)	Continue providing TA and complementing procurement of consumables to support VL testing. Advocate with NCHADS for developing a hiring plan for staff capable of performing VL testing.	HVMS			Quality Management (3.86) Laboratory (3.66)

	clinics, ensure timely results, efficient patient management, and accuracy of high rates of suppression (90%). International accreditation received. Quality management systems are implemented. Processes are mapped and SOPs are developed and followed. Sample request, collection, transportation, testing, and results reporting are monitored to ensure timeliness and accuracy of results. LIS and clinics databases are integrated providing real-time reporting of results. Global Fund contractors performing VL testing are absorbed as MoH staff, in order to maintain improved standards. Physicians at ART clinics request VL testing for patients in a timely manner, are capable of interpreting VL results, and manage care and treatment options accordingly. Database managers maintain patients' database up-to-date, follow up on delayed or missing results and inform doctors when patient results are delivered.	nationally (semi-annual) Hiring plan is developed and in place (semi-annual) Turnaround time from collection to returning results for patient care (semi-annual) % compliance with ISO requirements (semi-annual) Implementation of LIS (semi-annual)	(2-9) Support NCHADS to have a functional quality assurance (QA) program for point of care testing (facility and community) and viral load testing, through creating and providing internal and external proficiency testing (PT panels), providing on the job coaching and training workshop.	HVCT	$100,000	NCHADS	
			(3-10) Strengthen sample referral, confirmation of diagnostic tests, and evaluation of new methodologies. Monitor performance EQA programs (PT). Generate, distribute, and evaluate results of PT panels. Improve quality of laboratory practices by implementing international standards of quality and applying for ISO15189 accreditation. Support calibration and maintenance of equipment.	HLAB	$160,000	NIPH	

Systems for diagnostics, lab information and data management, and sample referral require support.	All ART sites able to offer VL testing to all eligible ART patients.	% of sites where the efficiency of VL routine testing is monitored (semi-annual))	(3-3) Increase viral load testing coverage, improve viral suppression of PLHIV on ART and monitor for ARV drug-resistance to achieve 90/90/90 results through: 1) Improvements to regular/ routine VL assessment, transport, and result reporting 2) Increased capacity to perform VL testing (3rd machine in Siem Reap), 3) viral resistance testing among un-suppressed samples 4) integration of CQI and EWI. Activities to include: integrated transport, lab quality assurance, monitoring and supervision, contract and transport for sending samples out for VL resistance testing, purchase essential lab supplies and materials not available through GF/ CMS.	HLAB HTXS PDTX	$66,000 $22,000 $22,000	NCHADS NCHADS NCHADS	Laboratory (3.66)
TOTAL					$1,447,500		

6.1.3 Sustainable elimination of new HIV infections: Lack of multi-stakeholder strategy for sustained elimination

Given Cambodia's significant achievements in HIV epidemic control and its further goal of virtual elimination of new infections, it is timely to develop a multi-stakeholder strategy for sustainable elimination to which external stakeholders align their own plans. RGC has introduced a "sustainability technical working group" to develop such a plan. That plan should ideally be costed and take account of declining external resources, and a changing political environment, including 'Deconcentration and Decentralization' – a government-wide effort to place more fiscal and programmatic responsibility at the peripheral level. With broad stakeholder engagement from within RGC it could provide a useful exercise for shoring up future domestic resource allocation for the HIV response.

Under its new funding model, Global Fund has reduced Cambodia's funding by 50% since 2014. PEPFAR has embarked on a transition plan that envisages a gradual budget decline. As Cambodia approaches lower middle-income status, the country is under added pressure to increase its domestic contribution to supporting the HIV response, which at present sits at 24%. The challenge for Cambodia is that such expectations for increased contributions cut across not only the broader health portfolio, but also the entire spectrum of development assistance. The SID indicated that financing was an area requiring strengthening in order to sustain the HIV response. PEPFAR will focus on building a financial case to inform policy makers about the costs and benefits of increased allocation of domestic resources to finance the National HIV Program. This entails examining the current financial landscape to determine how various elements of the response are being financed, exploring financial mechanisms already in place which could be utilized in the HIV sector, and costing out services to obtain a better picture of actual budget requirements. In parallel, PEPFAR is supporting innovative financing through the Health Equity Fund (HEF) for the poor to reduce management costs and to pave the way for inclusion of PLHIV as a vulnerable population under a pooled donor fund, of which RGC contributes 40%.

Perhaps one of the reasons for Cambodia's success in combating HIV was the establishment and full scale-up of dedicated HIV services, solely managed and monitored by the National HIV/AIDS Program. As the country turns its sights on sustained elimination of new HIV infections, the efficiency of this approach is of concern and requires more "smart integration." The challenge is to shift away from the vertical HIV service delivery approach and adapt new service delivery models that will maintain life-long care and treatment services for PLHIV while being cost efficient and effective. Besides long-term financing, strengthening and integrating systems are a high-priority for sustaining the gains made in Cambodia. PEPFAR is working with NCHADS and other national programs to assess the present situation and provide TA on potential, strategic integration of HIV services into mainstream health services, without disrupting quality and while adopting improved service delivery models.

According to the SID, another hurdle to obtaining sustainability is the Commodity Security and Supply Chain system (score: 2.8 out of 5). Poor forecasting and distribution have led to under stock and stock-outs, resulting in a lower number of Cambodians tested for HIV as well as creating overall inefficiencies in service delivery. The ability of the National HIV/AIDS program to achieve an AIDS-free generation depends on solving procurement and supply chain management concerns. The issues reach far beyond NCHADS as the majority of drugs and medical supplies in Cambodia are stored and distributed through a central body (the Central Medical Stores) and a dispensing regulation that is not enforced across both public and private facilities. PEPFAR is leveraging Global Fund and WHO support to modernize the existing automated logistics and supply chain management system to become web-based and link to the MOH web-based Health Information System, thereby providing real time data for managing key

commodities. This will lead to improvements in drug forecasting, ordering, tracking, and distribution mechanisms and resolve bottlenecks in the drug and health commodities delivery systems in Cambodia.

The SIMS process revealed that some PEPFAR-supported sites do not have patient tracking information. Gaps in reliable epidemiological and health data result in suboptimal program planning. The interventions proposed to address these barriers are detailed in above. If successful, these investments will improve allocative efficiencies as planners will be able to base resource decisions on robust epidemiological, health, workforce and economic data. These efforts will take time, and would not be expected to be completed during the implementation of COP16.

Table 6.1.3. Key Programmatic Gap #3: Lack of Strategy and Policy Guidance for Sustainable Elimination							
Key Systems Barrier	**Outcomes expected after 3 years of investment**	**Milestones**	**Proposed COP Activities**	**Budget Code(s)**	**Activity Budget Amount**	**Associated Implementing Mechanism ID**	**Relevant SID Element and Score (if applicable)**
General policy gap: No **Sustainability Plan** or Elimination Guidance	Sustainability TWG and strategy that includes MOH, MOEF, NCHADS, NAA, MOI/NCDD and key stakeholders working towards agreed elimination roadmap. PEPFAR Cambodia Transition Blueprint aligned with the national sustainability strategy.	Sustainability TWG established and meeting regularly Cambodia National Sustainability Plan developed	Support RGC to develop transition plan through technical support to Sustainability Technical Working Group.	HVMS			Planning and Coordination (8.83)
Constrained **domestic resource mobilization** (DRM)	Robust investment case for increased RGC investment for HIV accepted by finance/health ministries. Greater efficiency gains in service delivery models reduces cost of response. Overall increase in domestic investment – meeting levels required of an LMIC status country (20% plus all HRH costs).	Building and sharing of investment case and evidence to advocate increased domestic HIV resources (semi-annual) Track implementation of new MOH guidelines incorporating HIV into HEF service package (quarterly)	(1-1) Build capacity of MoH and MoEF to identify and develop innovative health financing approaches and find costing efficiencies.	OHSS	$200,000	HFG	Domestic Resource Mobilization (3.3)
			(1-2) Provide technical support for the adoption and roll-out of the HIV service package within the Health Equity Fund.	OHSS	$250,000	SHP	
Strategic information: Limited reliance on accurate epidemiological data to establish targets and budgets, and forecast commodity needs.	Allocative efficiencies improved through RGC analysis of recent epidemiological, health, workforce and economic data to inform HIV investment.	National data follows individual patients (rather than aggregate data) across the cascade	(3-2) Support NCHADS, provinces and health facilities in scale up and implementation of boosted integrated active case management (BIACM) through improved active case finding of PLHIV to identify 90% of PLHIV and maintain retention in care by:1) Active Case	HBHC HTXS HTXS	$50,000 $50,000 $370,000	NCHADS NCHADS Flagship	Epi and Health Data (4.84)

Constrained ability to actively manage and track HIV+ cases – limited cohort tracking.	Improved interoperability of information systems streamlines planning reducing cost of response. Shift to elimination response results in accurate individual case data maintained in national Information System (BIACM). Health officials confidently using B-IACM dashboards to monitor cascade and taking informed planning decisions.		Management Coordination 2) Partner notification, testing and treatment 3) QA of HIV testing 4) Reducing loss to follow-up. Activities to include updating national guidelines, update/ write SOPs, training, and monitoring.				
			(4-1) Strengthen and scale up use of the national unique health identification number and leverage opportunities for HIV information systems to use the national health identification number to improve monitoring of HIV throughout the cascade and improve interoperability of health programs (e.g., HIV, TB, MCH, inpatient). Leveraging opportunity for HIV information systems and improve the interoperability with other health information systems. Work at the national level.	HVSI	$50,000 $250,000 $60,000 $45,000	CENAT HIPA MOH NCHADS	
			(4-3) Enhance national and subnational staff capacity to collect, report, analyze, and use quality data for program planning.	HVSI	$30,000 $20,000	Flagship NCHADS	Technical and Allocative Efficiencies (8.45)
Unknown impacts of changing **governance system** and increased decision making devolved to provincial level.	Functional dialogue between central and provincial level in 6 priority provinces results in smooth devolution of responsibility. USG advocacy and support to province contributes to understanding of need for continued epidemic control and provincial level resource allocation.	Integrated service delivery model developed and rolled out in 6 provinces.	USG supports effective intergovernmental dialogue (national/provincial levels) through regular meetings with national and provincial health staff.	HVMS	$105,000	Flagship	Planning and Coordination (8.83)
			(1-4) Provide training and coaching to provincial leadership, health facility managers and other members of the B-IACM Group of Champions as well as technical assistance within health facilities to strengthen integration and mainstreaming of HIV-related services into wider health or community platforms.	OHSS	$105,000	Flagship	

Commodity security and supply chain	Multi-partner funded LMIS project identified key constraints to improving supply chain, in coordination with GFATM and other partners. RGC and development partners united behind strategic plan for commodity security and supply chain improvements. Pharmacies filling longer term prescriptions for stable patients. No commodities expiring in central warehouses or at health facilities.	LMIS pilot completed, assessed and ready for country-wide scale up.	(1-3) Complete the MOH pilot for and scale-up of a strengthened and modernized logistics management information system (LMIS) and improve efficiency of the supply chain system.	OHSS	$140,000	PSM/Supply Chain	Commodity Security and Supply Chain (2.88)
TOTAL					$1,725,000		

6.2 CRITICAL SYSTEMS INVESTMENTS FOR ACHIEVING PRIORITY POLICIES

6.2.1. Priority Policy: Test and Start

A 'Test-and-Start' approach will mean a major shift in PLHIV care and treatment with a corresponding positive impact on patient outcomes and HIV transmission. 'Test-and Start' will require continued efforts to ensure high levels of HIV testing uptake, innovative and effective linkage to care strategies, treatment coverage, sustained adherence to ART, and high rates of retention in care. Once Test-and-Start is approved as policy, strengthening national, sub-national and health facility capacity to implement and monitor Test-and-Start to achieve 90-90-90 results will be a strong focus of the PEPFAR program. Activities will include mentoring and training of staff to reduce clinical and laboratory monitoring to that which is essential for Test and Start (CD4, viral load); and increasing HIV testing and referrals for Test and Start among priority populations, including certain KPs and TB patients. If successful, in three years' time Test and Start will have been rolled out country-wide with over 80% ART coverage of PLHIV.

Recently, NCHADS requested CHAI to cost out the implementation of Test and Start in Cambodia. That analysis focused on the roll-out and increased drugs procurement without estimating savings from infections and illness averted or a shift to a more efficient service delivery model. Working with NCHADS, CHAI, UNAIDS and other development partners, PEPFAR will support work to take the analysis further in order to build an investment case for Test and Start and more efficient service delivery models.

A further barrier to the success of Test and Start is an unreliable commodity security and supply chain. According to the NHA about 60% of the health budget goes towards health commodities and drugs. But this figure may be unduly high as a result of inefficiencies within the system, according to a 2012 World Bank study. PEPFAR will support the National HIV program in its efforts to offset, at least partially, Test-and Start's costs implications, including additional ARV drug costs, through procurement and supply chain system strengthening and the implementation of innovative service delivery models. The long-term goal of the system, if successful, is to ensure there are no commodities or test kits expiring in central warehouses, and facilities and pharmacies will be receiving their commodities and drugs in a smooth and timely manner.

The long-term sustainability of Cambodia's HIV response is threatened by an approach to staffing that has prioritized urgent need over long-term sustainability. PEPFAR is working with Global Fund and other development partners to support RGC to develop a sustainable staffing approach. PEPFAR will then assist national programs to develop SOPs, tools, guidelines and training materials to enhance their capacity to provide quality HIV services.

Table 6.2.1. Test and Start						
Key Systems Barrier	**Outcomes expected after 3 years of investment**	**Proposed COP Activities**	**Budget Code(s)**	**Activity Budget Amount**	**Associated Implementing Mechanism ID**	**Relevant SID Element and Score (if applicable)**
Human Resources for Health: Inconsistent management and deployment of staff many of whom are not on RGC payroll.	RGC has sustainable workforce management in place having considered innovative options such as task shifting, training CHWs. Core service providers adhering to newer practice standards, all having had appropriate training.	Work with RGC and Global Fund to develop sustainable staffing approach.	HVMS			Human Resources for Health (4.83)
		(2-8) Assist national programs (NCHADS, NMCHC, CENAT) to develop national SOPs, tools, guidelines, and training materials to improve HIV counseling and testing and monitoring systems to allow tracking individuals (high risk groups, pregnant women, TB patients and exposed infant, etc.) through the cascade, and identify individual risk characteristics and trace their sexual partners.	HVCT	$20,000	NCHADS	
Commodity security and supply chain: Interruption of supply for ARVs and commodities.	Stable patients receive 3 months' supply from pharmacies without needing to visit clinician. No commodities or ARVs expiring.	(1-3) Complete the MOH pilot for and scale-up of a strengthened and modernized logistics management information system (LMIS) and improve efficiency of the supply chain system.	OHSS	$140,000	PSM/Supply Chain	Commodity Security and Supply Chain (2.88)
Strategic information: Epidemiological and health data: Insufficient data systems result in inadequate monitoring and evaluation of the continuum of care.	Cohort monitoring provides robust data for supporting high-quality care and monitoring retention rates. Unique identifier system allows longitudinal monitoring of patients to reduce loss to follow up.	(3-2) Support NCHADS, provinces and health facilities in scale up and implementation of boosted integrated active case management (BIACM) through improved active case finding of PLHIV to identify 90% of PLHIV and maintain retention in care by:1) Active Case Management Coordination 2) Partner notification, testing and treatment 3) QA of HIV testing 4) Reducing loss to follow-up. Activities to include updating national guidelines, update/ write SOPs, training, and monitoring.	HBHC HTXS HTXS	$50,000 $50,000 $370,000	NCHADS NCHADS Flagship	Epidemiological and Health Data (4.84)
		(4-1) Strengthen and scale up use of the national unique health identification number and leverage	HVSI	$50,000 $250,000 $60,000	CENAT HIPA MOH	

		opportunities for HIV information systems to use the national health identification number to improve monitoring of HIV throughout the cascade and improve interoperability of health programs (e.g., HIV, TB , MCH, inpatient).		$45,000	NCHADS	
		(4-2) Help to develop national SOPs, tools, and guidelines to improve HIV surveillance and monitoring systems to allow tracking individuals through the cascade, identify individual risk characteristics, improve HIV case surveillance, and respond to changes in epidemiology.	HVSI	$100,00	NCHADS	
Domestic resource mobilization: In a dynamic political situation RGC may be reluctant to commit to higher investments in HIV.	Robust investment case for increased RGC investment for HIV accepted by finance/health ministries. Greater efficiency gains in service delivery models reduces cost of response. Overall increase in levels of domestic investment enables smooth introduction of Test & Start.	(1-1) Build capacity of MoH and MoEF to identify and develop innovative health financing approaches and find costing efficiencies.	OHSS	$200,000	HFG	Domestic Resource Mobilization (3.3)
Governance: Lack of policy guidance for implementing Test and Start.	Test and Start rolled out successfully across country resulting in over 80% ARV coverage of PLHIV.	(2-12) Increase HIV testing and ensure effective referrals for Test and Start among TB inpatients and outpatients.	HVTB	$100,000	Flagship	Policies and Governance (7.95)
		(3-1) Strengthen community activities to support the KP cascade for confirmed HIV+ KP, including enrollment in ART Test and Start, ART adherence and ensuring viral load suppression.	HBHC	$495,000	Flagship	

		(3-5) Strengthen national, sub-national and health facility capacity to implement and monitor "test and start" to achieve 90/90/90 results through facilitating initiation on treatment, maintain adherence to treatment, retention in treatment services, pilot more efficient service delivery models for stable patients, reduce clinical and lab monitoring to those essential for Test and Start needs (CD4, Viral load) in PEPFAR supported health facilities. Activities to include: clinical mentors, training of clinical mentors/trainers.	HTXS PDTX HTXS	$93,150 $21,850 $584,841	NCHADS NCHADS Flagship	
		(3-8) Strengthen capacity of NTP (CENAT) and NCHADS to lead, implement, and monitor TB/HIV activities, focusing on the 3Is ("Intensified case finding", HIV testing of tuberculosis patients, tuberculosis-symptom screening and diagnosis among HIV-positive patients and treatment if co-infected, "Isoniazid preventive therapy", and "TB Infection control") through: 1)Training on TB/HIV counseling and diagnostic workshop and treatment of TB/HIV, 2)Monitoring activities for F/ u HIV positive among TB patients to put in care and treatment, 3)update diagnostic and treatment protocol, 4)implement TB infection control package (impact evaluation), 5)provide onsite technical support at PEPFAR-supported health facilities to strengthen HIV testing among TB patients and TB testing and care among HIV patients.	HVTB	$100,000	CENAT	
TOTAL				$2,629,841		

6.2.2. Priority Policy: New and Efficient Service Delivery Models

Introducing new and efficient service delivery models will be critical for managing the costs of Cambodia's HIV response and ensuring its long-term sustainability. PEPFAR will support the national HIV program to determine how national policy can be brought in line with the most recent WHO guidelines, including defining a 'stable patient' in the Cambodian context and identifying workable service delivery models, such as the differentiated care approach (a 3-6 month-based patient visit schedule for stable patients on ART), task shifting, integration of HIV and related services, and reducing the cost of ARVs.

It is expected that the cost of the first line will significantly decrease as soon as EFV 400 mg (either as single tablet or part of the FDC) is introduced. For instance, based on a costing exercise, conducted by CHAI, of the implementation of the new WHO ART initiation recommendations, there is a potential of a move from the current $257 (per person per year (pppy) TDF/3TC/EFV (600mg)) to the new more optimal $200 pppy TDF/3TC/EFV (400mg) in 2017. Additional potential avenues for optimizing ART drug regimens may include in the next few years the generic FDC versions of TDF/3TC/DTG (Dolutegravir, a cheaper integrase inhibitor) and DRV/r (darunavir/ritonavir) as alternatives to the currently used EFV 600mg-based first line FDC and the LPV/r-based second line regimen, respectively.

Based on the same CHAI costing exercise, it is estimated that the total five-year costs will decrease by ~$5.6M (as compared to the costing of the current baseline scenario), should the 'test and treat' approach be adopted, CD4 monitoring be reduced, and regimens, HR and ART clients visits be optimized. It is worth mentioning that the costing exercise conducted by CHAI did not account for savings in other health sectors costs (e.g., TB co-infection), from improvement in quality of life (e.g., OIs), and for further reductions in ARV cost prices over the years. The total cost of adding new patients under the 'test and treat' case in 2017 ($317,000) will be offset by savings in HR and laboratory-related costs alone ($852,511).

COP16 will emphasize more targeted HIV testing services to identify the undiagnosed individuals, including using innovative strategies such as social media to reach out to MSM and TG with key HTC messaging. PEFPAR will provide support at the national, sub-national and health facility levels to pilot the agreed upon service delivery models for stable patients through clinical mentoring, training of clinical mentors and trainers, and integrated lab transportation (VL, CD4, and infant PCR).

Complementing this effort will be the USG investments in strengthening the LMIS (logistics management information system) – one of the weakest domains identified in the SID – Commodity security and supply chain (ranked second lowest in the SID with a score of 2.88). These efforts are expected to result in a more efficient supply chain that allows patients to receive longer prescriptions of ARVs. When completed, ARV supplies will move in and out of warehouses on a regular basis according to a robust, modern inventory system.

All of these efforts will be underpinned by the strengthened data systems outlined in the section on strategic information above (section 6.0).

Table 6.2.2. New and Efficient Service Delivery Models						
Key Systems Barrier	**Outcomes expected after 3 years of investment**	**Proposed COP Activities**	**Budget Code(s)**	**Activity Budget Amount**	**Associated Implementing Mechanism ID**	**Relevant SID Element and Score (if applicable)**
Commodity procurement and supply not aligned with policy requirements of providing longer prescriptions of ARVs for stable patients.	ARV supplies moving in and out of warehouse on regular basis according to a sensible inventory system.	(1-3) Complete the MOH pilot for and scale-up of a strengthened and modernized logistics management information system (LMIS) and improve efficiency of the supply chain system.	OHSS	$140,000	PSM/Supply Chain	Commodity Security and Supply Chain (2.88)
HRH: Staff not adequately trained in clinic management and forecasting.	Health facilities able to manage 3-monthly patient visits and provide 3-months of ARVs. Central and site level staff working together to forecast and meet patient need.	(1-3) Complete the MOH pilot for and scale-up of a strengthened and modernized logistics management information system (LMIS) and improve efficiency of the supply chain system.	OHSS	$140,000	PSM/Supply Chain	Human Resources for Health (4.83)
Strategic information: Inadequate data systems for managing patient data.	Stable patients clearly identified according to government health policy. Unique identifier information system maintained with accurate data supporting smooth delivery of care and treatment.	(3-2) Support NCHADS, Provinces and health facilities in scale up and implementation of B-IACM.	HBHC HTXS HTXS	$50,000 $50,000 $370,000	NCHADS NCHADS Flagship	Epidemiological and Health Data (4.84)
		(4-1) Develop a unique identification number and improve interoperability with other health programs (TB, blood bank and MCH) and ultimately with MoH health management information system (In- and outpatient).	HVSI HVSI HVSI HVSI	$50,000 $250,000 $60,000 $45,000	CENAT HIPA MOH NCHADS	
Policy: Current policy lacks conformity with most recent WHO guidelines.	Updated policy based on WHO guidelines for efficient service delivery models. Implementation plan for more efficient service delivery model based on better understanding of the barriers and enablers.	(3-5) Strengthen national, sub-national and health facility capacity to pilot more efficient service delivery models for stable patients in PEPFAR supported health facilities through clinical mentoring, trainings of clinical mentors/ trainers, integrated lab transportation (VL, CD4, and infant PCR).	HTXS PDTX HTXS	$110,000 $25,000 $584,841	NCHADS NCHADS Flagship	Policies and Governance (7.95)
TOTAL				$1,874,841		

6.3 Proposed System Investments Outside of Programmatic Gaps and Priority Policies

Table 6.3. Other Proposed Systems Investments

Systems Category* (only complete for categories relevant to country context)	Activity	For each activity, indicate which of the following the activity addresses: 1) First 90; 2) Second 90; 3) Third 90; or 4) Sustained Epi Control. (Teams may select more than one.)	Outcomes expected after 3 years of investment	Budget Amount	Budget Code(s)	Associated Implementing Mechanism ID	Relevant SID Element and Score (if applicable)
Finance							
N/A							
Governance							
Policy development	(3-4) Improve national policies to identify, follow and retain HIV-exposed infants, ensure transition of adolescents to adult services	90-90-90	National policies in place for managing HIV-exposed infants across cascade and for transitioning adolescents securely into adult services	$32,000 $48,000 $150,000 $50,000	MTCT PDTX PDTX PDCS	NCHADS NCHADS Flagship Flagship	
HRH - Systems/Institutional Investments							
Training and curriculum	(2-11) Develop training curriculum and IES for injection safety	Sustained epi control	Safer injection practices protocol rolled out to provincial level	$39,465	HMIN	MOH	
Inst & Org Development							
N/A							
Laboratory							
N/A							
Strategic Information							

Systems Category* (only complete for categories relevant to country context)	Activity	For each activity, indicate which of the following the activity addresses: 1) First 90; 2) Second 90; 3) Third 90; or 4) Sustained Epi Control. (Teams may select more than one.)	Outcomes expected after 3 years of investment	Budget Amount	Budget Code(s)	Associated Implementing Mechanism ID	Relevant SID Element and Score (if applicable)
N/A							
Systems Development							
N/A							
TOTAL				$319,465			

*Reference Appendix C for a list of activity types that fit in each category.

7.0 STAFFING PLAN

PEPFAR in Cambodia has always been a relatively small program working across multiple program areas. Over the past few years, the team has reviewed and adjusted positions that were either difficult to fill or more narrowly focused. The result is a number of critical shifts that have set the team up well to address the program shifts and the core/near-core/non-core decisions. Some changes include:

- Adjusting the Strategic Information Advisor position scope to spend approximately 50% effort on capacity building with the national HIV program and changing the hiring mechanism to a CDC direct-hire position. This position was filled in July 2015 after a three year vacancy. The skills in this position are helping meet the focus within PEPFAR on data analysis and use, ensure support to the national program in measuring progress towards eliminating new HIV infections, and building sustainability.
- Modifying the previous HIV Prevention Advisor position to support PEPFAR in context of broader HSS. In order to ensure the overarching goal of sustained elimination of new HIV infections, PEPFAR must be engaged in working towards long-term sustainability. This includes working on innovative ideas for sustaining the HIV KPs prevention work that has been previously supported almost exclusively by donor funding as well as reaching out to work more closely with the Ministry of Economy and Finance on domestic resources for HIV.
- Consolidating the Global Fund Liaison position and the PEPFAR Coordinator position into one, beginning in July 2017.

With COP16, the total amount of funding toward PEPFAR's cost of doing business has not changed, though the percentage has increased due to the reduction in our overall budget ceiling. As programs transition to local partners, including government and NGOs, the direct funding to these partners has declined while the TA needs provided by PEPFAR staff has remained steady or, in some cases, increased to help with the program transition. As a result, the relative proportion of funding that goes to PEPFAR staff has, and will likely continue, to increase as the program continues to transition and the overall funding envelope declines. The TA provided by PEPFAR staff will likely decline at a more gradual rate than the funding provided to partners.

A large portion of staff time is dedicated to providing TA to the national program in order to encourage innovation and adoption of best practices. PEPFAR staff actively participate on national TWGs, donor coordination groups and the Country Coordinating Mechanism. Staff also provide direct assistance with the development and revision of national HIV guidelines and SOPs, the provision of technical guidance and direction through active involvement in program decisions, including suggesting and encouraging approaches to accelerate progress. All TA is delivered with the intention of increasing quality and reach of prevention efforts, improving service delivery quality, ensuring data analysis and use, and promoting good governance over the HIV program, all of which are essential to achieving and sustaining an AIDS-free generation. For CDC, all funding to government partners is coupled with intensive technical support by CDC staff. Significant staff time is spent with the national program and in the field, co-facilitating training workshops, undertaking joint monitoring and supervision visits with national staff to sub-national sites, providing hands-on coaching and mentoring of laboratory staff, and building

management capacity and oversight through participation on government procurement and human resource selection committees for supplies and personnel funded by PEPFAR resources.

The PEPFAR team has requested support from S/GAC for a long-term staffing review, during mid-2016, to understand the short and long-term staffing needs of our program in line with the transition blueprint.

APPENDIX A

Table A.1 Program Core, Near-core, and Non-core Activities for COP16

Level of Implementation	Core Activities	Near-core Activities	Non-core Activities
Site level	• (2-4) Demonstrate innovative and sustainable approaches to improve targeted reach, uptake of community-based testing, and confirmatory testing and tracking of HIV+ KPs with a focus on the most at risk key populations, in particular MSM, transgender women, and female sex workers with 7+ clients per week and those who work freelance. • (2-12) Increase HIV testing and ensure effective referrals for Test and Start among TB inpatients and outpatients. • (3-6) Improve the quality of facility-based HIV care and treatment services through clinical mentoring, strengthening of continuous quality improvement systems, and supervision.	• (2-1) Evaluate the effectiveness of client profiling, partner tracing and index testing methods of identifying new HIV+ cases in health facilities and enrolling PLHIV in care and treatment services. • (2-2) Evaluate innovative ways to improve the effectiveness and efficiency of identifying new HIV+ Key Populations and improving HIV testing yield, such as the Risk Screening/Assessment Tool and the snowballing approach. • (2-3) Evaluate the effectiveness and cost-effectiveness of the new community-based prevention, care and support approaches to identify, enroll and retain key populations (IRIR) through the cascade. • (2-5) Demonstrate improved linkages and tracking of HIV reactive cohorts from community testing and VCTC to HIV Voluntary Testing and Counseling confirmatory testing to reduce loss to follow-up, ensure enrollment in Test and Start and retention throughout the cascade. • (2-6) Refine and support the implementation of more efficient prevention work for the most at risk key populations (MSM, TG, and high-risk EW) and develop strategies and partnerships for long-term sustainability of prevention work. • (2-7) Evaluate the outreach program for entertainment workers, including freelance sex workers. • (3-1) Strengthen community activities to support the KP cascade for confirmed HIV+	N/A – no non-core activities are being funded in COP16

		KP, including enrolment in ART Test and Start, ART adherence and ensuring viral load suppression. • (3-11) Evaluate the Boosted Integrated Active Case Management (B-IACM) approach at PEPFAR -supported prevention and ART sites for improving the 90-90-90 cascade and for KP-friendliness. • (4-4) Conduct and strengthen partner capacity to do risk assessment, case profiling, size estimations and mapping of priority populations to improve case finding.	
Sub-national level	• (1-4) Provide training and coaching to provincial leadership, health facility managers and other members of the B-IACM Group of Champions as well as technical assistance within health facilities to strengthen integration and mainstreaming of HIV-related services into wider health or community platforms. • (3-2) Support NCHADS, provinces and health facilities in scale up and implementation of boosted integrated active case management (BIACM) through improved active case finding of PLHIV to identify 90% of PLHIV and maintain retention in care by:1) Active Case Management Coordination 2) Partner notification, testing and treatment 3) QA of HIV testing 4) Reducing loss to follow-up. Activities to include updating national guidelines, update/ write SOPs, training, and monitoring. • (3-3) Increase viral load testing coverage, improve viral suppression of PLHIV on ART and monitor for ARV drug-resistance to achieve 90-90-90 results through: 1) Improvements to regular/ routine VL assessment, transport, and result reporting 2) Increased capacity to perform VL testing (3rd machine in Siem Reap), 3) viral resistance testing among un-suppressed samples 4) integration of CQI and EWI. Activities to	• (2-11) Expand medical injection safety programs to a few more operational districts in PEPFAR supported provinces, where they have high prevalence of medical injections.	N/A – no non-core activities are being funded in COP16

	include: integrated transport, lab quality assurance, monitoring and supervision, contract and transport for sending samples out for VL resistance testing, purchase essential lab supplies and materials not available through Global Fund/ CMS. • (3-10) Strengthen sample referral, confirmation of diagnostic tests, and evaluation of new methodologies. Monitor performance EQA programs (PT). Generate, distribute, and evaluate results of PT panels. Improve quality of laboratory practices by implementing international standards of quality and applying for ISO15189 accreditation. Support calibration and maintenance of equipment. • (4-3) Enhance national and subnational staff capacity to collect, report, analyze, and use quality data for program planning.		
National level	• (1-1) Build capacity of MoH and MoEF to identify and develop innovative health financing approaches and find costing efficiencies. • (1-3) Complete the MOH pilot for and scale-up of a strengthened and modernized logistics management information system (LMIS) and improve efficiency of the supply chain system. • (2-8) Assist national programs (NCHADS, NMCHC, CENAT) to develop national SOPs, tools, guidelines, and training materials to improve HIV counseling and testing and monitoring systems to allow tracking individuals (high-risk groups, pregnant women, TB patients and exposed infant, etc.) through the cascade, and identify individual risk characteristics and trace their sexual partners. • (2-9) Support NCHADS to have a functional quality assurance (QA) program for point of care testing (facility and community) and viral load testing, through creating and providing internal and external proficiency	• (1-2) Provide technical support for the adoption and roll-out of the HIV service package within the Health Equity Fund. • (2-10) Assist MoH (Department of Hospital Services) to leverage other resources to expand the pilot medical injection safety program – roll out piloting model, use revised training curriculum, monitoring tools, and IEC materials. • Address legal barriers in regards to stigma and discrimination and condom availability. *(Activity is funded through Key Population Challenge Fund moneys rather than COP16 funds.)*	N/A – no non-core activities are being funded in COP16

	testing (PT panels), providing on the job coaching and training workshop. • (3-4) Improve national policies and systems to identify, follow and retain HIV-exposed infants and HIV-infected children in HIV care and treatment, ensure transition of adolescents to adult services. • (3-5) Strengthen national, sub-national and health facility capacity to implement and monitor Test and Start to achieve 90-90-90 results through facilitating Test and Start, maintain adherence to treatment, retention in treatment services, pilot more efficient service delivery models for stable patients, reduce clinical and lab monitoring to those essential for Test and Start needs (CD4, Viral load) in PEPFAR supported health facilities. Activities to include: clinical mentors, training of clinical mentors/trainers. • (3-7) Strengthen capacity of MOH (NMCHC, NCHADS, health facilities) to coordinate, lead, implement, and monitor PMTCT activities for AIDS free generation and virtual elimination of HIV through: 1) Financial and technical assistance for updating guidelines, SOPs, training documents; 2) Direct assistance in TOT and trainings; 3) Financial and technical assistance for monitoring, reporting (f/u register), analysis; 4) FP/ HIV integration to reduce un-intended pregnancies among PLHIV; 5) Training and monitoring activities for F/ u HIV positive mothers and HIV exposed infants; 6) onsite technical support to improve quality of PMTCT services. • (3-8) Strengthen capacity of NTP (CENAT) and NCHADS to lead, implement, and monitor TB/HIV activities, focusing on the 3Is ("Intensified case finding", HIV testing of tuberculosis patients, tuberculosis-symptom screening and diagnosis among HIV-positive patients and treatment if co-infected, "Isoniazid preventive therapy", and "TB Infection control") through: 1)Training on		

	TB/HIV counseling and diagnostic workshop and treatment of TB/HIV, 2)Monitoring activities for F/ u HIV positive among TB patients to put in care and treatment, 3)update diagnostic and treatment protocol, 4)implement TB infection control package (impact evaluation), 5)provide onsite technical support at PEPFAR-supported health facilities to strengthen HIV testing among TB patients and TB testing and care among HIV patients. • (3-9) Strengthen capacity of national program to improve quality of care and treatment services through: 1) CQI; 2) Clinical mentoring targeting sites with low achievement scores and monitoring progress, 3) CTX prophylaxis among eligible PLHIV in care, PHDP activities, Intensified Case Finding for Tb/ Hep B and treatment if co-infected. Activities to include standardized assessments, data entry and analysis, monitoring, meetings, training and EQAS. • (4-1) Strengthen and scale up use of the national unique health identification number and leverage opportunities for HIV information systems to use the national health identification number to improve monitoring of HIV throughout the cascade and improve interoperability of health programs (e.g., HIV, TB, MCH, inpatient). • (4-2) Help to develop national SOPs, tools, and guidelines to improve HIV surveillance and monitoring systems to allow tracking individuals through the cascade, identify individual risk characteristics, improve HIV case surveillance, and respond to changes in epidemiology.		

Table A.2 Program Area Specific Core, Near-core, and Non-core Activities for COP16			
	Core Activities	**Near-core Activities**	**Non-core Activities**
HTS	• (2-8) Assist national programs (NCHADS,	• (2-1) Evaluate the effectiveness of client	N/A – no non-core activities are being funded in

	NMCHC, CENAT) to develop national SOPs, tools, guidelines, and training materials to improve HIV counseling and testing and monitoring systems to allow tracking individuals (high-risk groups, pregnant women, TB patients and exposed infant, etc.) through the cascade, and identify individual risk characteristics and trace their sexual partners. • (2-9) Support NCHADS to have a functional quality assurance (QA) program for point of care testing (facility and community) and viral load testing, through creating and providing internal and external proficiency testing (PT panels), providing on the job coaching and training workshop.	profiling, partner tracing and index testing methods of identifying new HIV+ cases in health facilities and enrolling PLHIV in care and treatment services. • (2-5) Demonstrate improved linkages and tracking of HIV reactive cohorts from community testing and VCTC to HIV Voluntary Testing and Counseling confirmatory testing to reduce loss to follow-up, ensure enrollment in Test and Start and retention throughout the cascade.	COP16
PMTCT	• (3-4) Improve national policies and systems to identify, follow and retain HIV-exposed infants and HIV-infected children in HIV care and treatment, ensure transition of adolescents to adult services. • (3-7) Strengthen capacity of MOH (NMCHC, NCHADS, health facilities) to coordinate, lead, implement, and monitor PMTCT activities for AIDS free generation and virtual elimination of HIV through: 1) Financial and technical assistance for updating guidelines, SOPs, training documents; 2) Direct assistance in TOT and trainings; 3) Financial and technical assistance for monitoring, reporting (f/u register), analysis; 4) FP/ HIV integration to reduce un-intended pregnancies among PLHIV; 5) Training and monitoring activities for F/ u HIV positive mothers and HIV exposed infants; 6) onsite technical support to improve quality of PMTCT services.		N/A – no non-core activities are being funded in COP16
Priority Populations Prevention	• (2-4) Demonstrate innovative and sustainable approaches to improve targeted reach, uptake of community-based testing, and confirmatory testing and tracking of HIV+ KPs with a focus on the most at risk key	• (2-2) Evaluate innovative ways to improve the effectiveness and efficiency of identifying new HIV+ Key Populations and improving HIV testing yield, such as the Risk Screening/Assessment Tool and the	N/A – no non-core activities are being funded in COP16

	populations, in particular MSM, transgender women, and female sex workers with 7+ clients per week and those who work freelance.	snowballing approach. • (2-6) Refine and support the implementation of more efficient prevention work for the most at risk key populations (MSM, TG, and high-risk EW) and develop strategies and partnerships for long-term sustainability of prevention work. • (2-7) Evaluate the outreach program for entertainment workers, including freelance sex workers. • Address legal barriers in regards to stigma and discrimination and condom availability. *(Activity is funded through Key Population Challenge Fund moneys rather than COP16 funds.)*	
Injection Safety		• (2-10) Assist MoH (Department of Hospital Services) to leverage other resources to expand the pilot medical injection safety program – roll out piloting model, use revised training curriculum, monitoring tools, and IEC materials. • (2-11) Expand medical injection safety programs to a few more operational districts in PEPFAR supported provinces, where they have high prevalence of medical injections.	N/A – no non-core activities are being funded in COP16
Blood Safety	•	•	N/A – no non-core activities are being funded in COP16
Adult Care and Treatment	• (3-2) Support NCHADS, provinces and health facilities in scale up and implementation of boosted integrated active case management (BIACM) through improved active case finding of PLHIV to identify 90% of PLHIV and maintain retention in care by:1) Active Case Management Coordination 2) Partner notification, testing and treatment 3) QA of HIV testing 4) Reducing loss to follow-up. Activities to include updating national guidelines, update/ write SOPs, training, and monitoring. • (3-3) Increase viral load testing coverage,	• (2-3) Evaluate the effectiveness and cost-effectiveness of the new community-based prevention, care and support approaches to identify, enroll and retain key populations (IRIR) through the cascade. • (3-1) Strengthen community activities to support the KP cascade for confirmed HIV+ KP, including enrolment in ART Test and Start, ART adherence and ensuring viral load suppression. • (3-11) Evaluate the Boosted Integrated Active Case Management (B-IACM) approach at PEPFAR -supported prevention and ART sites for improving the 90-90-90 cascade and	N/A – no non-core activities are being funded in COP16

	improve viral suppression of PLHIV on ART and monitor for ARV drug-resistance to achieve 90-90-90 results through: 1) Improvements to regular/ routine VL assessment, transport, and result reporting 2) Increased capacity to perform VL testing (3rd machine in Siem Reap), 3) viral resistance testing among un-suppressed samples 4) integration of CQI and EWI. Activities to include: integrated transport, lab quality assurance, monitoring and supervision, contract and transport for sending samples out for VL resistance testing, purchase essential lab supplies and materials not available through Global Fund/ CMS. • (3-5) Strengthen national, sub-national and health facility capacity to implement and monitor Test and Start to achieve 90-90-90 results through facilitating Test and Start, maintain adherence to treatment, retention in treatment services, pilot more efficient service delivery models for stable patients, reduce clinical and lab monitoring to those essential for Test and Start needs (CD4, Viral load) in PEPFAR supported health facilities. Activities to include: clinical mentors, training of clinical mentors/trainers. • (3-6) Improve the quality of facility-based HIV care and treatment services through clinical mentoring, strengthening of continuous quality improvement systems, and supervision. • (3-9) Strengthen capacity of national program to improve quality of care and treatment services through: 1) CQI; 2) Clinical mentoring targeting sites with low achievement scores and monitoring progress, 3) CTX prophylaxis among eligible PLHIV in care, PHDP activities, Intensified Case Finding for Tb/ Hep B and treatment if co-infected. Activities to include standardized assessments, data entry and analysis, monitoring, meetings, training and EQAS.	for KP-friendliness.	

Pediatric Care and Treatment	• (3-5) Strengthen national, sub-national and health facility capacity to implement and monitor Test and Start to achieve 90-90-90 results through facilitating Test and Start, maintain adherence to treatment, retention in treatment services, pilot more efficient service delivery models for stable patients, reduce clinical and lab monitoring to those essential for Test and Start needs (CD4, Viral load) in PEPFAR supported health facilities. Activities to include: clinical mentors, training of clinical mentors/trainers. • (3-9) Strengthen capacity of national program to improve quality of care and treatment services through: 1) CQI; 2) Clinical mentoring targeting sites with low achievement scores and monitoring progress, 3) CTX prophylaxis among eligible PLHIV in care, PHDP activities, Intensified Case Finding for Tb/ Hep B and treatment if co-infected. Activities to include standardized assessments, data entry and analysis, monitoring, meetings, training and EQAS. • (3-4) Improve national policies and systems to identify, follow and retain HIV-exposed infants and HIV-infected children in HIV care and treatment, ensure transition of adolescents to adult services.		N/A – no non-core activities are being funded in COP16
TB/HIV	• (2-12) Increase HIV testing and ensure effective referrals for Test and Start among TB inpatients and outpatients. • (3-8) Strengthen capacity of NTP (CENAT) and NCHADS to lead, implement, and monitor TB/HIV activities, focusing on the 3Is ("Intensified case finding", HIV testing of tuberculosis patients, tuberculosis-symptom screening and diagnosis among HIV-positive patients and treatment if co-infected, "Isoniazid preventive therapy", and "TB Infection control") through: 1)Training on TB/HIV counseling and diagnostic workshop and treatment of TB/HIV, 2)Monitoring activities for F/U HIV positive among TB		N/A – no non-core activities are being funded in COP16

	patients to put in care and treatment, 3)update diagnostic and treatment protocol, 4)implement TB infection control package (impact evaluation), 5)provide onsite technical support at PEPFAR-supported health facilities to strengthen HIV testing among TB patients and TB testing and care among HIV patients.		
LAB	• (3-3) Increase viral load testing coverage, improve viral suppression of PLHIV on ART and monitor for ARV drug-resistance to achieve 90-90-90 results through: 1) Improvements to regular/ routine VL assessment, transport, and result reporting 2) Increased capacity to perform VL testing (3rd machine in Siem Reap), 3) viral resistance testing among un-suppressed samples 4) integration of CQI and EWI. Activities to include: integrated transport, lab quality assurance, monitoring and supervision, contract and transport for sending samples out for VL resistance testing, purchase essential lab supplies and materials not available through Global Fund/ CMS. • (3-10) Strengthen sample referral, confirmation of diagnostic tests, and evaluation of new methodologies. Monitor performance EQA programs (PT). Generate, distribute, and evaluate results of PT panels. Improve quality of laboratory practices by implementing international standards of quality and applying for ISO15189 accreditation. Support calibration and maintenance of equipment.		N/A – no non-core activities are being funded in COP16
Program/system support	• (1-1) Build capacity of MoH and MoEF to identify and develop innovative health financing approaches and find costing efficiencies. • (1-3) Complete the MOH pilot for and scale-up of a strengthened and modernized logistics management information system (LMIS) and improve efficiency of the supply	• (1-2) Provide technical support for the adoption and roll-out of the HIV service package within the Health Equity Fund.	N/A – no non-core activities are being funded in COP16

	chain system. • (1-4) Provide training and coaching to provincial leadership, health facility managers and other members of the B-IACM Group of Champions as well as technical assistance within health facilities to strengthen integration and mainstreaming of HIV-related services into wider health or community platforms.		
Strategic Information	• (4-1) Strengthen and scale up use of the national unique health identification number and leverage opportunities for HIV information systems to use the national health identification number to improve monitoring of HIV throughout the cascade and improve interoperability of health programs (e.g., HIV, TB, MCH, inpatient). • (4-2) Help to develop national SOPs, tools, and guidelines to improve HIV surveillance and monitoring systems to allow tracking individuals through the cascade, identify individual risk characteristics, improve HIV case surveillance, and respond to changes in epidemiology. • (4-3) Enhance national and subnational staff capacity to collect, report, analyze, and use quality data for program planning.	• (4-4) Conduct and strengthen partner capacity to do risk assessment, case profiling, size estimations and mapping of priority populations to improve case finding.	N/A – no non-core activities are being funded in COP16

Table A.3 Transition Plans for Non-core Activities

Transitioning Activities	Type of Transition	Funding in COP16	Estimated Funding in COP 17	# of IMs	Transition End date	Notes
Blood Safety • Training and the development of policies, guidelines and tools for blood donor education, pre-donation behavioral screening and selection. Improving recruitment and retention of voluntary blood donors and donor care. Improving donor counselling and care, including staff trained in TTI. • Strengthening serology testing strategy through an improved and validated viral testing algorithm to increases the chance of identifying a person in acute	AuRC TA will take over this activity under the Global Fund NFM	$0	$0	1	9/2016	

phase of HIV infection (most infectious phase due to high viral load) helping ensure that HIV is detected earlier and more accurately, and not transmitted through blood transfusion. Referral and tracing of blood donors with high-risk status and/or HIV-reactive results to HTC programs for confirmatory testing and, where needed, referral to care and treatment services. • Priority investments to ensure USG investments (DOD and Global Fund) are successful: o Successful move to, and validation of, new NBTC facilities o assistance with strategies for staff management, recruitment, retention, including an adequate number of active MOH staff at NBTC for the new premises o Training for purchased equipment in the provincial sites – including use, maintenance and cleaning • Forecasting and advocating for sufficient and sustainable supply of testing reagents, longer term strategy is through cost recovery and/or MOH support						
Totals		$0	$0			

APPENDIX B

B.1 PLANNED SPENDING IN 2017

Table B.1.1 Total Funding Level		
Applied Pipeline	New Funding	Total Spend
$US 0	**$US 12,000,000**	**$US12,000,000**

Table B.1.2 Resource Allocation by PEPFAR Budget Code		
PEPFAR Budget Code	**Budget Code Description**	**Amount Allocated**
MTCT	Mother to Child Transmission	$217,069
HVAB	Abstinence/Be Faithful Prevention	$0
HVOP	Other Sexual Prevention	$772,995
IDUP	Injecting and Non-Injecting Drug Use	$52,142
HMBL	Blood Safety	$18,761
HMIN	Injection Safety	$122,130
CIRC	Male Circumcision	$0
HVCT	Counseling and Testing	$2,093,986
HBHC	Adult Care and Support	$796,853
PDCS	Pediatric Care and Support	$78,657
HKID	Orphans and Vulnerable Children	$0
HTXS	Adult Treatment	$2,191,144
HTXD	ARV Drugs	$0
PDTX	Pediatric Treatment	$330,441
HVTB	TB/HIV Care	$347,529
HLAB	Lab	$427,387
HVSI	Strategic Information	$1,392,841
OHSS	Health Systems Strengthening	$882,534
HVMS	Management and Operations	$2,275,558
TOTAL		**$12,000,000**

B.2 RESOURCE PROJECTIONS

A number of data sources were used in calculating resource needs for COP16. The first step was to come to agreement on activities that would be included in core and near-core. The team agreed that non-core activities would not be funded in COP16. The second step was to come up with a template for budgeting for each core and near-core activity. As PEPFAR is a targeted assistance country without large scale service delivery activities, the PBAC tool was not useful in budget setting. The lump sum budgeting tab from the PBAC was used for all COP16 activities.

Because the target-based budgeting was not possible, the team reviewed a number of data sources to set budget figures. The COP15 budget levels for continuing core/near-core activities were one input. During the COP15 budget setting process, the team did significant work using FY14 expenditure analysis data to set budget levels. The COP15 costing looked at EA categories including: 1) training; 2) construction/renovation; 3) equipment/furniture; 4) travel/transportation; 5) other investment; 6) personnel; 7) other supplies; and 8) other recurrent cost. This information was used as a basis for the COP16 activities, along with input from the FY15 expenditure analysis data, to help guide reasonable allocations. The expenditure analysis data were not sufficiently granular to provide all needed information, as they were not specific to site level cost for partners. Therefore, activity managers used the information and made adjustments to best articulate the inputs for activity. The interagency team then reviewed the proposed activity budgets, along with the overall implementing mechanism budgets and allocation to program areas and budget codes.

The activity budget setting was an iterative process with activity managers putting together reasonable figures that were reviewed and agreed to by the interagency team. At agency discretion, the activity budgets were then shared with the implementing partner for review, discussion and agreement.

Following the initial allocation based on activities, the current monthly burn-rate and pipeline was reviewed to ensure implementing mechanisms would not be building up pipeline and that new allocations were sufficient to cover anticipated monthly expenditures for the implementation period.

There is no pipeline to be applied to COP16. There was an amount of $1,070,751 identified from the Q4 FY2015 pipeline report. However, the FY15 outlay data used was not correct. USAID total outlays for Q4 FY15 was off by $1M (USAID has made OGAC M&B aware of this error). Therefore, with the decrease of $1M in outlay, Cambodia does not need to apply any pipeline. This error was corrected in Q1 FY16 pipeline report; but subsequently the Q1 outlay rate will appear higher.

APPENDIX C

C.1 ACRONYMS LIST

AIDS	Acquired Immune Deficiency Syndrome
AIHA	American International Health Alliance
ART	Anti-retroviral therapy
B-IACM	Boosted, Integrated Active Case Management
CENAT	National Center for Tuberculosis and Leprosy Control
CCC	Country Coordinating Committee
CD4	Cluster of Differentiation 4 (a type of white blood cell)
CDC	Centers for Disease Control and Prevention (USG)
CHAI	Clinton Health Access Initiative
CoAg	Cooperative Agreement
COP	Country Operational Plan
CoPCT	Continuum of Prevention to Care to Treatment
CQI	Continuous Quality Improvement
DFAT	Australian Department of Foreign Affairs and Trade
DNA	Deoxyribonucleic acid
FP	Family planning
FY	Fiscal year
G2G	Government to government (funding)
GAP	Global AIDS Program (funding account through HHS/CDC)
HEF	Health Equity Funds
HSS	Health systems strengthening
HIV	Human immunodeficiency virus
HIPA	Health Information, Policy and Advocacy
IBBS	Integrated Biological and Behavioral Survey
IPT	isoniazid preventive therapy
IT	Information technology
M&E	Monitoring and evaluation
M&O	Management and Operations
MOH	Ministry of Health (Cambodian)
MTCT	Mother-to-Child Transmission
NASA	National AIDS Spending Assessment
NCHADS	National Center for HIV/AIDS, Dermatology, and STDs
NGO	Non-governmental organization
NHA	National Health Accounts
NIPH	National Institute of Public Health
NMCHC	National Center for Maternal and Child Health
OI	Opportunistic Infection
PCR	polymerase chain reaction
PEPFAR	President's Emergency Plan for AIDS Relief
PMTCT	Prevention of mother-to-child transmission of HIV
POC	Point of Care
RGC	Royal Government of Cambodia
S/GAC	Office of the Global AIDS Coordinator (Department of State)
SHP	Social Health Protection
SI	Strategic Information
SOP	standard operating procedures
STD	Sexually transmitted diseases
STI	Sexually transmitted infections
TA	Technical assistance
TB	Tuberculosis
TBD	To be determined
UIC	unique identifier code
UIS	Unique Identifier System
UN	United Nations
UNAIDS	Joint United Nations Program on HIV/AIDS
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
USG	United States Government
VL	Viral Load
WHO	World Health Organization