Botswana

Country Operational Plan 2017

Strategic Direction Summary

March 2017

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1.0 Goal Statement

Botswana is on the path to becoming one of the first countries in Africa to reach the UNAIDS 90-90-90 targets and epidemic control. But as in any race, the final miles can be the toughest. The launch of "Treat All" in June 2016 was a positive shift that put Botswana among the pack of leaders. Now, the challenge that remains is finding the hard-to-find cases, and quickly linking them to life-saving treatment – a task that has been compared to finding the needle in the haystack. Despite the challenges, in COP17 with PEPFAR support, Botswana has found its second wind and is prepared to lead the world to the finish line.

Botswana's resolve to achieve epidemic control is further underlined by the renewed commitment at the highest level to transform the health system. As highlighted by President Ian Khama during his 2015 and 2016 State of the Nation addresses, this transformation incorporates a revitalization of primary health care with a focus on the community-based delivery of integrated quality care. PEPFAR Botswana (PEPFAR/B) shares this vision and is working closely with the Ministry of Health and Wellness (MOHW) to achieve epidemic control within the broader goal for revitalized primary health care.

PEPFAR/B has over the last two years successfully pivoted its programs to concentrate on the right places with the highest HIV burden and greatest need for support. In FY18, the team will focus on the under 30 year olds with targeted case identification efforts, as well as creative prevention efforts through DREAMS-like programming that includes the introduction of PrEP for high-risk populations. PEPFAR is also working closely with the Government of Botswana (GoB) to change the culture of ART initiation through fast-track strategies, task-shifting, meeting the service delivery needs of men and youth, and multi-month dispensing of antiretroviral therapy (ART).

PEPFAR will continue to provide ARVs and other commodities to support Treat All. Botswana has introduced Dolutegravir (DTG), one of the most effective ARVs with a low risk of side effects and a high genetic barrier to resistance and in FY 18 PEPFAR will be procuring a generic version to reduce the price per unit by over 80%.

In COP17, PEPFAR/B will focus efforts in four scale-up SNUs, two sustained SNUs, six KP specific sites, and one TB/HIV specific site. PEPFAR/B goals for FY18 include:

- Reaching attainment status in all scale-up and sustained SNUs;
- Scaling up high-yield HIV testing modalities, including facility and community index testing and expanded routine testing in facilities focusing on STI patients, in-patients and presumptive TB patients;
- Implementing DREAMS-like activities in two districts in Greater Gaborone to reduce incidence rates in adolescent girls and young women (AGYW);
- Supporting the MOHW on improving its electronic Health Information Systems for improved monitoring and data-driven decision making;
- Aligning community-based interventions with facility-based support, and rolling out evidence-based interventions to enhance adherence and retention in both ART and TB treatment for PLHIV;
- Supporting an accelerated and age-appropriate VMMC acceleration campaign; and

- Focusing services in select sites for female sex workers (FSWs), men who have sex with men (MSM) and AGYW.

The PEPFAR/B team routinely coordinates and consults with the GoB, multilateral organizations, Global Fund and CSOs. These consultations have led to PEPFAR/B's emphasis on human-rights based approaches, consideration of ART readiness and treatment literacy among PLHIV, and reinvigorated attention to prevention for AGYW in the COP17 plan.

2.0 Epidemic, Response, and Program Context

2.1 Summary statistics, disease burden and epidemic profile

Botswana has a population of 2.2 million and a gross national income of $6,460 (2015).[1] While an upper middle-income country, its Gini Index is 60.5[2] and 19.3% of the population lives below the poverty line.[3] UNAIDS' 2016 estimated HIV prevalence is 15.7%; the last population-based survey (2013) estimated the prevalence at 18.6%, an increase from 17.6 % in the previous national survey conducted in 2008 (Table 2.1.1). Current incidence is estimated to be 0.58%, a substantial drop from 1.35% in 2013, with an estimated 9,668 new infections in 2016 (Table 2.1.1). There are an estimated 349,000 people living with HIV (PLHIV) in Botswana (Table 2.1.2).

The disparity in HIV burden between females and males is evident starting in the 15-24 year old age group (9.0% female prevalence vs 3.7% male prevalence) and persisting in older adults (31.7% vs 27.6%; Table 2.1.1). Of note, Botswana's gender inequality rank is 109.[4] The Second Botswana Youth Risk Behavioral and Biological Surveillance Survey Report[5] (BYRBBSS) estimated that 5.4% of students were forced to have sex the first time they had sexual intercourse. These persistent high infection rates among young females are partly attributed to gender inequality, which puts women and girls at high risk for domestic and sexual violence and compromises their ability to negotiate safer sex. In addition, the HIV prevalence among female sex workers (FSWs) is very high at 61.9%[6]. Prevalence among men who have sex with men (MSM) is estimated to be 13.1% (see Table 2.1.1 below), higher than the 5.2% prevalence reported among all 20-24 year old males; incidence among MSM is 3.6%, higher than the national incidence rate of 0.84%. More than 80% of PLHIV live in 12 of the 24 health districts having the highest unmet need for ART. The districts with the largest numbers of PLHIV are clustered in greater Gaborone and greater Francistown, followed by Mahalapye and Serowe/Palapye (Figure 2.4.1).

Coverage, achievements, challenges and plans

PEPFAR's support to facility and community-based HIV testing has shown promising results with index testing in the community and high coverage of HIV testing among TB patients, but overall inadequate case-identification

[1] World Bank
[2] World Bank's Gini Index (measure of income inequality) score of 60.5 in 2009 (1-100 scale), the 3rd worst ranking in the world, behind South Africa and Namibia
[3] World Bank
[4] Botswana ranks 109th of 187 nations scored on the UNDP's Gender Inequality Index (measure of loss in human development due to gender inequality), though this is the 3rd highest score in SADC region
[5] II BYRBBS, 2016
[6] BBSS, 2012

across all implementing partners (IPs). Starting in FY17, PEPFAR is collaborating with GoB to expand facility and community index testing; social network testing to identify key age, sex and risk groups, and improved targeting of facility-based testing to reach presumptive TB and STI patients, inpatients, and other high risk outpatients. An emergency supply of PEPFAR-procured RTKs were delivered in-country in June 2016 and distributed to the PEPFAR IPs. Delays in the GoB's transition from a parallel to serial HIV testing algorithm have exacerbated RTK stock outs; PEPFAR IPs are facilitating the training for this transition in FY17. PEPFAR has initiated another RTK emergency procurement, based on PEPFAR targets, which will cover up to FY18, to be distributed to PEPFAR IPs only.

Botswana launched the "Treat All" strategy in June of 2016. Monthly new initiations compared with the previous year (2015) have increased by more than 50% and in some months by more than 100%, yet national ART coverage remains below target at 84%. Despite the launch of "Treat All", there has not been a community mobilization campaign and many facilities continue to delay ART initiation until baseline laboratory test results are available. Starting in FY17, working with GoB and DHMTs, PEPFAR/B is supporting community mobilization for testing and ART initiation. The MOHW has agreed to clarify the policy to ensure fast-track initiation of ART for non-sick patients without waiting for baseline lab results.

Botswana has seen a significant reduction of HIV transmission among newborns from HIV-positive mothers. The mother-to-child HIV transmission rate has dropped from a peak of around 40% to under 2%. While the number of pregnant women on life-long ART and the uptake of early infant diagnosis (EID) is increasing in PEPFAR supported SNUs, PEPFAR Botswana is prioritizing increasing the uptake of both of these critical interventions.

Provision of differentiated service delivery models, including multi-month scripting and dispensing and community ART provision, has not yet implemented in Botswana. In FY17 and FY18, PEPFAR will support GoB's efforts to standardize multi-month dispensing and support buffer stocks to allow, at a minimum, a three-month supply of ART.

It is estimated that more than 55% of patients with TB are co-infected with HIV (Table 2.1.1). TB remains the leading cause of death in PLHIV, though local evidence suggests cancer-related mortality may be overtaking TB in Botswana. Currently, TB is responsible for 13% of adult deaths and 40% of deaths among PLHIV.[7] Draft Integrated Community Service Delivery Guidelines will support community ART provision alongside Directly Observed Therapy (DOT).

PEPFAR continues to provide prevention, testing, and treatment services to key populations, primarily FSW and MSM. While many receive routine ART refills from government facilities, oftentimes clients first seek prevention, counseling and testing from PEPFAR IPs which offer services in a safe, stigma-free environment that caters to the specific needs of these key populations. In FY18, IPs will also work with government facilities to improve KP-friendly services throughout the system.

Botswana does not offer free HIV services to non-citizens; therefore many foreigners go untreated, including the high-risk FSW population. PEPFAR is collaborating with multilateral organizations[8] and other bilateral partners to quantify non-citizens in Botswana and assess the transmission impact of treating or not treating this sub-group.

[7] WHO Global TB Report, 2014
[8] UNAIDS, IOM, WHO, UNHCR and UNICEF

Results of this impact modeling are expected in FY17 and plans are for the Botswana Minister of Health to advance the issue with the South African Development Community (SADC).

The estimated coverage of VMMC was 11% in 2008 and doubled to 24.3% in 2013. The GoB established a target of circumcising 385,000 males by 2016 to achieve 80% coverage of this important intervention. As of September 2016, just 46% of the national target (178,510 circumcisions) had been met. At the end of a PEPFAR-supported acceleration campaign in March 2016, 18,493 circumcisions had been performed. In FY17, in addition to the routine service, a second accelerated SMC campaign targeting 8,823 males was launched on March 1st. Task shifting to nurses has been very successful and an increase in VMMC coverage in FY17 and FY18 is expected.

Currently, Pre-Exposure Prophylaxis (PrEP) is only provided in private facilities. However, guidelines propose to roll-out PrEP in government facilities by 2017. PrEP implementation plans are discussed at the national technical working group level led by UNAIDS and will be supported by PEPFAR in COP17.

Beginning in COP16, PEPFAR committed $20.9 million[9] in central funds to procure DTG and other HIV commodities to support the GoB Treat All strategy. The funds will be used for FY17 and 18, with $2 million of the planned funding earmarked for technical assistance (TA) for the national supply chain system. Strengthening of the Central Medical Stores (CMS) and consistent availability of commodities has been an ongoing challenge. Recently, PEPFAR and GoB agreed to pilot a tracer system for DTG and to embed two high-level PEPFAR-supported staff in CMS.

Finally, the bilateral PEPFAR program continues to benefit from important lessons and resources from BCPP. Among others, these include successful strategies for finding HIV-positive men, effective linkage to care SOPs, fast-track ART initiation and strengthening of the HMIS and M&E systems.

[9] COP 16: $7,400,000 COP 17: $13,500,000

Table 2.1.1. Key National Demographic and Epidemiological Data

	Total		<15				15-24				25+				*Source, Year*
			Female		Male		Female		Male		Female		Male		
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	
Total Population	2,219,758	100	357,555	16.1	363,919	16.4	229,575	10.3	221,880	10.0	548,329	24.7	498,499	22.5	Census 2016 Proj.
HIV Prevalence (%)		15.7		1.2		1.2		9.0		3.7		31.7		27.6	UNAIDS, 2016
AIDS Deaths (per year)	3,180		125		123		162		101		844		1,825		UNAIDS, 2016
# PLHIV	348,928		4,192		4,347		20,560		8,282		173,861		137,686		UNAIDS, 2016
Incidence Rate (Yr)		0.58		0.14		0.14		1.58		0.61		NA		NA	UNAIDS, 2016
New Infections (Yr)	9,668														UNAIDS, 2016
Annual births	42,234														PMTCT, FY2016
% of Pregnant Women with ≥ ANC visit	46,355	95.0	232	0.5			19,933	43.0			26,191	56.0			PMTCT, FY2016
Pregnant women needing ARVs	10,840	22.6													PMTCT, FY2016
Orphans (maternal, paternal, double)	117,893		49,641		50,337		8,893[1]		9,021[1]		NA		NA		BAIS IV, 2013 Census 2016 Proj
Notified TB cases (Yr)	5,883		175		163		436		384		1,921		2,804		BNTP, 2015
% of TB cases that are HIV infected	3,265	55.5[2]	23	16.2	33	25.0	150	37.9	80	23.3	1,357	73.6	1,622	61.5	BNTP, 2015
% of Males Circumcised	263,484[3]	24.3			107,793[4]	41.0			104,576	39.7			51,115	19.4	BAIS IV, 2013 Census 2016 Proj
Estimated Population Size of MSM	LG	LG													Limited General.
MSM HIV Prevalence		13.1													BBSS, 2012
Estimated Population Size of FSW	18,556	3.0													Census 2016 Proj; Vandepitte et al[5]
FSW HIV Prevalence	11,486	61.9													BBSS, 2012
Estimated Population Size of PWID	NA	NA													Not Available
PWID HIV Prevalence	NA	NA													Not Available

NA = not available; LG = limited generalizability

[1] Includes orphans 15-17 years of age.

[2] Denominator is those with known HIV status. A total of 390 had unknown HIV status.

[3] Estimates for male ages 10-64 only (per BAIS IV), applied to 2016 population projections.

[4] Distribution by age based on 2015 MOHW data

[5] Vandepitte J, Lyerla R, Dallabetta G, et al. Estimates of the number of female sex workers in different regions of the world. Sex Transm Infect 2006; 82: iii18–iii25

PMTCT, FY2016 – National PMTCT program data as reported from January – December 2016

BNTP, 2015 – National TB program data as reported from January – December 2015

Table 2.1.2. 90-90-90 Cascade: HIV diagnosis, treatment and viral suppression

Epidemiologic Data					HIV Treatment and Viral Suppression			HIV Testing and Linkage to ART		
	Total Population Size Estimate (#)	**HIV Prevalence (%)**	**Total PLHIV (#)**	**PLHIV diagnosed (#)**	**On ART (#)**	**ART Coverage (%)**	**Viral Suppression[1] (%)**	**Tested for HIV[2] (#)**	**Diagnosed HIV Positive[2] (#)**	**Initiated on ART[3] (#)**
Total population	2,219,758	15.7%	348,928	NA	291,923	84%	94%	402,263	25,984	18,019
Population < 15 years	721,474	1.2%	8,539	NA	8,453	99%	94%	22,087	282	112
Population 15-24 years	451,456	7.9%	28,838	NA	17,184	60%	97%	119,078	4,293	2,301
Population 25+ years	1,046,829	29.8%	311,547	NA	255,431	82%	94%	261,098	21,409	15,606
Sources	*Census '15 PMTCT*	*UNAIDS '16*	*UNAIDS '16*		*Nat'l Data, Sept'16*			*Nat'l Data, Sept'16*	*Nat'l Data, Sept'16*	*Nat'l Data, Sept'16*
MSM	LG	13.1%	LG	NA	NA	NA	NA	NA	NA	NA
FSW	18,556	61.9%	11,486	NA	NA	NA	NA	NA	NA	NA
AGYW 15-24	229,575	10.4%	20,558	NA	11,536	56%	97%	84,990	3,601	1,866
Sources	*BBSS'12 Census '16*	*BBSS'12 BAIS IV*	*BBSS'12*		*Nat'l Data, Sept'16*			*Nat'l Data, Sept'16*	*Nat'l Data, Sept'16*	*Nat'l Data, Sept'16*

NA = not available; LG = limited generalizability

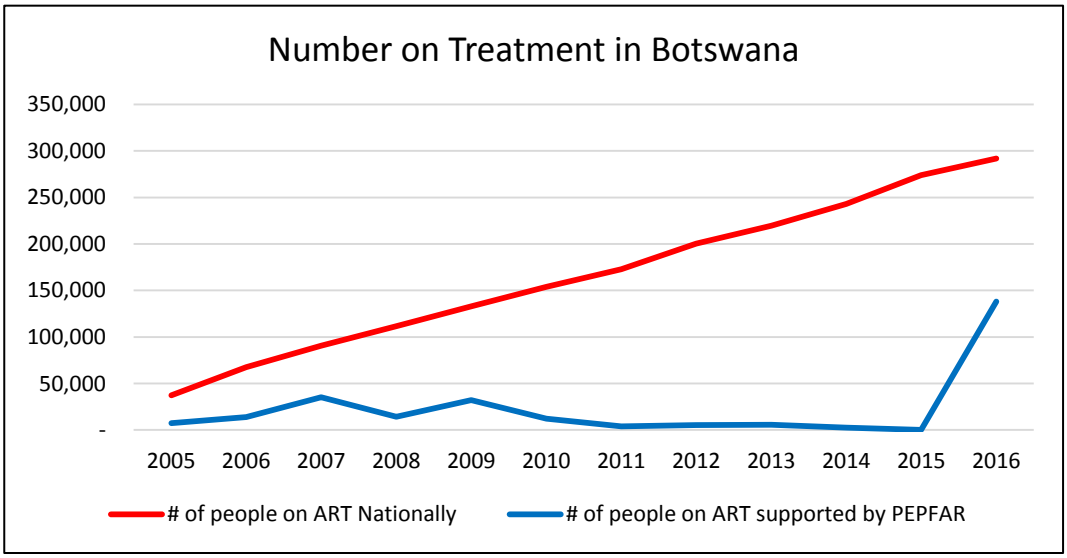
National level reliable data not available for PWID; dropped from table

[1] MOHW Data Warehouse

[2] MOHW and PEPFAR Testing Data

[3] Net new as a proxy for number initiated and distributed based on Q1 FY17 results

Figure 2.1.3 National and PEPFAR Trend for Individuals currently on Treatment



2.2 Investment Profile

According to the recently released 2013/2014 *National Health Accounts* (NHA), the GoB remains the primary funder of HIV/AIDS programs in Botswana. The GoB contributes 57% of funding for HIV/AIDS programs, while external donors contribute 38% and private funders account for just 5%. This represents a decline from 2012 figures from *National AIDS Spending Assessment* (NASA), which showed the GoB contributed almost 70% of funding for HIV/AIDS programs, external donors just over 28% and private funds just under 2%.

Public funding has gradually increased over a three-year period, from $186.8 million in 2009/10 to $253.5 million in 2011/12, while external sources of funding peaked in 2010/11 at $113 million before declining in 2011/12 to $105 million. PEPFAR, the largest external donor, has seen funding decline to $43.2 million in COP16 from its highest level of about $90 million just seven years ago. In 2016, the Global Fund became the second largest external donor by providing a grant totaling $27,043,808 over three years for TB/HIV programs. The new funding allocation from GFATM for Botswana is a maximum of $17 million across the three diseases. This reduced funding, to begin in January 2019, and possible reduction in PEPFAR funding, will put pressure on the GoB to maintain the momentum of the Treat All implementation. Other development partners in Botswana include the EU, SIDA, and UN agencies; however their financial contribution to HIV/AIDS programming is minimal.

Table 2.2.1 Sources of Financing for HIV/AIDS Programs (2013-14)[10]

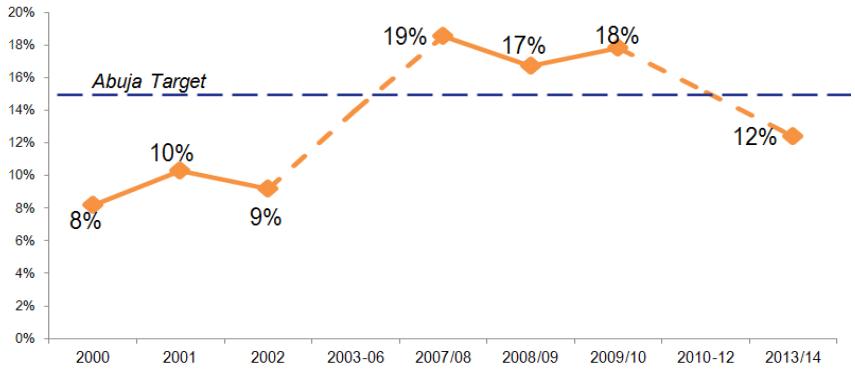
Source of finance	Percentage of total financing provided
GoB Public Funds	57%
Private Funds	5%
External Funds (bilateral/multilateral)	38%
NGOs	< 1%

Over half (56%) of the GoB's HIV/AIDS money is spent on care and treatment, 16% on OVC activities and 14% on prevention activities. Prevention spending decreased 35% from $52.8 million in 2009 to $34.2 million in 2011/12. An examination of the total health expenditures also found 53% of the spending goes to hospital-based care, the most costly type of health care.[11] These data are four years old and likely do not provide the most current picture of HIV/AIDS spending in Botswana. The data do reveal a costly physician-based system of care, placing Botswana among the most expensive HIV care and treatment programs in low or middle-income countries.[12] GoB has started to look at the more cost-effective methods of providing services, and MOHW will provide an action plan on how the government will address the high cost of treatment. Any increases in HIV/AIDS program costs in the face of declining donor funding may pose a challenge for the country, which is struggling to reduce its dependence on diamonds and generate private sector-led economic growth. One study, published in *The Lancet*, concluded Botswana should be able to finance its entire HIV/AIDS program without external aid.[13]

While total health expenditures have grown from BWP 532 million ($51.5m) in 2000 to BWP 7,802 million ($750m) in 2013/2014, total government health expenditure as a percentage of general government expenditure (GGE) has declined from 19 percent in 2007/2008 to 18 percent in 2009/2010, sustaining an average of 18 percent during this period. As of 2013/2014, government expenditure on health as a percentage of GGE was 12 percent. This level of government spending as a proportion of GGE puts Botswana below the Abuja target of 15 percent in 2013/14. (See Figure 2.2.1 below).

[10] National Health Account, 2012.
[11] National Health Account, 2012
[12] According to Michael Ruffner, the PEPFAR Director of Financial Sustainability, direct spending per patient living with HIV ranges from $800 to $1,200 annually. Comparatively, South Africa spends about $300 per person living with HIV (PLHIV) and Malawi spends about $183 per PLHIV annually.
[13] Resch, Stephen; Ryckman, Theresa; and Hecht, Robert. "Funding AIDS programmes in the era of shared responsibility: an analysis of domestic spending in 12 low-income and middle income countries" *The Lancet,* Vol3. January 2015.

Figure 2.2.1 Share of Total Government Health Expenditure out of Total Government Expenditure, 2002-2013/14



Source: NHA, 2013/2014

Table 2.2.1: Annual Investment Profile by Program Area[14]

Program Area	Total Current Expenditure (millions USD)	Percent Contribution			
		PEPFAR	GF	GoB	Other
Clinical care, treatment and support	220.9	14%	0%	83%	3%
Community-based care, treatment, support	Not disaggregated	NA	NA	NA	NA
PMTCT	5.1	NA	NA	NA	NA
HTS	4.9	78%	0%	22%	0%
VMMC	4.2	90%	1%	9%	3%
Population prevention	20.1	55%	1%	43%	1%
OVC	53.0	2%	0%	98%	0%
Laboratory	NA	NA	NA	NA	NA
SI, Surveys and Surveillance	15.4	100%	0%	0%	0%
HSS	1.5	99%	0%	1%	0%
Other*	43.9	85%	0%	15%	0%
Total	369.1				

*Includes program management, administration, human resources and enabling environments

During the GoB Fiscal Year 16/17 (April 1, 2016 to March 31, 2017), the procurement of key health commodities has primarily been funded by GoB as reflected in the data obtained from the CMS in Table 2.2.2. The total amount spent on ARVs, other commodities (HIV test kits, condoms, viral load reagents, VMMC kits) and other drugs was $92 million. PEPFAR's contribution was

[14] Source: NASA 2012, Gaborone, Botswana

primarily for the procurement of ARVs through a CDC Cooperative Agreement (CoAg) with GoB (22.8%), HIV test kits at 35% and VMMC kits at 17.2% of the national total expenditure (Table 2.2.2). The rest were expenditures by the GoB. Noteworthy is PEPFAR's FY2017/18 support to the GoB Treat All strategy toward the procurement of the Dolutegravir (DTG), other ARVs and other HIV related commodities for a total amount of $20.9 million

Commodities-related issues that may affect the ability of PEPFAR to support the country's achievement of epidemic control include:

- The national supply chain issues that may negatively impact on the last mile distribution of required commodities to the patient include inefficiencies, inadequate procurement staffing capacity at CMS, insufficient forecasting technical expertise that may lead to potential stockouts, and poor distribution to facilities downstream, where commodities are required.
- The PEPFAR team engaged with the MOHW and CMS for the past year in an effort to support and advocate for an open, international Invitation to Tender (ITT) that will result in a more experienced and effective operator winning the follow-on tender. The process hasn't been going as efficiently and smoothly as it should have, and thus there's some uncertainty to achieving a successful result at the end of the tendering process. The current contract is to end in April 2017, but will have to be extended as a result of the slow progress in the re-tendering exercise.
- Shortage of funds currently being experienced by the GoB is resulting in the government's inability to achieve sustainable commodity procurement – such as with HIV test kits, where PEPFAR had to do an emergency procurement for distribution to our IP's in-country for $395,392 from central funds.
- As a matter of policy, GoB also does not fund commodities such as lubricants for Key Populations – which can negatively contribute to the efforts toward epidemic control.

Table 2.2.2: Annual Procurement Profile for Key Commodities

Commodity Category	Total Expenditure USD	% PEPFAR	% GF	% Host Country	% Other
ARVs	27,248,133.31	22.8		77.2	
Rapid test kits	1,496,015	35		65	
Other drugs	37,690,700	-		100	
Lab reagents (General reagents)	5,539,550	-		100	
Condoms (Male)	464,201	-		100	
Viral Load commodities (HIV reagents)	18,819,600	-		100	
VMMC kits	823,429	17.2		82.2	
MAT	-	-		100	
Other commodities	-	-		-	
Total	**92,081,628.31**				

NOTES:

I. The expenditure period is corresponds to FY2016/17 for the GoB (April 1, 2016 – March 31, 2017)

II. For ARVs the following PEPFAR expenditures were from central funding, not COP – (22.8%)
   a. CDC CoAg funds – $5,290,641.60
   b. Dolutegravir (DTG) plus-up funds – $862,891.31
   c. Botswana Red Cross (Dukwi Refugee Camp) - $63,342

III. HIV test kits procurement by PEPFAR & directly by IPs - (35%)
   a. PEPFAR RTKs emergency procurement - $395,392 (distributed to IPs)
   b. Tebelopele - $45,284
   c. I-TECH - $77,132

IV. VMMC kits procured through central funding - $142,380

V. The expenditure figures were converted from the local currency (Botswana Pula – BWP) using exchange of 0.09504 from OANDA Currency Converter on March 9, 2017; www.oanda.com/currency/converter

Table 2.2.3: Annual USG Non-PEPFAR Funded Investments and Integration, FY17

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	N/A	N/A	N/A	N/A	N/A
USAID TB	N/A	N/A	N/A	N/A	N/A
USAID Malaria	N/A	N/A	N/A	N/A	N/A
Family Planning	N/A	N/A	N/A	N/A	N/A
NIH	N/A	N/A	N/A	N/A	N/A
CDC (Global Health Security)	N/A	N/A	N/A	N/A	N/A
(CDC Other) National Public Health Institute	$250,000	$250,000	1	N/A	Establish a National Public Health Institute (NPHI) in Botswana
(CDC Other) DTBE	$950,000	N/A	N/A	N/A	Improve prevention, surveillance, diagnosis and treatment of TB and HIV in Botswana through research and technical support
Peace Corps	$1,926,000				PC Appropriation for non-PEPFAR volunteers
MCC	N/A	N/A	N/A	N/A	N/A
Total	$3,126,000				

Table 2.2.4: Annual 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
VMMC – Central Funds	$1,038,000 *			1		1. Circumcise a total of 3900 males and increase VMMC coverage among males 15-29 yrs
LCI	$250,000					1.Create an enabling environment to improve access to and use of quality services for KPs 2.Address legal and policy barriers at the national level to create an enabling environment for KP to access services 3.Reduce stigma and discrimination at local levels through social mobilization, empowerment, education and advocacy around human rights and legal issues to increase access to services
BCPP	$3,975,000		4			1. To implement the combination prevention (CP) intervention package in combination prevention communities (CPC) and determine uptake of interventions in CPCs HTC, Male Circumcision, strengthened and expanded HIV Care and Treatment, and strengthened PMTCT.
PRRR	$250,000			1		1. Scale-up See and Treat sites 2. Provide TA for HPV vaccination efforts 3. Enhance pathology services, mainly related to LEEP specimens
Total	**$6,198,862**					

*Central funding for FY16

2.3 National Sustainability Profile Update

PEPFAR/B considered changes in Botswana's country context potentially impacting sustainability and COP17. A negative change was noted for Commodity Security and Supply Chain while progress was made in Quality Management and in Policies and Governance. Minor events occurred in some elements while nothing noteworthy occurred in the remaining elements (See Appendix E).

Commodity Security and Supply Chain remains one of the areas of greatest concern. Over the years PEPFAR has made substantial investments in Botswana's health supply chain and systems strengthening, but the supply chain continues to experience challenges. After the GoB took a decision to outsource warehouse management and IT, distribution, and facilities management,

the contract was awarded to Botswana Couriers & Logistics (BC & L) through a sole source tender in 2014 for a three-year period ending April 2017. As a subsidiary of the Botswana Post, BC & L's core business was primarily in distribution; consequently warehouse management and IT (as the backbone of the supply chain) significantly suffered and resulted in poor performance of the contract.

At the request of the GoB, PEPFAR/B agreed to assist with an international "open and transparent" Invitation to Tender (ITT) process, offering TA and advice for the follow-on contract. The PEPFAR team, working with the MOHW and the CMS on the retendering, have experienced difficulties and expressed concerns at the slow pace and inefficiencies that may have the potential to negatively impact an open and transparent international bid. As a result, the MOHW is forced to extend the current contract by the allowable maximum of nine months; the team is hopeful that the new contract will be finalized and in place by then.

Notwithstanding the issues discussed above, a decision has been made to utilize the national supply chain for the warehousing and distribution of the PEPFAR funds earmarked to support the GoB Treat All strategy ($14.8mil in "game-changer" funds + $6.1mil BCPP funds). In order to ensure an effective, efficient and secure supply of the procured commodities, PEPFAR plans to embed two supply chain experts at CMS; invest in a track and trace system to monitor and ensure the commodities reach the facilities and patients as desired. In addition, PEPFAR will train Peace Corps volunteers and facility-based supply chain advisors, who will collaborate to ensure that the required data is properly collected and verified at facility level for the OGAC reporting requirements.

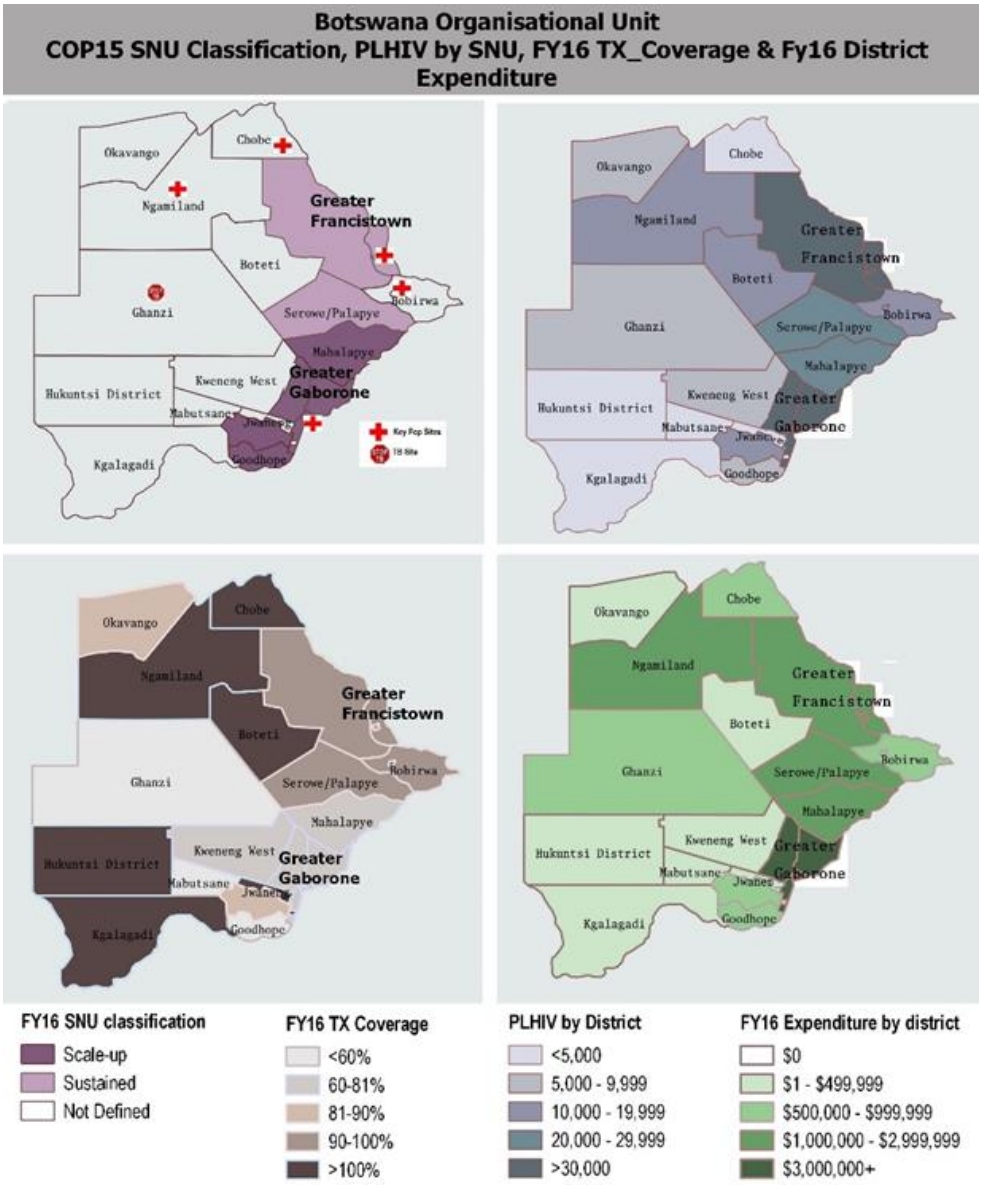
2.4 Alignment of PEPFAR investments geographically to burden of disease

PEPFAR Botswana's scale-up SNUs represent the districts with the highest total number of PLHIV in need of ART (Figure 2.4.1 and Figure 2.4.2). Sustained districts in COP16 had high overall ART coverage levels (with the exception of Ghanzi) and services either focused on retention and viral suppression or were targeted for key populations. Ghanzi was targeted as a TB/HIV micro-epidemic based on the SNU having the highest TB incidence in the country and an unmet need for ART. Reaching these populations and working in sparsely populated districts (e.g. Ghanzi for TB-HIV) is generally more expensive than serving urban and per-urban populations.
FY16 expenditures in non-focus districts were predominantly from PEPFAR-procured ART and work from BCPP (Figure 2.4.4 and 2.4.5).

Expenditures between FY15 and FY16 appropriately increased at a higher proportion in scale-up vs sustained districts (Figure 2.4.3). A shift is anticipated in programmatic focus and expenditures from sustained to scale-up districts associated with the facility realignment process. Discussions about budget neutrality revealed that some CDC/HRSA IPs had been utilizing the same programmatic approach in sustained as in scale-up SNUs; the IPs are currently right-sizing their approaches to invest proportionally more in scale-up SNUs in FY17, a process that will continue in COP17. In FY18, Epidemic Control funding will be used in sustained districts to target case-

finding and ART initiation and retention at age-sex "micro-epidemics." DREAMS-like funding will focus on the two districts within the Greater Gaborone SNU with the highest number of AGYW living with HIV.

Figure 2.4.1: COP15 SNU Classification, PLHIV by SNU, TX Coverage & District Expenditure



PEPFAR expenditures outside of PEPFAR priority districts were reported by the CDC/GoB Cooperative Agreement (Co-Ag), BCPP and Peace Corps (see Figure 2.4.4). The GoB Co-Ag accounted for the majority of these expenditures in non-priority districts, including spending on ARVs from the Co-Ag pipeline (Figure 2.4.5).

Figure 2.4.2 PEPFAR Botswana Expenditures vs. Treatment Coverage

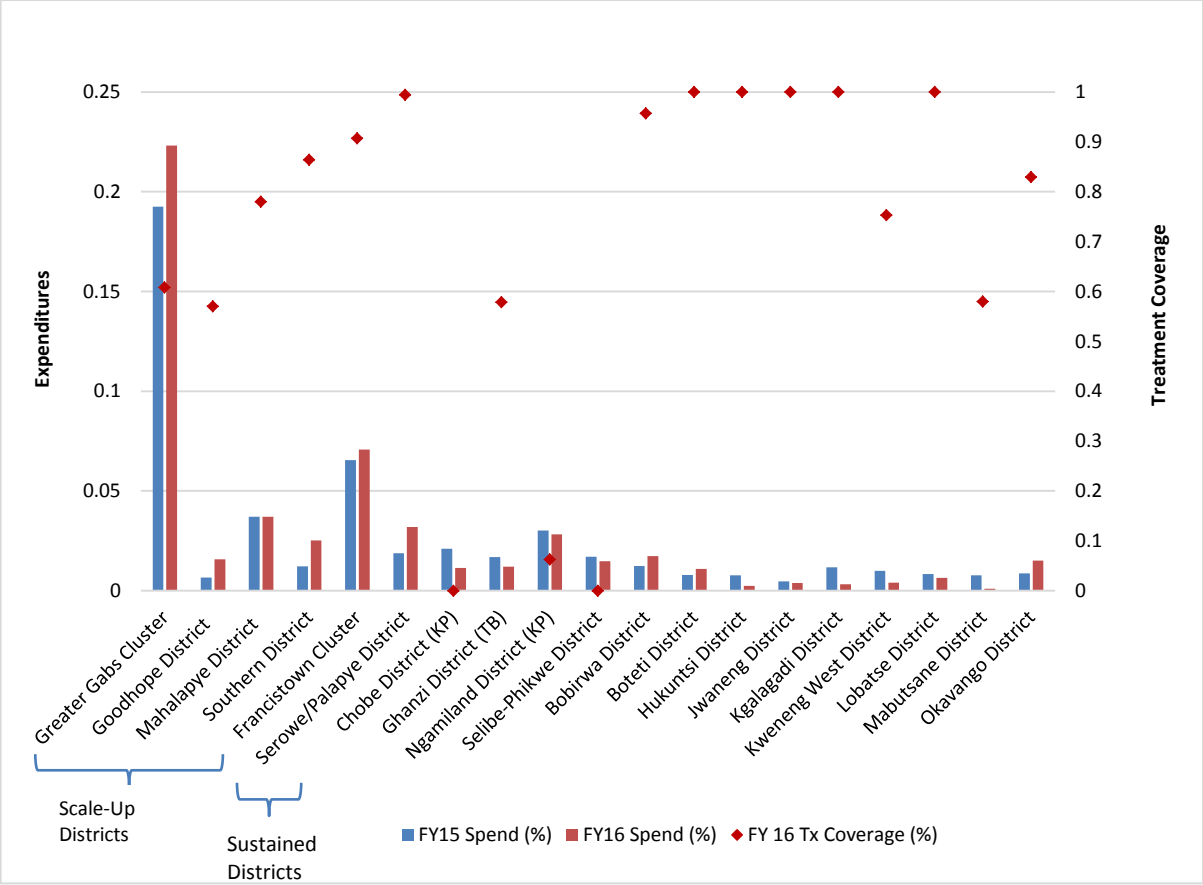


Figure 2.4.3 PEPFAR Botswana FY16 Expenditures by SNU Classification

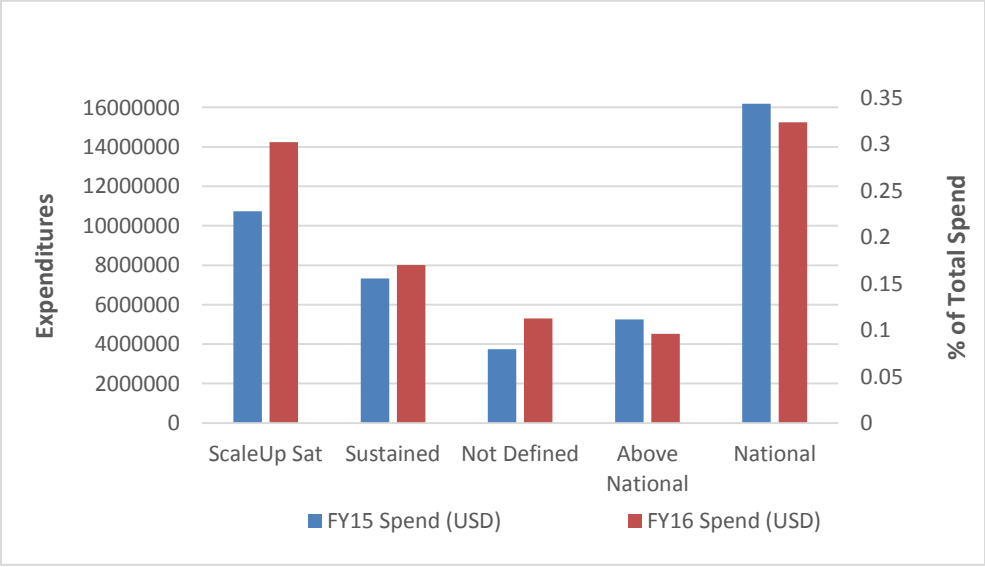


Figure 2.4.4 PEPFAR Botswana FY16 Expenditures in Non-Priority Districts

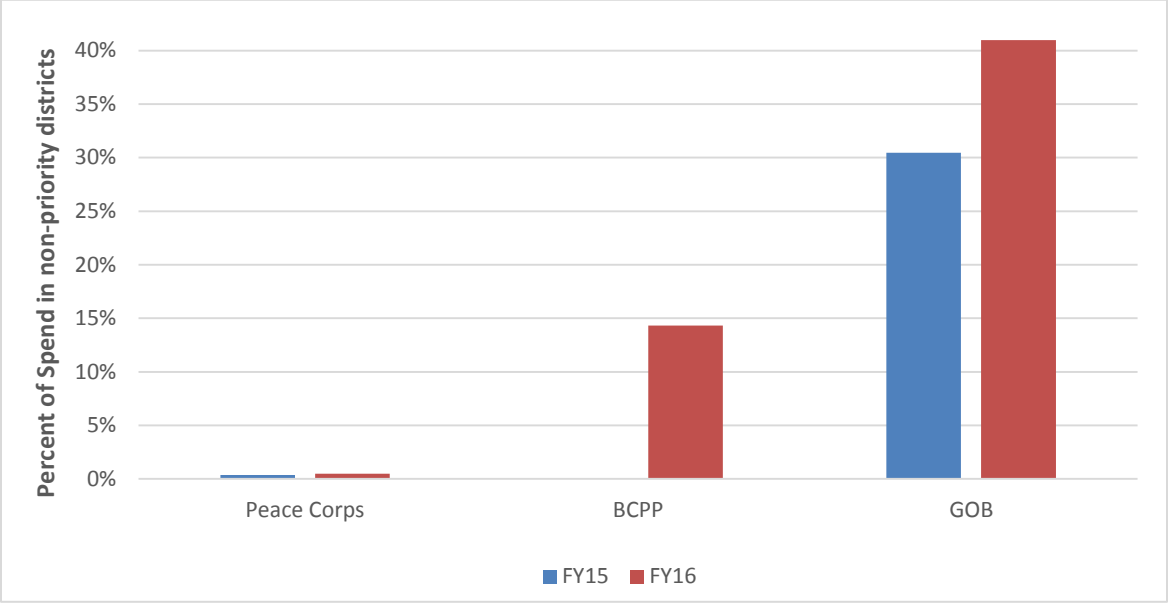
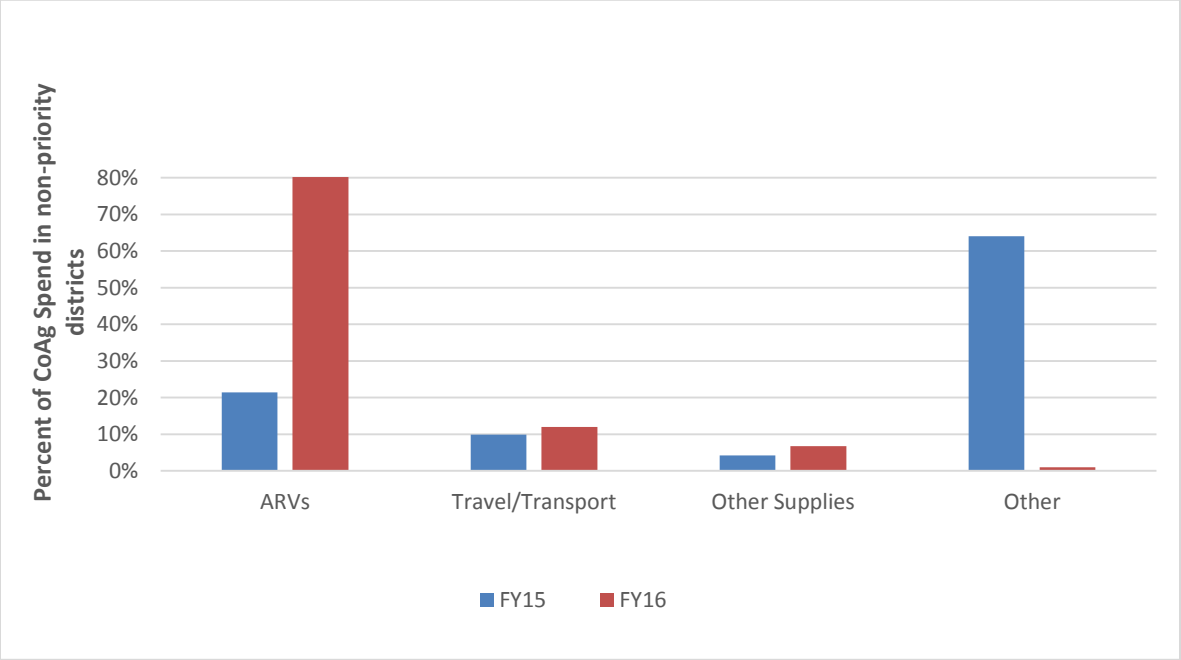


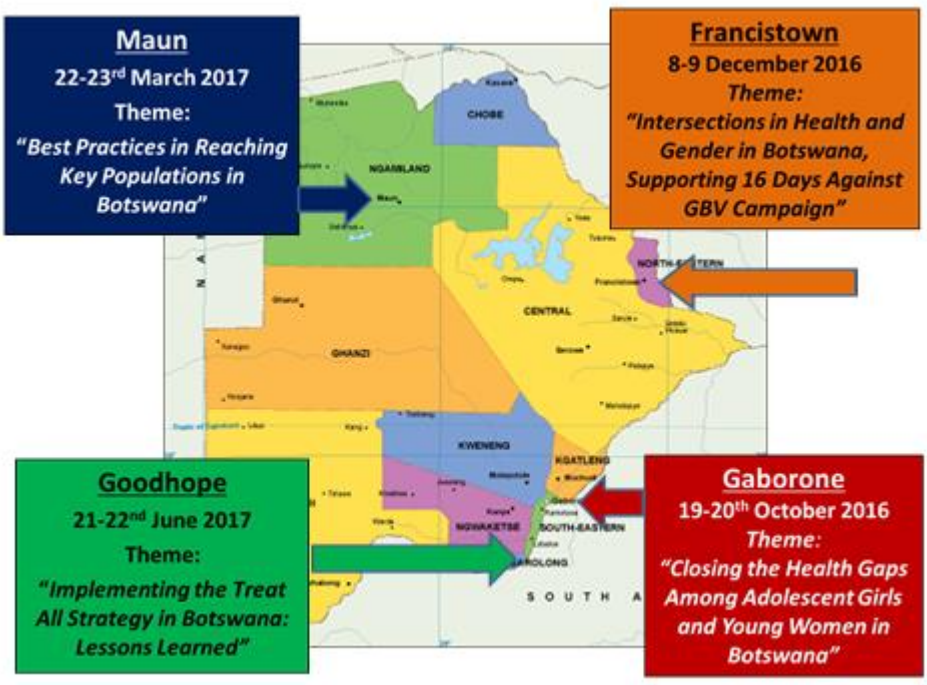
Figure 2.4.5 PEPFAR/GoB Cooperative Agreement FY16 Expenditures in Non-Priority Districts



2.5 Stakeholder Engagement

The PEPFAR/B team has adopted the 3 C's (communication, coordination and collaboration) as one of its values, and has made a number of improvements to the stakeholder engagement process of reporting, reviewing, and giving and receiving feedback. PEPFAR/B has made investments in strategic communications across all agencies which are providing a deeper level of engagement with Botswana's national ministries and district government agencies, multilateral organizations, the private sector, civil society, and faith-based organizations. In particular, the PEPFAR/B's "New Directions in Global Health" seminars have adopted new themes that allow staff and audiences, including representatives from print and broadcast media, to dive deeper into specific issues impacting COP priorities and program results, yielding more valuable feedback from district health officials and stakeholders. Held quarterly around the country, these seminars gather 40-50 healthcare workers, local government and civil society leaders, and program beneficiaries, to discuss HIV-related research, policy, and practice, as well as building the capacity of journalists to effectively report on health and gender issues. The U.S. Ambassador to Botswana opens each of these seminars to underscore their importance and Front Office support for the outreach program.

Figure 2.5.1 New Directions Dates, Locations and Topics



PEPFAR/B has also introduced a new monthly e-newsletter aimed at stakeholders to strengthen the communication process between meetings. All quarterly and COP preparatory stakeholder meetings and communications have produced feedback (verbal or written) which PEPFAR has utilized in program decision making. The CDC, USAID, Defense Department, State Department,

and Peace Corps offices all participate in regular, joint communications and external partner engagement activities. Finally, the PEPFAR Country Coordinator continues to serve as a voting member of the Global Fund's Country Coordinating Mechanism (CCM) and PR Oversight Committee, and is in regular communication with the GF Portfolio Manager in Geneva. The CDC Country Director is now an alternate on the CCM and attends all CCM meetings.

3.0 Geographic and Population Prioritization

Geographic Prioritization

The criteria for geographic prioritization continue to include total number of PLHIV, ART coverage, and net new needed for ART saturation by SNU. Further stratification by age and sex were utilized in COP17 to refine our targeting and ensure saturation of ART coverage for all populations. As in years past, UNAIDS PLHIV estimates were proportionally distributed by district based on BAIS IV HIV prevalence and district population projections. ART coverage by district, age, and sex were estimated using the most recent data sources available, including National ART Program data, PEPFAR program data, and 2015 UNAIDS Spectrum modeling results. Net_New needed for saturation was calculated for males and females separately, by three age bands: under 15; 15-24; and 25 and older.

Nationally, half of the health districts achieved greater than 80% ART saturation for the total population at APR16, and one-third reached saturation for both males and females. However, no districts attained saturation across all age and sex disaggregates by APR16 and none are expected to by APR17. Four SNUs (Greater Gaborone, Goodhope, Mahalapye, and Southern) include 50% of the PLHIV and are prioritized as scale-up saturation for COP 17, with the intention to reach 80% ART coverage overall for the SNUs by FY18 (Table 3.1, Appendix A.1).

Table 3.1: Current Status of ART saturation

Prioritization Area	Total PLHIV (% of all PLHIV for COP17)	# Current on ART (FY16, HAART*)	# of SNU COP16 (FY17)	# of SNU COP17 (FY18)
Attained	N/A	N/A	N/A	N/A
Scale-up Saturation	48,721 (14%)	36,809	3	4
Scale-up Aggressive	124,623 (36%)	75,765	1	0
Sustained[1]	123,743 (35%)	123,780	6	6
Central Support[2]	52,291 (15%)	55,570	9	9

[1] Includes 4 sustained SNUs with micro-epidemics: 3 KP specific and 1 TB/HIV specific.
[2] PEPFAR/B is supplying DTG for the entire country including these SNUs which are otherwise supported by GoB
* HAART (Highly Active Antiretroviral Therapy) Update – National ARV program update on those currently enrolled in treatment

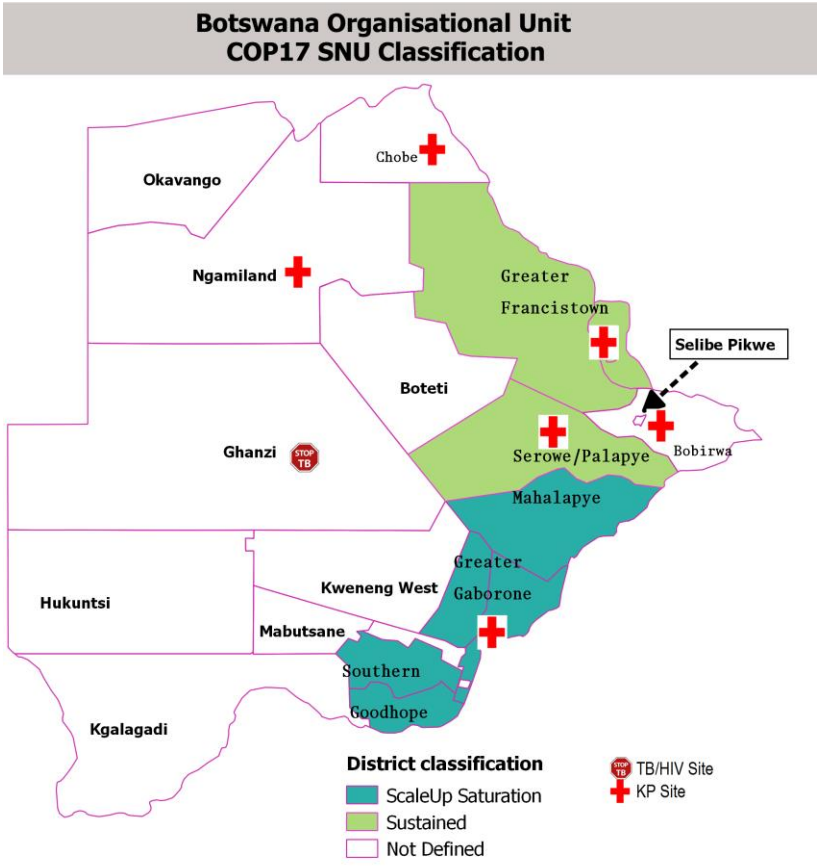
Looking closer at VMMC efforts, Goodhope, Mahalapye, and Southern are on track to meet saturation targets in FY17. Greater Gaborone, as the largest urban population with the highest unmet ART and VMMC need, will receive additional resources to scale up DREAMS-like activities for young women and men, including VMMC programming, to ensure we reach these groups.

Two sustained SNUs (Greater Francistown and Serowe/Palapye), serving an additional 27% of the PLHIV, exceed 80% ART coverage for the total population; however, coverage gaps leave young men and women vulnerable to ongoing transmission and poor health (Table 3.2).

Table 3.2 ART coverage by age and sex bands by SNU, APR16

District	Female <15 ART Coverage	Male <15 ART Coverage	Female 15-24 ART Coverage	Male 15-24 ART Coverage	Female 25+ ART Coverage	Male 25+ ART Coverage
Greater Gaborone	48.0%	43.2%	80.2%	33.5%	68.4%	51.5%
Serowe/Palapye	240.2%	194.6%	127.4%	41.2%	118.5%	74.1%
Mahalapye	287.8%	282.9%	128.8%	173.9%	74.3%	56.1%
Greater Francistown	85.5%	84.9%	123.1%	78.0%	94.1%	81.5%
Southern	82.9%	67.8%	88.6%	39.1%	92.7%	81.8%
Goodhope	41.8%	103.4%	55.1%	131.9%	45.5%	88.1%

Figure 3.1 Geographic Prioritization



Population Prioritization

As noted above, AGYW aged 15-24 and young men 15-29 are priority populations for reaching ART saturation. AGYW are twice as likely to acquire HIV as their male counterparts and more likely to become victims of gender inequality and gender-based violence (GBV), which are key drivers of the epidemic. Young men, as well as older men, were identified in our age/sex disaggregation as at higher risk of unmet need. Integrated approaches to reach these populations will focus on workplace and schools, with special outreach to attract men to services.

Six sites are targeted for KP services based on high HIV prevalence and large estimated at-risk populations. Chobe, Ngamiland, and Selibe-Phikwe are classified as Sustained SNUs with a KP micro-epidemic. Three additional KP micro-epidemic sites are embedded within other generalized HIV priority SNUs (Greater Gaborone, Greater Francistown and Serowe/Palapye).

PEPFAR/B's focus on KPs (FSW and MSM) is an effort to meet the needs of these groups as they are high-risk populations with a higher incidence than the general population (see section 1.0).

One additional SNU, Ghanzi, has a TB/HIV micro-epidemic requiring additional support for the largely rural, migratory population. Ghanzi has a TB prevalence rates 2.5 times the national average. People with TB are a high-yield population for HIV case-finding and new ART initiations given the high co-infection rate in Botswana (61% of TB patients are also living with HIV).

PEPFAR/B has also identified three other important populations – military personnel, OVC, and refugees – who will be targeted in COP17. Military personnel will be targeted with specific VMMC and HTC campaigns, unique to the needs of their mostly male population. Given the mobility and disbursement of military personnel, services implemented in collaboration with the defense force include camps that do not all fall within priority areas. OVC have a higher HIV prevalence than the general population under the age of 18 (5.2% vs. 3.5%).[15] They are also far more likely than other children to move from being "affected" by the virus to becoming infected, as well as facing other risks, making them an important focus population.[16] This is especially true for adolescent girls who have lost a mother and are more likely to engage in risky sexual behavior.[17] Finally, refugees will remain an important population to support as non-citizens do not have access to publically-funded ART of HIV care service, except through PEPFAR support. The refugees live in Duwki Refugee Camp in Tutume District. As of February 2017, there were 330 PLHIV at the refugee camp and receiving support from PEPFAR/B.

[15] BAIS IV
[16] Operario D, Underhill K, Chuong C, Cluver L. (2011). HIV Infection and Sexual Risk Behavior Among Youth who have Experienced Orphanhood: Systematic Review and Meta-Analysis. *International Aids Society*. 14:25.
[17] Ibid

4.0 Program Activities for Epidemic Control in Scale-up Locations and Populations

4.1: Priority Population Prevention

PEPFAR/B has prioritized the following priority populations in COP17: Adolescent Girls and Young Women (AGYW) aged 15-24 years in Greater Gaborone and key populations (FSW and MSM) in six sites. BAIS IV data shows that HIV prevalence for girls aged 15-19 is 6.2% compared to males of the same age which is estimated at 3.6%. HIV prevalence for females 20-24 is estimated at 14.7% which is double the younger female age group and three times higher than males of the same age.

The most significant change impacting programming for AGYW, MSM, and FSW is the WHO guidelines for PrEP. In 2015, the WHO recommended PrEP as a global standard for all at high risk of HIV infection, including AGYW. While WHO guidelines provide for PrEP to be made available for AGYW, the Botswana 2016 Integrated HIV Clinical Care Guidelines do not specifically mention AGYW. PEPFAR/B will pilot the provision of PrEP to approximately 400 KP and 600 AGYW. The provision of PrEP to at-risk AGYW will occur in Greater Gaborone as part of the core package of DREAMS-like interventions that PEPFAR/B will implement in COP17.

In COP17, prevention programming will target females 10-14 through PEPFAR/B's OVC platform and females 15-24 through DREAMS-like activities (Appendix G). Prevention programming for this population is derived from the core package of interventions outlined in the DREAMS Guidance: empowering girls and young women and reducing their risk; mobilizing communities for change; strengthening families; and decreasing risk in sex partners of AGYW. Under PEPFAR/B's DREAMS Service Delivery Model, illustrated in Appendix G, AGYW will be identified and screened for HIV infection. HIV positive AGYW will be linked to care and treatment services; HIV negative AGYW will be linked to prevention programming, including DREAMS-like activities. The AGYW receiving DREAMS-like services will be tracked to ensure that they are receiving appropriate, layered services in order to increase the efficacy of prevention programming. As part of the DREAMS package of services, the male partners of AGYW will be identified and targeted for HTS and linked to prevention (VMMC) and care and treatment (ART) services as appropriate.

PEPFAR/B will continue providing support to increase prevention, testing and clinical services for key populations in six sites. The Botswana Incidence Patterns Model indicates that FSWs are estimated to contribute 8% of all new HIV infections. The Behavioral and Biological Surveillance Survey (BBSS, 2012) reported that in Francistown, 18% of HIV-positive FSWs were on treatment. During the same period, 26.4% of FSWs in Gaborone reported that they were on HIV treatment, and 26.4% reported the same in the Chobe District. Only 13.1% of HIV positive MSM reported that they had initiated ART. Adherence to ART in the government-supported MASA program was very low among FSW: just 50% of Batswana FSWs who tested positive at last test said they take

ARV drugs daily, compared with 40.2% of non-citizen FSWs who cannot access free treatment in Botswana. The situation for foreign FSWs was worse in Kasane, where just 1.7% of non-citizen FSWs were taking ARV drugs daily compared with 64.5% of Batswana FSWs (BBSS, 2012). Introduction of PrEP for KPs in COP17 will be an important intervention to help prevent new infections among FSWs. BBSS data indicates that for sex workers who had practiced for only one year, the infection rate was 37%. This rate exponentially increased to 59.2% for FSWs who had been in sex work for two years.

PEPFAR/B will consolidate KP programs in COP17 and implement them through one partner – LINKAGES. In response to low achievements for new on treatment, this partner is working with Global Fund-supported CSOs to increase treatment demand creation among KPs and improve linkage to care and treatment. LINKAGES is also working with relevant District Health Management Teams (DHMTs) to improve quality of services for KPs through mentorship, training and provision of diagnostic equipment. The partner has increased collaboration with MOHW and is currently tracking clients between BOFWA sites and GoB facilities through monthly data checks of government electronic medical records. As a result, in COP17 LINKAGES will report on the treatment new (TA) indicator.

LINKAGES will use lessons learned from FY15 to improve performance. Lessons from FY15 achievements indicated that campaign-based mobilization coupled with incentivized active referral yielded improved results. LINKAGES will use this model as its standard method. In addition, services will be provided under one roof, on the same day, to minimize loss to follow up. Furthermore LINKAGES identified a new demand creation partner (SKSG) for MSM in Selibe-Phikwe, which increased reach into the MSM population.

Table 4.1.1 Target Populations for Prevention Interventions to Facilitate Epidemic Control

Target Populations	Population Size Estimate[1]	Coverage Goal (FY17)	Target FY18
MSM (KP_ PREV)	1,514	743	824
FSW (KP_ PREV)	6,687	4,338	4,562
AGYW (PP_PREV)[2]	90,519	5,529	18,826
Young Men (PP_PREV)[2]	92,294	N/A	19,112
Total	**191,014**	**10,610**	**43,324**

[1] Size estimates in SNUs PEPFAR is targeting. Key populations size estimates based on BBSS, 12 and for priority populations based on Census projections.

[2] PP_PREV targets reflect work in Gr. Gaborone only. Peace Corps contributes an additional 10,731 TA targets for FY18 in the additional 17 districts where they work.

4.2 Voluntary Medical Male Circumcision

In FY18, PEPFAR/B will provide VMMC services using only approved, age-appropriate surgical techniques in four scale up SNUs: Greater Gaborone, Mahalapye, Southern and Goodhope. PEPFAR will also continue to circumcise eligible males in the military and civilian populations in non-scale up districts in collaboration with the Botswana Defense Force (BDF). Finally, the accelerated VMMC campaign led by the MOHW in FY16/17 will continue with the same approach in COP17 in two scale-up districts.

From FY15 to FY16, PEPFAR provided technical assistance to support implementation of the pilot and active surveillance for PrePex devices, and last year the country moved into passive surveillance. In response to the recent WHO recommendations and PEPFAR requirements on tetanus immunization in use of elastic compression devices, and given the small proportion[18] of VMMCs performed using PrePex devices, the PrePex program in Botswana has been suspended.

Currently, PEPFAR is providing direct services for adult and adolescent VMMCs and technical assistance for Early Infant Male Circumcision (EIMC). However, because PEPFAR support to EIMC will end in June 2017, the program is in transition to full ownership by MOHW.

PEPFAR/B has recorded success in improving the numbers of VMMCs performed within the age group of 15 to 29 years (from 35% in FY15 to 50% in FY16). After the GoB's first accelerated VMMC campaign in FY16, PEPFAR has opted to continue with the same approach in selected districts. The first campaign proved a high number of circumcisions can be performed in a short period of time, at a relatively low unit cost, thus a second accelerated VMMC campaign was launched on the 1st of March 2017 with the goal of circumcising 8,823 males in Goodhope and Southern districts using $1.5 million of CDC CoAg pipeline funds. This campaign will increase VMMC coverage among 15-29 year-old men in these two districts to reach 57% and 61%, respectively, by the end of FY17. The same approach is planned for use in FY18 to achieve near saturation.

Successful school holiday campaigns continue to be implemented, but are primarily reaching boys aged 10 to 14 years. Moving forward, demand creation and service delivery resources and activities will target males 15 to 29 years. This priority age group accounts for 65% of the total PEPFAR VMMC target in FY 18. It is expected that three of the scale up districts will be near saturation by the end of FY18, with Mahalapye reaching 77% coverage, Southern 76% and Goodhope 75% (See Figure 4.2.1).

Greater Gaborone has a high HIV burden and the lowest expected VMMC coverage compared to other scale-up SNUs, therefore intensive efforts and innovative strategies will be implemented in Greater Gaborone to improve the coverage. These strategies include inclusion of private practitioners, recruitment of VMMC champions in tertiary schools and workplaces, engagement of Peace Corps volunteers in community mobilization, and weekend and after-hours VMMC clinics.

[18] VMMC performed with PrePex devices represented 6% of the total OU achievement in FY 16. (APR 16)

Figure 4.2.1: Trajectory of VMMC Coverage among 15-29 yr olds in Scale Up districts

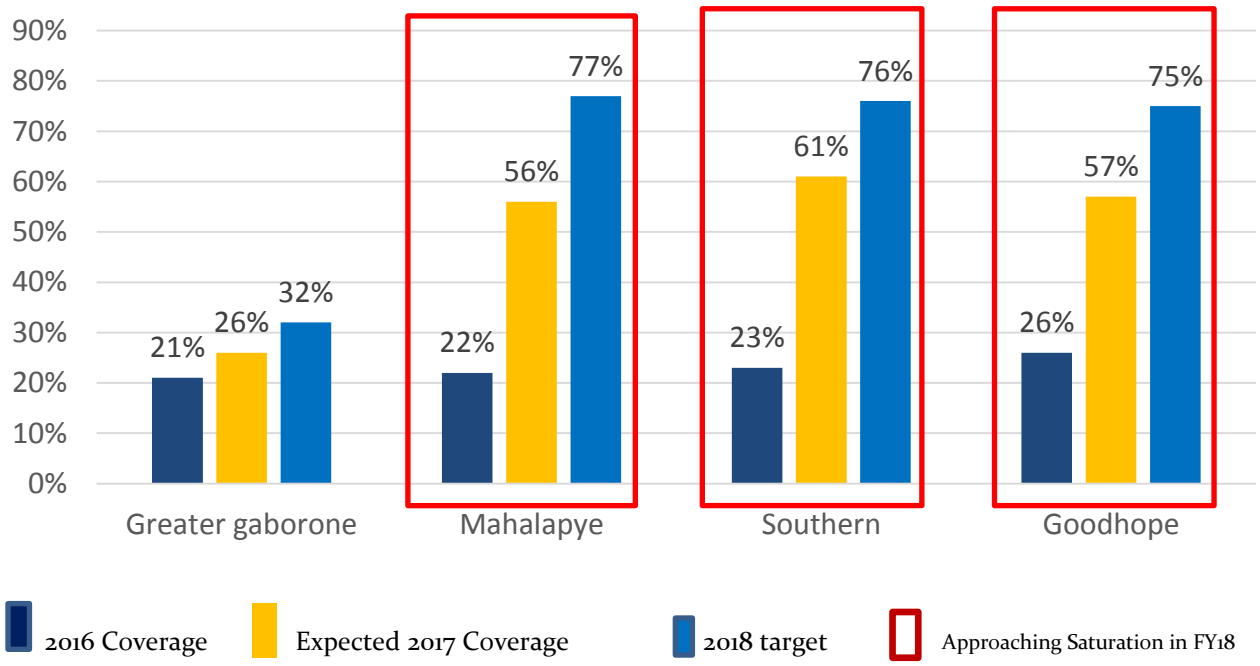


Table 4.2.1 VMMC Coverage and Targets by Age Bracket in Scale-up Districts

SNU	Target Pop-ulations*	Population Size Estimate	Current Coverage	*VMMC_CIRC*				Expected Coverage
		(SNUs, 15-29 males)	(APR 16, 15-29)	(FY17, 15-29)	(FY18 15-29)	other age groups in FY18 (10-14 & 30+yrs)	Total FY 18 10+yrs	(FY18, 15-29)
Greater Gaborone Cluster	15-29 years	112269	21%	5135	6,500	3,500	10,000	32%
Mahalapye District		15671	23%	1335	3,250	1,750	5,000	77%
Southern District		17351	23%	6617	2,600	1,400	4,000	76%
Goodhope District		7280	26%	2206	1,300	700	2,000	75%
Totals		152571		15293	13,650	7,350	21,000	

*** VMMC is also offered to boys aged 10-14 years and males aged > 30 years, however the priority age group of 15 to 29 years represents 65% of the total OU target in COP 17.**

Various cost-reduction strategies will be implemented in COP17, including the introduction of reusable VMMC kits, reduction of travel-associated costs, and continued training of nurses to ensure task-shifting in all VMMC sites (a total of 178 nurses have already been trained).

Addressing partner performance in COP17 will include data triangulation of key MER indicators, SIMS findings, and budget/expenditure data, as well as combined group and individual partner meetings.

4.3 Preventing Mother-to-Child Transmission (PMTCT)

The Botswana PMTCT program, funded almost exclusively by GoB, achieved high coverage of HIV testing and enrolling HIV-infected pregnant women on either life-long ART or prophylaxis. Despite this, overall coverage for early infant diagnosis (EID) at 4-6 weeks remained low at 49.7%, according to 2015 national program data. Botswana adopted and rolled out Option B+ in FY15 and completed the training of eligible health care workers (HCWs) by the end of FY16. The intended public health impact was to take advantage of high ANC attendance, high testing rates of pregnant women and enrolling all infected women on ART at scale-up and maintenance facilities. However, APR16 achievement for PMTCT_ART was only 34%, while that of PMTCT_EID was only 48%. In scale-up districts, EID for APR16 was 69%, with a similar trend in FY17 Q1 at 71%.

Clearly, more has to be done to address the barriers, which include: 1) missed opportunities to test pregnant women especially in labor and delivery (L&D) because health care auxiliary are off-duty in the evenings and during weekends; 2) pregnant women's ART initiation is not prioritized; 3) almost 99% of facilities still initiate ART at infectious disease care clinics (IDCC) and not at the sexual and reproductive health (SRH) or antenatal (ANC) sections, contributing to suboptimal linkage and delays to treatment; 4) some hospitals do not keep ARVs in L&D sections, hence late or non-bookers receive prophylaxis instead of lifelong ART. EID has unique challenges and barriers of its own, including the high mobility of clients and the non-disclosure of status if the child is under the care of a guardian. System based barriers are related to inadequate internal control for DNA PCR specimens contributing to long turn-around times.

The PEPFAR IP working on PMTCT went through a site refinement process and commenced implementing in re-prioritized sites in Q2 of FY17, supporting a total 97 sites in scale-up (67) and sustained (30) districts. The IP has begun to address identified barriers, including guidelines distribution, intensive mentoring of HCWs on how to document HIV status accurately, a strong emphasis on life-long ART as opposed to prophylaxis, and periodic auditing of sexual reproductive health registers.

In COP17, PEPFAR/B will provide intensive support to sites with a target of ART coverage 95%of all infected pregnant and breastfeeding women by FY18. Country data shows high unmet need for AGYW aged 15-25 years for ART across all scale-up districts in Greater Gaborone, IPs will scale up case findings of AGYW and their partners. IP will strengthen collaboration with the testing

partner to intensify testing of pregnant women regardless of the time they report to facilities, and to improve facility linkage and prioritize fast-track ART initiation. The IP will also monitor and retest HIV negative pregnant and breastfeeding women and ensure that they stay negative throughout the duration of pregnancy and breastfeeding. The IP is working with hospital management to ensure availability of ART at L&D to eliminate the existing treatment gap.

Advocacy for fast-tracking ART initiation has commenced in FY17. Mentoring of health care workers on triaging patients and screening of opportunistic infections before ART initiation is ongoing. IP will work with site staff to optimize retention and adherence by implementing alternative service delivery model-integrated services, in particular a "one stop shop" to integrate mother and child health clinics (MCH) and ART for pregnant, breastfeeding women and their infants. The IP is piloting text reminders and phone calls to improve adherence. Birth cohort registers for HEIs and mothers will be introduced, and the IP is working closely with MOHW to audit all infected HIV-exposed infant cases and deaths and address the bottlenecks related to these. Furthermore, IPs will closely monitor retention data of infected pregnant and breastfeeding women at IDCC to ensure PMTCT adherence.

Given that the program is using a new first line drug, DTG, the IP will support the MOHW to strengthen the existing pharmacovigilance system for DTG through TA at site level. Separate from PEPFAR, Botswana Harvard Partnership follows a cohort of ~50,000 women (representing 45% of all births in Botswana). As of December 2015, the cohort included 400 women on DTG. It is anticipated that the cohort on DTG will have sufficient sample size by July/August 2017 to begin reporting on some of the outcomes.

Special efforts will be made in COP17 to address specific needs of AGYW such as leveraging DREAMS- like resources by strengthening youth-friendly SRH/ANC services, increasing contraceptive access for non-pregnant clients, providing post-violence care with PEP, and testing of partners. Two districts, Gaborone and Kweneng East, will receive assistance to provide post violence care, PEP, PrEP and contraceptive services to AGYW.

To address the long EID turnaround, the IP has introduced log books to track DNA PCR specimens and results, in a bid to strengthen management of sample transport systems at the site level. Facility and community based IPs will work collaboratively to strengthen patient linkage and referrals, including for orphan and vulnerable children (OVC) programs. Strengthening systems for tracking patients to ensure linkage and coordination of community and facility staff in documenting linkage will be emphasized. Joint SOPs for linkage and client literacy packages are being finalized in FY17.

Addressing partner performance in COP17 will include data triangulation of key MER indicators, SIMS findings, and budget/expenditure data, as well as combined group and individual partner meetings.

4.4 HIV Testing and Counseling (HTS)

More creative and targeted case identification efforts are needed for Botswana to reach the 90-90-90 targets. Lessons from BCPP have demonstrated that high rates of linkage to care can be achieved through integration of appropriate counseling messages about rapid ART initiation at the time of diagnosis, as well as enhanced tracking of HIV-positive referrals through home visits and phone calls.

An analysis of available data has identified sub-populations by gender, age and scale-up SNU that have the highest number of PLHIV who are unaware of their HIV status as reflected by ART coverage (See Table 4.4.1 below). The gap in ART coverage shows that fewer young women than men, aged 15-24, are on treatment and therefore do not know their status. Targeting these young women is a priority for COP17. Among the older age bands, the percentage of older men (25+) not on treatment is significantly higher than that of older women and COP17 will prioritize efforts to find these older men and link them to ART. Gaborone has the vast majority of PLHIV but low ART coverage across the age bands.

Table 4.4.1: Estimated HTC_POS Targets by gender, age and Scale up SNU

	<15 Male			15-24 Male			25+ Male		
Scale-up SNU	Coverage	Gap	COP17 Target	Coverage	Gap	COP17 Target	Coverage	Gap	COP17 Target
Greater Gaborone	76%	369	202	52%	1,563	1,225	60%	20,443	15,055
Mahalapye	53%	134	68	61%	234	98	67%	3,167	1,162
Southern	100%	0	0	71%	108	26	72%	1,614	603
Goodhope	100%	0	0	100%	0	0	100%	0	0
Total (Males)	**78%**	**504**	**270**	**58%**	**1,905**	**1,350**	**64%**	**25,223**	**16,820**

	<15 Female			15-24 Female			25+ Female		
Scale-up SNU	Coverage	Gap	COP17 Target	Coverage	Gap	COP17 Target	Coverage	Gap	COP17 Target
Greater Gaborone	78%	297	146	44%	4,037	3,309	89%	6,546	5,434
Mahalapye	64%	99	45	62%	549	200	92%	1,041	709
Southern	100%	0	0	56%	371	92	98%	141	101
Goodhope	63%	54	21	44%	430	177	66%	2,238	1,454
Total (Females)	**77%**	**450**	**212**	**47%**	**5,387**	**3,778**	**89%**	**9,966**	**7,698**

	Total		
Scale-up SNU	Coverage	Gap*	COP17 Target
Greater Gaborone	74%	33,256	25,372
Mahalapye	79%	5,223	2,281
Southern	85%	2,208	824
Goodhope	79%	2,119	1,652
Total	**76%**	**42,806**	**30,129**

- 56% of COP17 positive HTC targets are among Males 25+
- 84% of COP17 positive HTC targets are in Greater Gaborone Cluster

Coverage: % of positives aware = End of 2017 Sub National PLHIV on ART estimates / PLHIV estimates
Gap: Number of unaware positives = End of 2017 PLHIV Sub National estimates – PLHIV on ART estimates.
*Total Gap is less than total by age/sex because ART estimates slightly exceed PLHIV estimates for some small SNU/age/sex .

As part of efforts to aggressively scale-up targeted testing, PEPFAR/B has developed strategies to achieve FY17 targets among populations with the highest ART gap (Table 4.4.2). The strategies include expanding Provider-Initiated Testing and Counseling (PITC) in facilities to screen and test STI patients, presumptive as well as confirmed TB patients, patients in inpatient-wards and additional targeted testing in outpatient departments. Index testing will be expanded to identify partners and families of HIV-positive clients in both community and facility settings and

expanding services for key populations and priority populations. These strategies will continue in COP17 with a focus on identifying HIV positives in Gaborone (84% of COP17 target is in Gaborone).

The following strategies will be employed to increase our case-detection rate among the identified age and sex bands in each scale up SNU (Table 4.4.2):

Table 4.4.2 Entry Streams for Adults and Pediatrics Newly Initiating ART Patients in Scale-up Districts

HTS modalities	COP 17 Targets: Tested for HIV (HTS_TST)	COP 17 Targets: Newly Identified Positive (HTS_TST_POS)	Expected Yield (%)	COP17 UE	Expected cost per positive identified*** *	Newly initiated on ART (APR 18) *TX_NEW*
Adults						
Pregnant Women	13,472	774	6%			1,013
PITC: Index	15,738	2,360	15%	11.57	$ 77.16	2,124
PITC: inpatient	59,730	8,064	14%	11.57	$85.70	7,258
PITC: TB	5,588	686	12%	11.57	$94.25	617
PITC: Presumptive TB*	12,898	1,583	12%	11.57	$94.27	1,447
PITC: STI**	1,916	152	8%	11.57	$145.84	139
PITC: Emergency Dept***	958	76	8%	11.57	$145.84	70
PITC: Other	14,085	467	7%	11.57	$159.74	429
PITC: VCT Co-located†	65,952	5,330	8%	11.57	$144.63	4871
VCT	8,240	450	5%	10.88	$199.22	405
CTBC: Home-based	27,567	1,943	7%	13.49	$199.39	1,749
CTBC: Index	15,738	2,360	15%	13.49	$89.96	2,205
CTBC: Mobile	100,016	5,937	6%	13.49	$227.26	5,343
CTBC: Other	13,639	682	5%	13.49	$269.78	614
Self-Testing	8,000	400	5%	13.49	269.80	360
Previously diagnosed / in care	n/a	n/a		n/a	n/a	755
Total Adults	**363,537**	**31,265**	**9%**	**n/a**		**29,399**
Pediatrics (<15)						

HIV Exposed Infants	3,810	22	1%	n/a	N/A	21
Other pediatric testing	43,364	815	2%	n/a	n/a	734
Previously diagnosed and/or in care	0	0		n/a	n/a	0
Total Pediatrics	**47,174**	**837**	**2%**	**n/a**		**755**
Total	**410,711**	**32,102**				**30,154**

* 2015 National TB Program data indicate that for every TB case there are 2.3 presumptive TB cases.
** RHT program data, 2016, estimates 2% of the original "other" PITC are STI patients.
***1% of OPD are from Emergency dept based on data from Princess Marina
****Cost per positive identified was determined by total number of tests to be performed in APR18 by each modality multiplied by the expected UE for COP17 by modality divided by the total number of positives to be identified by the modality (% yield).
†PITC other was split into PITC Other and VCT Co-located based on FY17 results from the facility based implementing partner. Results should that at least 20% of positives identified in the facility were from walk-in patients.

1. **Refined PITC plans**
   - Screening of presumptive TB patients for HIV: Most presumptive TB patients are seen in consulting rooms by clinicians (nurses and doctors). Ideally, the consulting clinician should offer and perform HIV testing at the point of consulting with the patient. Testing presumptive TB patients will reduce the risk of not finding TB patients who do not complete their TB work-up and will identify sick patients who do not have TB but may have another HIV-associated pulmonary or disseminated infection.
   - Testing of TB patients: Available program data shows 13% yield for testing of TB patients. A COP17 priority is to ensure all TB patients are offered an HIV test. Additionally, providers will review TB registers and clients cards to ensure that patients have documented HIV status. Those without documented status will still be offered HIV testing.
   - Adolescent Girls and Young Women: Although young women (15-24 years) have a high HIV risk, many have low access to HTS services and are unaware of their HIV status. A COP17 strategy will involve routinely offering this group PITC services at youth-friendly clinics within public facilities. COP support will also include making services easily accessible to this subgroup by offering appropriate hours of operation including weekend testing services. Training will also be supported to ensure facilities are staffed by providers trained to meet the needs of the youth.
   - Promoting male partner testing: Available program data shows men are less likely to seek services at health facilities. Voluntary assisted Partner Notification services will be integrated into facility-based testing to specifically target older men (25 years and older) who are often the partners of 14-24 AGYW. PEPFAR will also support piloting self-testing as a strategy for optimizing case detection among these high risk men. To increase HIV

testing among their partners, women in antenatal care, postpartum care and high risk AGYW will be given self-tests and instructions for testing their sexual partners. Linkage will be facilitated by providing the name and phone number of contact person and facility where services for both confirmation testing and linkage to care can be sought.

- Screening STI patients: Botswana implements a syndrome management approach in the management and treatment of STIs. This approach places very little emphasis on HIV testing. For instance, of the approximately 263,794 tests performed through PITC in 2016 only 1% reported STI as reason for testing. In COP17 the HIV testing of STI patients will be prioritized.
- Expanding inpatient testing: Currently, routine HIV testing among inpatients is offered to patients with symptoms consistent with HIV infection. This approach is inadequate in the identification of patients who are unaware of their infection, like men who may be admitted for non-HIV related trauma. In COP17, funds will support activities for expanded inpatient testing including review of patient cards to identify those who have never tested.
- HIV testing at Accident and Emergency: Accident and Emergency (A&E) departments are important locations for case detection as these may be the only place where many medically underserved persons at risk for HIV, especially older men, seek care. Through the placement of HCA at A&E department, testing of pregnant women including those who present in labor untested and whose HIV status is unknown will be prioritized for testing.

2. **Expanding Index Client Partner Testing** to identify partners and families of HIV+ clients to offer testing services and linkage to care in both community and facility settings. PEPFAR implementing partners will prioritize elicitation of 25+ males and their female 15-24 partners. This will include implementation of voluntary Partner Notification services for facility tested clients. The facility based partner will collaborate with community testing partners to relay information about any needed community based testing for partners who fail to show up at health facilities for testing.

3. **Scaling services for KP and priority populations (PP)** to identify partners of KP and PP clients in both community and facility settings will be implemented as will identification through social networks and targeted community-based outreach with prioritization of males and 15-24 females. These will be offered testing services and linkage to care. To increase high positivity-yielding HTS, the KP program will adopt an acceleration campaign model where clients recruited in the campaign are followed up through personalized peer mobilization (This uses a case-management approach). This strategy uses a chain referral method involving coupon distribution through peer mobilizers and peer outreach worker networks.

4. **Linkage to Care**: To ensure linkage to care, all HTS implementing partners are now required to counsel on treatment readiness and actively link clients to treatment. Facility and community IPs will track identified HIV-positive persons and trace those who fail to keep

appointments in the community to ensure they register and start treatment. Implementation of active linkage to care by BCPP has demonstrated that high rates of linkage to care can be achieved through tracking HIV-positive referrals who keep appointments and tracing those who do not through home visits and phone calls.

HTS target setting strategy

As part of COP planning, the team developed an HTS resource allocation optimization model to ensure that the COP17 HTS targets would be ambitious yet affordable and reasonable. To identify the most cost-effective approaches by SNU, we ranked the "Expected cost per positive identified" (5th column in table 4.4.2 above) in increasing order. Analysis of the model results suggests that given the large number of visits to healthcare facilities and the low cost per positive test, the number of clients who can be reached for HTS within facilities should be expanded with focus on maximizing modalities with the highest yield. We are increasing HTS coverage in inpatients wards, expanding testing of TB patients to include presumptive cases (for every TB case there are >4 presumptive case and HIV yield is the same) and introducing HTS for STI patients and in Emergency Departments (ED). Index partner testing will be expanded using strong collaboration between facility and community partners in order to reduce the cost per person tested (i.e. partners who come into the facility for testing will be less costly than those who will need to be followed-up at the community level). Index partner testing with active referrals and tracking will be a key for reaching male partners. Lastly, targeted community based approaches complimented by self-testing are essential for priority and key populations who do not typically present in healthcare facilities.

Table 4.4.3 below summarizes the distribution of tests and newly identified positives targets by modality for COP16 versus COP17. In COP17, we have optimized our testing strategies by focusing CBTC away from standalone VCT while maintaining PITC that identifies the largest proportion of positives at the lowest cost. The few remaining standalone VCT targets for COP17 reflect an integrated approach to VCT incorporating FP, STI and TB screening. The strategy will reach a proportion of AGYW, young males (15-24) and adult males (25+).

Table 4.4.3 Distribution of Tests and Newly Identified Positives targets by Modality (COP 16 vs. COP 17)

	% Tested for HIV		% Newly identified	
Modality	**COP 16 Target**	**COP 17 Target**	**COP 16 Target**	**COP 17 Target**
PITC	54.9%	57.1%	65.2%	63.2%
CTBC	29.2%	40.7%	23.1%	35.3%
VCT	15.9%	2.1%	11.7%	1.5%

Assuring the Quality of HTS

SIMS findings indicate several issues related to the quality of HTS, including limited participation in proficiency testing (PT) and poor compliance with the HIV testing algorithm. COP17 will support the ongoing roll-out of proficiency testing (through Botswana Quality Assurance Lab) in

both community and facility settings. Additional quality assurance strategies that will be supported including re-testing of HIV-positives for verification prior to ART initiation, training and certification of HIV providers on the new serial testing algorithm, and conducting lot verification and post-marketing surveillance.

Implementation of self-testing in the context of the Revised Botswana HIV testing guidelines

Through COP17 support, HIV Self-Testing (HIVST) and voluntary assisted partner notification services will be piloted in both community and facility settings. For key populations programming in Greater Francistown, Chobe, Selebe-Phikwe and Gaborone self-testing will target 4,000 female sex workers and sex partners through social network testing strategy. The approach will involve enlisting (both HIV-positive and HIV-negative) FSWs to recruit network associates and regular sex partners to participate in HIV self-testing and linkage to treatment. FSW presenting at drop in centers or reached through hot spot testing will be given self-test kits and clear instructions how to use the test-kit to provide to their associates and regular sex partners.

To increase identification of HIV-infected AGYW in DREAMS districts of Gaborone and Kweneng east, 4,000 at risk AGYW and their sex partners will also be targeted through self-testing using epidemic control funds. AGYW in antenatal care, postpartum care and high risk AGYW will be given self-test kits to distribute to their sexual partners who in most cases are older men 25 years+.

As part of the instructions package, it will be explained to patients that self-testing is a screening test and does not itself provide an HIV diagnosis and thus individuals whose self-tests are reactive (indicating that they may be infected with HIV), will need to seek further verification testing at a health facility. To improve linkage to care, brochures and flyers will be distributed together with HIVST kits containing information on HIV testing services, HIV prevention, treatment and care. The name and phone number of the contact person and facility where services can be sought will also be provided. Contact details for the client provided with the self-test kit will be collected and used for follow-up by the facility health education assistant (HEA) in the case of public health distribution and community-based follow-up by peer and outreach workers (in-person or via telephone/text messages) will be used where HIVST kit distribution was done in community settings.

Referral of HIV negative people to PrEP, VMMC and DREAMS-like activities as appropriate

Implementation of HTS, in Gaborone and Kweneng East to support DREAMS-like activities, will be key to reaching the DREAMS goals. Support includes active linkage from HTS to VMMC, and using VMMC as an approach to involve men in reducing HIV infection in AGYW. Additional HTS support for DREAMS-like activities will involve skills training and education about condoms for

individuals and group sessions of men to increase use, as well as providing AGYW with the skills to negotiate condom use. Support for PrEP uptake by integrating messaging in HTS counseling sessions and linking at-risk AGYW to health facilities in public and nonpublic settings will also be prioritized.

Addressing partner performance in COP17 will include data triangulation of key MER indicators, SIMS findings, and budget/expenditure data, as well as combined group and individual partner meetings.

4.5 Facility and Community-based Care and Support

In COP17, PEPFAR/B will support reaching attainment across all scale-up SNUs. Technical assistance will be provided to support implementation of best practices at facility and community levels, and increased focus will be placed on strong linkages between facilities and communities to ensure a quality continuum of care for all health services. For example, once a clinic receives referrals of newly identified HIV+ persons or referrals from community programs, the linkage coordinator will track referrals to ensure appointments are kept. Those who do not keep appointments will be referred to the health education assistant or the community partner health worker for tracing and re-appointing.

Due to low treatment achievements in Q1 of FY17, PEPFAR/B is working with IPs and the MOHW to develop strategies for improved case identification in facilities and communities, as well as treatment initiation in facilities, to close the new on ART achievement gap. Strategies being developed by partners and DHMTs include:

- Tracking HIV infected patients to ensure linkage and coordination of community and facility staff in proper documentation of linkage. To ensure that linkage to care takes place several steps are taken:
    - After testing positive, the patient receives a referral slip from the HTC partner to link them to the facility; at the facility the referral slip is passed to the facility HCW who records in the facility register that the patient has been enrolled in care and signs and stamps the referral slip. A copy of the slips is left at the facility, and the patient is encouraged to return the other one to the HTC partner that will indicate that linkage has been established.
    - An HTC partner visits the facility to record the number of patients linked to treatment by reviewing both the collected slips and entries in the facility register.
    - If no record of an HIV positive patient is found at the facility (suggesting no linkage), the HTC partner will follow up with the patient by calling, conducting a home visit, and or accompanying client to the facility ensure linkage has been completed.
- Rapid ART initiation for patients who are not sick with complete clinical evaluation for those who are sick;

- Training nurses in ARV drug prescribing and dispensing, resulting in at least one nurse per district providing same day ART initiation services;
- Introducing afternoon and evening/weekend clinic hours to allow for ART initiation appointments, seeking especially to be attractive to working men and to adolescents;
- Introducing youth-friendly services aimed at secondary and tertiary school clinics to test and provide ART;
- Multi-month scripting and dispensing of treatment;
- Immediate linkage to treatment of HIV positive blood donors;
- Re-training key population Peer Outreach Workers to equip them with skills in treatment education and clinical navigation; and
- Support of the Information Education Communication (IEC) strategy through the printing and dissemination of client literacy packages in facilities and communities to improve patient knowledge on early treatment initiation and virologic suppression.

In COP17, the implementation of active linkage to treatment and care for newly diagnosed patients will be a key focus for PEPFAR/B, supported by SOPs developed and adopted by PEPFAR/B facility and community IPs.

A community-based package of services aimed at supporting both pediatric and adult care for fast-tracking ART initiation will include:

- Active linkage to treatment for newly diagnosed patients
- Patient tracking for previously diagnosed clients
- Demand creation
- Treatment literacy
- ART readiness to support same day initiation
- Community PMTCT
- FP as an entry point to HTC and care and Treatment

Community-based partners will implement alternative service delivery models to decongest facilities and allow for rapid initiations, address barriers to initiation and adherence and improve patient-centered focus (see Section 6.2). Introduction of innovative approaches to service delivery, with reduced frequency of clinic visits, multi-month drug pick-ups for stable patients, and increased availability of services in the community will be introduced to improve retention while also reducing wait times.

To support retention and viral suppression, implementation of a comprehensive set of community-based care and treatment interventions tailored to the recurring needs of PLHIV will be of central importance. Adherence counselling will be implemented at community level for the most vulnerable clients, particularly following virologic failure. Use of peer counselors and reminder mobile phone text messages will be employed. Other key activities will include increased patient literacy on verification testing, same-day treatment initiation without waiting for baseline lab results, adherence to treatment and viral load suppression. Positive Health Dignity Prevention (PHDP) minimum package, pharmacovigilance, especially for patients newly

initiated on ART and unstable patients, and TB/HIV integrated services will also be key in promoting retention and viral suppression. Family Planning (FP) will be used as an entry point to HTC and care and treatment services M&E systems will also be improved by adopting electronic data collection by community IPs with reporting to the data warehouse to enhance feedback between community and facility partners.

Botswana is a Pink Ribbon Red Ribbon (PRRR) country. The PRRR funding for the support of cervical cancer activities ends in Q2 FY18. In COP17, PEPFAR/B through technical assistance (training and mentoring) will continue to support the scale up of secondary prevention of cervical cancer through the screening and same day treatment of pre-cancerous lesions using visual inspection with acetic acid and cryotherapy, LEEP services for large lesions. There are currently 20 sites providing cervical cancer "see and treat" services across both scale up and sustained PEPFAR/B SNU's. PEPFAR/B will also provide TA for the national roll out of the HPV vaccination. From FY 17 through FY18, a demonstration project will consider the use of molecular testing of HPV DNA testing. Furthermore, Quality Improvement (QI) teams will work closer with IPs at the community and facility level to improve the systematic linkage, retention and adherence to HIV care.

4.6 TB/HIV

The estimated TB incidence in Botswana continued to decline between 2013 and 2015. The incidence in 2015 reduced to 356/100,000 from 385/100,000 in 2014. Despite this, the 2015 incidence corresponds epidemiologically to an annual risk of infection (ARI) of 0.4% and thus Botswana still remains a high TB risk country.[19] Botswana has high rates of TB transmission as indicated by the NIH-funded Kopanyo study, which showed 49%-69% clustering of cases.[20] Sixty percent (60%) of TB patients are HIV-positive[21] and TB is responsible for 40% of deaths in this group, making TB the current leading cause of death in PLHIV (though recent local evidence from Botswana Harvard Project suggests cancer may overtake TB as the leading cause of death).

Early access to ART and isoniazid preventive therapy (IPT) greatly reduces the incidence of TB and improves outcomes among PLHIV. Diagnosing TB early among PLHIV and providing appropriate treatment improves viral suppression and outcomes among the dually infected. However, the potential benefits from these interventions are not fully realized in Botswana as many TB cases remain undiagnosed. TB case detection is 62% nationally and identification of presumptive TB cases has only started in Fy17 after review of registers with partner support. In FY16, 94% of registered TB patients in PEPFAR-supported facilities knew their HIV status, slightly higher than the national average of 91%, and only 78% of diagnosed TB/HIV patients were initiated on ART at par with the national average. GoB has not yet adopted an IPT policy

[19] Enarson 2004, WHO Global TB report 2015 and 2016
[20] Unpublished Kopanyo Study
[21] Botswana National TB Program NTP 2014

consistent with WHO or PEPFAR guidance although a technical working group did recommend this to MOHW via the Deputy PS, Prevention, in the last 2 years.

In COP17, district-level TB/HIV programming will continue among PLHIV and presumptive TB patients in all seven SNUs (scale-up and sustained). Facility-based TA interventions will be implemented in 94 facilities, to support identification of presumptive TB cases and to link these cases to HIV testing services and evaluation for TB using Xpert MTB/RIF, a rapid molecular TB diagnostic test. Those identified to be TB/HIV co-infected will be linked to care to ensure they initiate ART and CTX prophylaxis. Support will also be provided to facilities to optimize implementation of TB IC in order to reduce TB transmission in facilities and contribute to reduction in TB incidence and improve viral suppression rates. The partner will enhance collaboration with other organizations through joint planning, coordination and sharing of data.

Strengthening of M&E systems for TB/HIV will continue through the operationalization and utilization of an Open Medical Records System (OMRS) at the district level for reporting and patient management at PEPFAR-supported facilities. OMRS will be expanded to also capture presumptive TB cases that will be targeted for HIV testing. Support for OMRS is to avail patient level TB/HIV information and through the data warehouse assess linkage of co-infected TB patients to HIV care and treatment as well as ascertain their final outcomes. (Please see Appendix F for additional details).

The GoB engages a wide range of stakeholders, including community-based organizations, to implement TB activities at the community level. While diagnostic tests for TB continue to be performed in clinical settings, community-based TB activities are conducted outside the premises of formal health facilities in community. The CTB/HIV package includes HTC for TB patients and their families; fast tracking/referral of PLHIV with TB for initiation into ART; intensified case finding through regularly screening for TB among PLHIV; contact tracing for family members and contacts; linking patients to HIV and TB treatment and care services; promotion of adherence and retention in TB/HIV care; administering family supported DOTS; community sputum collection; community refill of isoniazid prophylaxis for children on IPT; tracing and linking TB defaulters back to care; and providing TB/HIV health education to empower clients, family members and the community to understand and cooperate in TB/HIV control efforts.

PEPFAR/B continues coordination and TA support for the national TB program at the MOHW level and the National Tuberculosis Reference Library (NTRL). In COP 17, TA will support mentoring, supportive supervision and training to optimize GeneXpert and GxAlert implementation, ensuring that the national algorithms and guidelines are implemented properly. PEPFAR/B will support development and integration of pharmacovigilance for new TB drugs and new treatment regimen (Bedaquiline and delamanid) and DTG in facilities. Strong monitoring of the possible side effect of those two drugs is essential. PEPFAR/B will also support an M&E staff position to the Botswana National TB Program (BNTP).

Support will also be directed at interfacing GxAlert with other information systems within the MOHW and provision of buffer stock for TB Xpert cartridges. Focused TA will also continue to be channeled towards the TB prevalence survey combined with the National HIV survey (BAIS), towards data analysis, dissemination of the results and data use. It is envisioned that the TB/HIV prevalence survey findings and recommendations will inform the development of the TB/HIV strategic plan (2018 – 2022) which will also be supported through PEPFAR/B in COP 17.

Addressing partner performance in COP17 will include data triangulation of key MER indicators, SIMS findings, and budget/expenditure data, as well as combined group and individual partner meetings.

4.7 Adult Treatment

In COP16, a site refinement exercise resulted in new service delivery sites within the priority districts. In COP17, PEPFAR/B care and treatment program will continue operating in these refined sites, supporting 68 high-volume sites and communities in four scale-up SNUs and the six key population hotspots where the IP will provide KPs with ART in Gaborone, Francistown, Maun (Ngamiland), Selebi-Phikwe, Serowe/Palapye and Chobe. (See Map, Figure 3.1)

On June 3, 2016 the GoB launched "Treat All," an initiative that supports the provision of ART to all PLHIV regardless of CD4 count. Since the national introduction and roll out of "Treat All," the country has observed a doubling of new treatment initiations each month. If appropriately implemented and all challenges are addressed in a timely manner, "Treat All" should support the achievement of FY18 targets. The national roll-out of Treat-All faced challenges including stock-out of rapid test kits, baseline labs delaying rapid initiation of treatment, introduction of DTG to the ART formulary which providers – especially nurses – were not comfortable prescribing, and more importantly poor client literacy of early treatment because there was no Information, Education and Communication (IEC) campaign for communities.

The majority of adult treatment activities for the general population are targeted technical assistance (TA) at the facility level while for key populations treatment is through direct service delivery. In FY 17, the KP implementing partner will support select government clinics for quality improvement and stigma reduction. These sites will count as TA centers for the KP program.

As a means of improving treatment initiations, COP17 TA will be tiered to include support in scale-up locations for temporary site-level positions such as ARV nurse prescribers, pharmacy technicians, and/or M&E clerks. Tx_New achievement in Q1 FY17 was at 8%, while in APR16 was only at 30%. Due to this low achievement, PEPFAR/B in collaboration with IPs and MOHW officials have developed strategies for case identification and treatment initiation to catch up with the achievement gap. These strategies are listed in detail in Section 4.5.

The implementation of active linkage to treatment and care for newly diagnosed patients will be a key focus for PEPFAR/B in COP17, as well as coordination of facility staff in documenting referrals

and linkage. Referrals of newly identified HIV+ persons or from community programs will be tracked by the linkage coordinator to ensure appointments are kept. Treatment for KPs and refugees will also remain as core interventions. In FY18, 37,780 new treatment initiations will be made through the combined DSD and TA treatment program efforts. The DSD component for the Dukwi refugee program accounts for less than 5% of the overall target. The proposal for GoB to take over responsibility under limited PEPFAR financing was made to the MOHW.

Community-based interventions aimed at supporting fast tracking ART initiation will include ART readiness through adherence counselling, psycho-social support and treatment literacy. Active patient tracking for previously diagnosed clients and linking clients back to treatment will be another key activity for advancing the enrollment of patients into treatment. Community-based partners will also implement alternative service delivery models to decongest facilities to allow for rapid initiations, address barriers to initiation and adherence and improve patient-centered focus. Innovative approaches to service delivery, with reduced frequency of clinic visits, multi-month drug pick-ups for stable patients, and increased availability of services in the community will be introduced to improve retention while also reducing wait times. Introduction of these new approaches will be done in close coordination with DHMTs, facility and community IPs, and communities themselves to ensure that the approach is patient-centered. Ongoing quality improvement work with partners and communities will additionally address modifications to maximize success.

PEPFAR/B will also support the development and implementation of the pharmacovigilance system at facilities to monitor outcomes and adverse events of related medications, including Dolutegravir (DTG); support for development of opportunistic infection operating procedures for screening, triaging and appropriate management including laboratory investigation; support of the review of the viral load (VL) cascade, with special emphasis on improved turnaround time (TAT) and utilization of VL results; and creation of a sustainable community health system built on tiered community health worker cadres such as Health Education Assistants (HEA) with responsibility for facility-to-facility and facility-to-community linkage, tracking, and support. To support retention and viral suppression, implementation of a comprehensive set of community-based care and treatment interventions tailored to the recurring needs of PLHIV will be of central importance. Interventions such as use of peer counselors, mobile phone text messages, home visits have demonstrated improved adherence, and will be employed.

PEPFAR/B will continue collaboration with the GoB to support a sustainable community health worker system. . A key step in this work is to finalize the development of the Community Service Delivery Integrated guidelines for GoB and support the government to develop other community integrated tools supporting the guidelines e.g. SOPs, IEC, M&E tools, curriculum, strategy document.

The COP17 PEPFAR/B treatment program as part of the DREAMS-like activities will introduce the provision of post-exposure prophylaxis (PEP) for victims of gender-based violence (GBV) as well as PrEP for FSWs, MSM and AGYW in Greater Gaborone. Implementing partners will provide

assistance to ensure family planning services are integrated within HIV/AIDs service points to promote access and generate demand for HTC and HIV care and treatment, as well as youth friendly clinics in Greater Gaborone district.

Addressing partner performance in COP17 will include data triangulation of key MER indicators, SIMS findings, and budget/expenditure data, as well as combined group and individual partner meetings.

4.8 Pediatric Treatment

Despite relatively low EID rates, the PMTCT program appears to be effective and few Batswana children are identified as HIV-positive. APR16 showed that 13 HIV exposed infants became infected in scale-up districts (MTCT rate of 0.7%), and all were enrolled in treatment. Currently, 8,539 children under the age of 15 are living with HIV. By the end of FY16, there were 8,456 children on ART, representing 99% of the estimated PLHIV in the age group.

PEPFAR/B will continue pediatric treatment activities including targeted TA at the facility level, DSD for pediatric care and support at the community level, and treatment for refugees. At the community level, pediatric treatment and support interventions are supported by one IP in all scale up districts.

PEPFAR/B will work to increase and maintain the coverage of ART for children and adolescents living with HIV in PEPFAR scale-up areas. The FY18 target for children age <15 is 658, and those 15-24 is 571 for both males and females. PEPFAR/B will use appropriate community-based interventions including maximizing the use of community-based youth friendly services, integration of SRH and FP, teen clubs, PLHIV support groups and networks. Focus will also be on providing community-based support for linkage/enrollment into treatment, with a focus on the utilization of community health workers (CHWs).

The PMTCT program will be strengthened with an aim to commence pre-validation activities for elimination of mother to child transmission (eMTCT) of HIV and syphilis in Botswana. PEPFAR/B will foster engagement of the community, and in particular, target adolescents living with HIV through peer-support approaches, tracking LTFU, follow-up for viral load testing and assessment of clinical and psychosocial needs, with linkage/referral to other services including cotrimoxazole prophylaxis, routine TB screening and IPT. Since children and adolescents on ART are less likely to achieve virologic suppression, focus will be placed on adherence, retention and prevention of further transmission. PEPFAR/B will support adolescent peer-based programs and services providing a transition plan to adult services. At the community-level, PEPFAR/B will support efforts to improve linkages between pediatric care and treatment, PMTCT and OVC programs ensuring few children diagnosed HIV-positive are linked to and retained in care, and those who need OVC interventions benefit.

PEPFAR/B will support the smooth and seamless transition of adolescent care to adult care to minimize loses and fatalities during this period. Activities will include and not be limited to

printing and dissemination of *Teen Talk* booklets. These activities will be scaled up during COP17 implementation. Targeted TA will provide support to HCW to ensure there is a timely drug switch for patients failing their current treatment regimen. This will lead to virologic suppression and therefore addresses the Third 90.

Addressing partner performance in COP17 will include data triangulation of key MER indicators, SIMS findings, and budget/expenditure data, as well as combined group and individual partner meetings.

4.9 Orphans and Vulnerable Children (OVC)

For COP17, we will continue implementing a program that uses a mix of DSD and TA to deliver services to OVC and their family members in four scale-up SNUs. In FY16 (COP15), the program performed very well with implementation led by Peace Corps (TA) and PCI (DSD).

Challenges experienced in OVC had to do with the DSD project ending service delivery in June to prepare for a September 30, 2016, close-out. While the project had over-achieved on their COP15 targets, their FY16 achievements could not be reported in DATIM at APR as beneficiaries were not served in Q4 with PEPFAR support. FY17 Q1 was spent on administrative aspects of project start-up, including sub-partner agreements and trainings with beneficiary enrollment starting in Q2.

Despite the gap in coverage, some service delivery to the target population was provided by Peace Corps, which places volunteers in, NGOs providing day care services, Social and Community Development Offices strengthening OVC services, as well as schools. Volunteers and their counterparts have been trained in the *Journey of Life* methodology used by the government to mobilize the community to meet the needs of children and provide psychosocial support to OVC and their families.

In COP17, the program will continue to work at the family and community level providing socio-economic interventions critical to mitigating the impact of HIV/AIDS and providing a platform for various interventions including DREAMS-like activities for girls aged 10-17, their family members, and the communities in which they live. For younger age groups, early childhood development services are used as a platform for ensuring access to other health programs, including immunizations and nutrition for children under five, and promoting adherence to care and treatment by working with parents and assisting them to adhere to clinic appointments. Services targeting adolescents aged 10-17 years will focus on HIV risk avoidance as well as GBV prevention and response. Activities will be delivered in schools, homes and communities at large. Examples of services targeting the 10-17 age-group include violence prevention, support for school enrollment, retention and progression, social asset building, linkages to GoB-offered social protection programs, financial literacy and ready to work programs, linkages to prevention and HTS for those identified as being highly vulnerable to HIV acquisition, and to care and treatment for those that tested HIV positive who are either not on treatment or have been identified in the home as defaulting. In terms of GBV prevention, there will be community mobilization efforts to increase awareness of existing social protection policies and laws and to work towards changing

community norms that contribute to HIV infection and infliction of violence on others. Survivors of violence will be linked to clinical post violence care and provided with continued support at family and community level. To support and strengthen parents in the day to day parenting, the OVC program provides parent/caregiver programs and household economic strengthening interventions.

In COP17, Peace Corps Botswana will expand its programming focused on AGYW through the *Let Girls Learn* initiative, training volunteers and counterparts to address vulnerabilities and barriers that affect girls' success in education. For families, the program provides group based household economic strengthening such as savings groups for caregivers and links them to prevention, HTS and care and treatment services. The savings groups provide a platform for adherence support among the members. The OVC program continues to work in the gender and GBV space, increasing awareness at the community level through existing community structures including schools, addressing abuse, neglect, violence and existing national protective laws. Interventions also include identifying GBV survivors and linking them to clinical services and ensuring continued support from community programming.

Table 4.9.1 Targets for OVC and Linkages to HIV Services

SNU	Estimated # of Orphans and Vulnerable Children	Target # of active OVC (FY18Target) OVC_SERV	Target # of active beneficiaries receiving support from PEPFAR OVC programs whose HIV status is known in program files (FY18 Target) OVC_STAT
Greater Gaborone Cluster	30,143	10,677	9,131
Serowe/Palapye District	12,513	0	0
Mahalapye District	9,825	3,928	2,919
Greater Francistown Cluster	27,332	59	0
Southern District	6,943	1,690	1,510
Ngamiland District	7,444	50	0
Goodhope District	3,275	704	513
Ghanzi District	2,512	24	0
Chobe District	650	76	0
Bobirwa District	10,009	16	0
Hukuntsi District	463	14	0
Jwaneng District	425	26	0
Lobatse District	2,343	44	0
Okavango District	4,799	321	0
TOTAL	118,676	17,629	14,073

Notes: The sites with zero for OVC_STAT are sites where Peace Corps is working. Peace Corps will not be reporting on this indicator because of the TA nature of work they do. They do not have access to patients/beneficiary files.

4.10 Addressing COP17 Technical Considerations

a. Increased focus on prevention and care services for under 30 years old

Treatment coverage analysis shows that by the end of FY17, no districts will have reached attainment across all age and sex bands in priority SNUs (Table 4.10.1). Therefore, special emphasis will be placed in COP17 on prevention and care services for under 30s (both males and females), as well as older men, in the scale-up and sustained SNUs.

Table 4.10.1 Treatment coverage by age and gender (COP 16 to COP 17)

			<15 years		15-24 years		25 years +	
End of FY17 TX Coverage			**Male**	**Female**	**Male**	**Female**	**Male**	**Female**
Greater Gaborone	**ScaleUp Sat**		76%	78%	52%	44%	60%	89%
Mahalapye	**ScaleUp Sat**		53%	64%	61%	62%	67%	92%
Southern	**ScaleUp Sat**		113%	102%	71%	56%	72%	98%
Goodhope	**ScaleUp Sat**		129%	63%	292%	44%	120%	66%
Serowe/Palapye	**Sustained**		66%	99%	56%	57%	73%	131%
Greater Francistown	**Sustained**		90%	88%	90%	67%	76%	101%

			<15 years		15-24 years		25 years +	
End of FY18 TX coverage		**Overall**	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**
Greater Gaborone	ScaleUp Sat	88%	94%	94%	96%	96%	95%	104%
Mahalapye	ScaleUp Sat	84%	92%	106%	102%	103%	109%	144%
Southern	ScaleUp Sat	88%	113%	102%	94%	111%	92%	98%
Goodhope	ScaleUp Sat	89%	157%	91%	355%	83%	147%	92%
Serowe/Palapye	Sustained	101%	86%	119%	79%	80%	91%	157%
Greater Francistown	Sustained	89%	105%	102%	104%	78%	89%	117%

In COP17, PEPFAR/B will focus on the under 30s with best practices aimed to ensure quality of services in prevention, care and treatment, including:

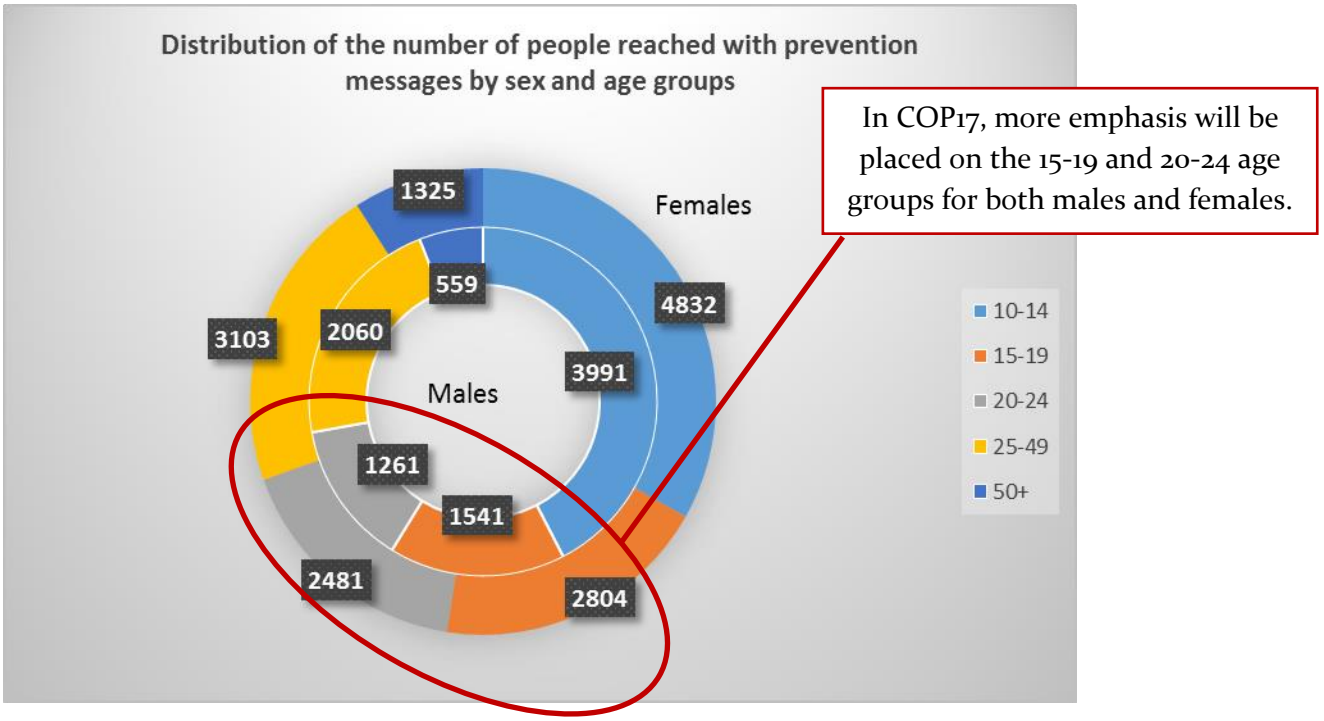
- Development of systems and tools to facilitate active case finding and ensure effective linkage to treatment for young men, adolescent girls and young women (e.g. prioritizing men in queues and extended working hours/weekends to cater for the working group of young men).
- Fast tracking treatment will support linkage and reduce loss between testing and treatment initiation across all ages and sex bands.
- Implementing PrEP and PEP through the DREAMS-like initiatives to at-risk populations such as AGYW, FSWs and MSM (the DREAMS-like core interventions for this age group will be implemented in the scale-up SNU of Greater Gaborone); and Improved service delivery through the use of :

- Workplace outreaches targeting men such as construction sites to provide test and start services;
- Secondary and tertiary school-based clinics offering test and start services to young men and women under 30;
- Multi-month scripting for stable young men and women to improve retention;
- One stop shop for tracking of mother-infant pair (MIP) and introducing HIV-exposed infant cohort registers;
- Use of social media platforms to reach out to young men and women under 30.

According to BYRBSS II (2016), just 41.1% of students had reported ever taking an HIV test, and 16.6% had been tested in the last 12 months. The study indicated that 22.3% of students had had sex. Among the sexually experienced students, 71% reported their sexual partner being five years younger or older than them. Further, 13.4% of female students reported having been pregnant.

In past years, the AGYW program had been reaching more youth in the 10-14 year range, resulting in low HIV yield in the prevention cascade. The approach has been revised and the program is currently targeting older youths 15-24 years. This, coupled with individualized risk assessment with a tailored risk reduction plan, has improved the HIV yield among tested youth to 4.5%.

Figure 4.10.1 Distribution of people reached with prevention messages in COP16 by age and gender



VMMC

To have the most impact in COP17, PEPFAR Botswana VMMC program will be predominantly implemented in the four scale-up SNUs: Greater Gaborone, Mahalapye, Southern and Goodhope. These four SNUs account for 80% of the total COP17 VMMC target. Given COP16 success in execution of the age pivot, PEPFAR/B will continue to prioritize males aged 15-29 years for VMMC and demand creation activities. Through school holiday campaigns, services will also be offered to boys aged 10-14 years using age-appropriate surgical techniques, and men aged more than 30 years will also be offered services on a walk-in basis. Three scale-up districts are expected to be approaching saturation (80% coverage) by the end of COP 17. The PEPFAR/B VMMC program includes the WHO recommended minimum package of services. To address WHO recommendations on tetanus immunization, and comply with PEPFAR requirement, provision of circumcisions using elastic collar compression devices have been suspended and providers refreshed on clean care approach, injection safety for VMMC service delivery, and early recognition and management of adverse events.

b. ***Increased testing yield and improving testing modalities***

To increase testing yield, PEPFAR/B HTS program will scale up high-yielding modalities focused on case identification in PLHIV high burden districts and, using epidemic control funding, among low coverage age-sex bands in sustained districts as described below. Analysis of both national and program ART data reveals that the gap in ART coverage (PLHIV not aware of their status) is higher in young women aged 14-24 than their male counterparts.

Among the older age bands, the trend is reversed with more men 25 years and older (who are often sexual partners of 14-24 AGYW) not on treatment as compared to females in that age group. As part of efforts to aggressively scale-up targeted testing, the team has developed appropriate strategies for case identification in these populations with the highest unmet need for testing and treatment. The strategies include expanding PITC beyond ANC to screen and test eligible clients seen in STI clinics, in-patient wards, presumptive TB patients and at-risk patients presenting at outpatient departments to increase identification of new positives; expanding index testing to identify partners and families of HIV positive clients; and expanding services to key populations and priority populations in both community and facility settings. HIV Self-Testing (HIVST) and voluntary assisted partner notification services will be piloted in both community and facility settings to increase identification of high risk populations including AGYW and their sex partners (older men 25 years+) in additional to targeting KPs and their sex partners through social network testing strategy.

Through Epidemic Control funding, HTS will also implement a tailored program for addressing micro-epidemics in specific sustained districts. Targeted facility and community based testing at hot spots targeting young females 15-24 and older men aged 25 years and above will be

implemented. The program will also implement a community social network testing program in support of a KP program for FSW and MSM. Overall, priority will be to target females 14-24 years, men older than 25, and KP and their partners in both facility and community settings.

HTS is also a critical part of the DREAMS-like package in two districts (Gaborone and Kweneng East). Ensuring access to HTS for AGYW and their male partners is the focus HTS strategy for supporting DREAMS. To increase identification of HIV-infected AGYW and their sex partners will be targeted through self-testing. AGYW in antenatal care, postpartum care and high risk AGYW will be given self-test kits to distribute to their sexual partners who in most cases are older men 25 years+.

As part of the instructions package, it will be explained to AGYW that self-testing is a screening test and does not itself provide an HIV diagnosis and thus individuals whose self-tests are reactive (indicating that they may be infected with HIV), will need to seek further verification testing at a health facility. To improve linkage to care, brochures and flyers will be distributed together with HIVST kits, containing information on HIV testing services, HIV prevention, treatment and care. The name and phone number of the contact person and facility where services can be sought will also be provided. Contact details for AGYW provided with the self-test kit will be collected and used for follow-up by the facility health education assistant (HEA) in the case of public health distribution and community-based follow-up by peer and outreach workers (in-person or via telephone/text messages) will be used where HIVST kit distribution was done in community settings.

Linkage to effective prevention services for AGYW who test HIV negative will be important in ensuring they remain uninfected. Additional efforts will include linking boys and young men who test negative to VMMC services. HTS will also ensure that at-risk young women are educated and linked to a range of sexual and reproductive health services. Condoms and contraceptive mix to decrease adolescent or unplanned pregnancy will also be a key part of HTS COP17 strategy.

c. ***Improved retention and viral suppression***

To support retention and viral suppression, a comprehensive set of care and treatment interventions tailored to the differentiating and recurring needs of PLHIV will be provided. More emphasis will be put on adherence counselling and client treatment literacy in facilities and communities. Peer counselors, home visits, adherence groups, text messages and phone calls will be used to enhance adherence. The Positive Health Dignity Prevention (PHDP) minimum package, pharmacovigilance, especially for patients newly initiated on ART, and unstable patients, and TB/HIV integrated services will be key in promoting retention and viral suppression. Innovative approaches to service delivery, with reduced frequency of clinic visits, multi-month drug supplies for stable patients, and increased availability of services in the community will improve retention while also reducing wait.

Specifically for adolescents, training will be provided on adolescent life skills, training of adolescent peer educators, and support groups on life skills as well as establishment of youth-

friendly centers to improve retention and viral suppression. Direct service delivery will be provided through community-based interventions to enhance adherence among young people through youth friendly services, teen clubs, integration of SRH, follow-ups for viral load testing, tracking LTFU and linking them back to care as well as reaching out to the sexual partners of the AGYW to promote positive living. PEPFAR/B will support the smooth and seamless transition of adolescent care to adult care to minimize loses and fatalities during this period. Activities will include and not be limited to printing and dissemination of Teen Talk booklets. Targeted TA will be provided to support HCW to ensure there is a timely drug switch for patients failing their current treatment regimen

Retention to PMTCT care will be supported with the use of district-level focal points, and community health workers, to target HIV positive mothers with HIV-exposed babies for care and support interventions to ensure adherence for viral suppression. Retention for PMTCT will also include active patient tracking and tracking LTFU and linking them back to care. Community TB/HIV activities will include support for adherence and retention in for both ART and TB DOT.

There is an expected increase in number of patients on ART and the need to test more HEI in scale up and sustained districts. To reduce results turnaround time, PEPFAR Botswana will work with GoB to scale up the integrated patient management system (IPMS) to 54 PEPFAR supported facilities that are not currently linked electronically to the laboratories referral network. To improve specimen integrity, piloting of DBS and GeneXpert viral load will be conducted at four sites in scale up districts and clinical registers for tracking viral load and EID specimens will be introduced at all PEPFAR sites. Additionally, PEPFAR/B will fund equipment maintenance for some ancillary equipment while advocating for GoB to develop the proper systems to cover the maintenance and replacement of old equipment in subsequent funding periods.

d. Support a sustainable, quality service delivery model.

PEPFAR/B capacity building of the MOHW health workforce through technical assistance (training and mentorship), has proven to be a good tool to support sustainability of ART program. Through this model, the GoB is responsible for facility infrastructure, staff salaries, ART drugs and other related commodities, as well as the day to day running of all care and treatment facilities without the active role of PEPFAR/B. At a minimum for scale-up SNU's implementing partners are expected to conduct quarterly site support and supervisory visit. During this time, an expert conducting the mentoring visit, ensures that national guidelines to case management are adhered to and more importantly that service provision is of the highest quality desirable.

In COP17, PEPFAR/B will introduce "tiered support" for temporary staffing of key personnel such as ARV nurse prescribers and pharmacy technicians to be placed at strategic sites in scale up SNUs to improve treatment initiation uptake through various innovative approaches including fast tracking initiation without baseline labs, evening and weekend ART services for men, and

adolescent and youth friendly services. In addition, PEPFAR /B will support quality of testing for diagnosis and treatment monitoring.

Through Site Improvement Monitoring Systems (SIMS), PEPFAR/B program staff are able to assess site performance for various program areas looking at specific core essential elements for each. In COP17 focus will be for improved performance across core essential elements for men and women below the age of 30.

As a sustainability effort, PEPFAR/B supported a consultancy that looked at the reorganization of some health services to allow them to be carried out by CHW force if feasible, to ease the burden on health facilities in the era of Treat All. Several service areas were identified by majority of respondents to be task shifted/shared from the community to the facility to ensure sustainability. This exercise informed the development of the national Community Service Delivery Integrated Guidelines, which have been developed in order to promote integrated approach to implementing community based health interventions. In COP 17, further support will be provided to develop other community integrated tools supporting the guidelines like SOPs, curriculum and IEC materials.

4.11 Commodities

The country continues to experience stockouts of key health commodities, such as HIV rapid test kits (RTKs) and laboratory commodities. The stockouts are partly attributed to weak systems for collection and analysis of logistics data to inform forecasting and procurement planning. In addition, the MOHW has inadequate capacity for forecasting and procurement planning. Technical advisors will be provided to strengthen supply chain technical capacity of the MOHW staff and set up track and trace systems for health commodities. Scale-up districts have more PEPFAR presence and thus it is easier to collect data as far as consumption of commodities in order to do a forecast of such commodities.

ARVs

- PEPFAR is committed to support the GoB "Treat All" strategy by procuring antiretroviral therapy drugs and other HIV related commodities during FY17 and FY18.
- After adopting the "Treat All" strategy, MOHW introduced Dolutegravir (DTG), which is one of the most effective new ARV drugs to reduce viral load and also has a low risk of side effects. Currently, only GSK/ViiV has capacity to supply the market with sufficient quantities of the branded DTG at a cost of $22.35 per unit. The generic DTG from Aurobindo is expected to be available from March 2017 at a cost $3.75, but they are likely to reach full production capacity between August and October 2017. Therefore, funding for COP 16 will be used to procure the GSK/ViiV DTG. Based on the forecast and procurement plan, COP 16 funds would run out in June 2017. To continue supporting the GoB with procurement of ARVs, COP17 funds would need to be made available in June 2017.

- Currently, the GoB policy does not allow ARV treatment for foreign nationals. PEPFAR continues to provide ARVs to refugees at the Dukwi Refugee Camp, but a plan to transition to the GoB for sustainability is being discussed.
- In COP17, PEPFAR will procure commodities for the PrEP pilot project, targeting KPs and AGYW.

RTKs

- An inadequate supply of RTKs from the GoB is a challenge that has hampered Implementing Partners (IPs) from reaching their testing targets. In COP17, PEPFAR will continue to procure HIV RTKs for the PEPFAR IPs to ensure there will be no stockouts affecting the PEPFAR partners.
- PEPFAR will also continue to advocate to MOHW to fast track implementation of serial testing. This will significantly reduce the cost of HIV testing.
- HIV self-testing (HIVST) will be piloted as an approach for expanding HTS especially to partners of FSW, youth and their partners who otherwise may not access services through regular testing approaches. Lessons learned from the pilot will be used to inform possible policy change in support of HIVST. COP17 funds will be needed to support the actual pilot of self-testing. Additionally, the funds will support procurement and validation of kits to be used for HIVST. Technical support will be needed to develop standard guidelines for self-testing.

VMMC

- Since inception in 2009, the Botswana VMMC program has relied entirely on disposable VMMC kits. In an effort to lower costs and to address issues of waste management, the use of reusable kits has been implemented and a pilot is being conducted in two sites in the Greater Gaborone SNU. To avoid shortage of VMMC reusable kits and prevent autoclaving challenges, the program will run a mixed model with 70% reusable kits and 30% disposable VMMC kits. Disposable kits are ideal for remote and hard to reach areas with no autoclaving infrastructure. If the pilot project is successful, in COP 17 PEPFAR/B will procure reusable kits and retain disposable kits for back up.

Viral Load, TB, and EID

- HIV viral load and EID testing coverage gaps have been identified through MER indicators, SIMS assessments and PEPFAR implementing partner reports, resulting from both equipment breakdown and testing commodities stock outs. GoB provides GeneXpert, viral load and EID reagents plus other supplies. However, the country continues to experience sporadic testing interruptions due to stock outs of reagents and GeneXpert cartridges. With anticipated increase in the number of patients initiated on ART there will be a strain on the already weak supply chain system leading to more testing interruptions. In COP17 PEPFAR/B will advocate for GoB to adequately fund for these commodities to ensure continuity of testing. PEPFAR/B in COP17 will also purchase stop gap GeneXpert reagents to assist with TB molecular testing technology scale up at PEPFAR sites.

4.12 Collaboration, Integration and Monitoring

PEPFAR/B uses the same approach to addressing challenges across the entire clinical cascade in both scale-up and sustained districts. The collaboration, integration and monitoring described below for scale up SNU's, is similar to section 5.12 for sustained SNU's.

A. Technical collaborations and implementation across agencies and with external stakeholders, including the GFATM and MOH.

PEPFAR/B has well-structured interagency coordination. Through the leadership of the PEPFAR coordination office, PEPFAR/B convenes regular country team (PCT) meetings where all hands PEPFAR staff across USG agencies participate, PEPFAR Management Team (PMT) meetings where TWG co-leads and agency leads convene for decision making process beyond PCT capabilities, as well as an agency lead specific weekly meetings. The PEPFAR office also works very closely with the front office at the U.S. Embassy in Botswana to ensure senior USG leadership buy-in and support for the broader PEPFAR policy decision making. Regarding partner management, beyond individual partner agency specific meetings, PEPFAR/B also coordinates joint interagency partner meetings to ensure transparency and collaboration among all PEPFAR implementing partners.

The PEPFAR/B team routinely coordinates and communicates with the GoB, multilateral organizations, GFATM, the private sector, faith-based and CSOs. The Interagency management team, including the DCM, has conducted monthly meetings with the Permanent Secretary (PS) at MOHW to discuss a common agenda of topics ranging from the PEPFAR pivot to challenges with implementation to plans for the country's move to Treat All. During the COP17 process, PEPFAR/B has made external partner engagement one of its highest priorities.

Feedback from these meetings has led to a series of quarterly engagements between PEPFAR/B, the PS and other MOHW department heads. These are important interactions to help MoH understand and guide the work of partners in districts, communities and at the facility level. The PEPFAR Coordinator is a voting member of the Country Coordinating Mechanism (CCM), sits on the PR Oversight Committee and is in regular communication with the GF Portfolio Manager in Geneva; the CDC Country Director is an alternate CCM member and attends all CCM meetings.

Finally, PEPFAR/B continues to engage with civil society and district-level stakeholders through a series of roadshow seminars called "New Directions in Global Health." The goal is to discuss the latest research and evidence-based programs with stakeholders outside of the capital city, and to build capacity in the media for reporting on these issues. This FY17, the New Directions seminars have been themed, e.g. AGYW, GBV, Treat All, and Key Populations.

Prior to and following DCMM February 2017, PEPFAR/B hosted stakeholder meetings where verbal and written feedback was collected from all participants. Civil society and private sector stakeholders were also convened on more than one occasion to educate them on the PEPFAR/B broader program and COP17 preparations.

B. IP management and monitoring and the implementation of innovative strategies across the cascade, in a timely manner, to improve impact within shorter time periods

Transparency on IP performance across all agencies is an important value in the PEPFAR/B program. A *Dossier of Implementing Partner Profiles* was developed prior to the DCMM. This very detailed document contains at least the following information:

- Site/above site and Project description
- Obligated amounts/current COP funds/Pipeline
- Project sites (village level)
- Sub partners
- Goals and Objectives
- Key PEPFAR Indicators
- Policy Implications
- Justification
    - Why is this intervention important for Botswana?
    - How do program activities align with OGAC Technical Considerations?
- Key Issues and Implementation Challenges
- SIMS Results and MER Results
- Future Planning/Corrective Action Plans

Agencies may add additional information for their own monitoring purposes. The PEPFAR Coordination Office manages the Dossier and the technical staff update the IP information in the Dossier as needed in support of the quarterly POART process with both new data and updated strategy.

Through the PEPFAR/B Coordination Office, PEPFAR/B holds partner quarterly meetings where quarterly achievements versus annual targets, challenges and mitigation plans are discussed. Individual and group partner meetings formerly relied primarily on partners presenting to PEPFAR/B technical staff. Now, PEPFAR/B program staff deep dive into the data to triangulate partner performance, including budget/expenditure data, MER results, and SIMS findings and propose areas of focus for collaborative discussions with IPs. Through such strategies, partners and PEPFAR/B collectively discussed and problem-solved, for example, concerns about being in the right sites, suggestions that TB case finding could lead to increased HIV case detection, and competition among partners.

PEPFAR/B now has combined group meetings with individual partner meetings on the same day, including joint in- and out-brief discussions to consolidate key messages. Through coordinated efforts of implementing partners and PEPFAR/B, partner roles and MER indicators were clarified, and this helped focus on critical areas of collaboration. A new policy for joint supportive supervisory visits of all PEPFAR/B partners quarterly and all partners joining relevant SIMS visits is being implemented in FY17.

Quarterly POART interagency partner meetings also help reinforce areas to strengthen collaboration and eliminate duplication across agencies, and these discussions continue between meetings. There is significantly more focus on transparency and problem solving, with PEPFAR/B technical staff taking the lead and being willing to push the partners whenever necessary; observations are carefully listened to and specific solutions sought for every identified barrier, especially during the annual technical review process for ongoing awards. If new approaches are proposed, partners are required to explain what barrier this will overcome so that resources are focused on impact.

Peace Corps Volunteers submit reports to Peace Corps on a quarterly basis, and Program Managers visit Volunteers and counterparts annually to discuss progress on work plans and offer technical support. Peace Corps also conducts quarterly calls to Volunteers and counterparts/supervisors and holds regular training with Volunteers and counterparts during which challenges and best practices are shared.

Management is also engaged to reinforce the shift to a more proactive and transparent approach. Post DCMM, PEPFAR/B convened an all PEPFAR implementing partner meeting, in partnership with the P.S. MOHW, DHMT's, MOHW heads of department, and USG staff to discuss how to address the FY17 achievement gap through innovative strategies to improve case detection and treatment initiations.

C. Improved integration of key health system interventions, including HRH and laboratory (VL) activities, across the cascade; and

Continued attention will focus on policy development and capacity building for a strong health workforce in COP17. Integrated Community Service Delivery Guidelines will pave the way for institutionalizing the role of CHWs and the relationship between community and facility workers. Task-sharing of HIV-related services across cadres both within and outside facilities will help to decongest facilities, share the workload, and respond to patient-centered approach. With the adoption of the Guidelines and subsequent SOPs, PEPFAR/B will turn attention to training cadres to meet fulfill their scopes of work for these new delivery models.

PEPFAR/B support for Viral Load testing is through technical assistance. Staffing for laboratory services continue to be inadequate especially the staffing of expert/specialists with advanced lab skills requiring outsourcing to other countries. Since the introduction of "Treat All," new

treatment initiations have increased each month, with an average of 2,600 newly initiated. This translates to the need for laboratory monitoring, especially VL doubling as well. In order to meet the demand for increased VL monitoring, the GoB's laboratory services are scaling up viral load services and uptake. The GoB intends to continue with viral load decentralization from the current 24 labs out of 54 to more sites to address the referral distances seen in some areas. As new sites are established, laboratory personnel are also trained to gain the skills needed for VL testing. Alongside the increase in VL sites, the GoB is also looking at workload and equipment throughput to optimize the testing. Through equipment harmonization exercises, the GoB utilizes only select approved equipment at their sites for easy referral and for comparability of data.

During COP16 PEPFAR/B, in collaboration with the MOHW, is assessing the current referral networks to identify some of the inefficiencies and make recommendation for improvement. Additionally standardized sample and result management manuals will be developed and rolled out for use. SOP's for viral load are being reviewed with GoB for implementation and scale up. National quality SOP's, developed through PEPFAR/B support, also continue to be rolled out by the laboratory quality office.

COP17 PEPFAR/B will continue to improve specimen and results management by working on registers to track viral load specimens and results both at requesting clinics and testing labs to address the clinic lab interphase. Scale up of the information systems such as the Integrated Patient Management System (IPMS), to include all PEPFAR/B supported sites ,will also be done to improve the identified turnaround times (TAT) gaps (see Appendix F, HMIS Proposal). Data from different information management systems will be inter-phased for better data quality for monitoring and evaluation. PEPFAR/B will implement production of external quality assurance material in-country for cost efficiencies and sustainability.

D. Improving efficiencies of service delivery through improved models of care delivery across community and facility sites.

COP17 PEPFAR/B prioritizes improved service delivery models across the community and facilities to improve case detection, new treatment initiations, and retention in care and treatment. Differentiated models of care for stable patients will be promoted and designed in collaboration with facilities, communities, DHMTs, and PLHIV, to improve patient-centered outreach and care. Some of these proposed strategies are currently implemented through COP16 and will be further scaled up in COP17.

Case detection:

- Expanding Index Client Partner Testing in the community and facilities.
- Expanded PITC in facilities: screen and test all TB suspects, STI patients, select patients in inpatient wards, and high risk patients in OPD.

- KP and Priority Population Services: social network testing and targeted outreach in communities; and
- Self-testing pilot to reach partners of FSW and/or MSM.

Linkage to Care

- Active linkage to care through integrated facility and community SOPs, building on BCPP's experiences; and
- Introduce same day treatment without need for referral.

Treatment initiation:

- Afternoon hours with appointments for new patients;
- Evening/Weekend clinic hours to access men and provide youth friendly services;
- Same day treatment initiation by fast tracking initiation of patients presenting well without the need for baseline labs or extensive clinical assessment; and
- Immediate treatment readiness and adherence counselling conducted at both community and facility HIV testing sites to avert delays to treatment initiation.

Retention in care and Treatment:

- Introducing multi-month scripting and dispensing;
- Strengthen the adherence buddy system at the same time ensuring that it is not a barrier to treatment initiation;
- Introducing one stop shop for tracking of mother-infant pair (MIP) and introducing HIV Exposed infant cohort registers;
- Pilot testing community-based treatment and retention models, such as CHW ARV distribution to farms in Ghanzi, or community ART groups (CAGs) for AGYW in Greater Gaborone; and
- Tracking LTFU and linking them back to care.

5.0 Program Activities for Epidemic Control in Attained and Sustained Locations and Populations

5.1 Targets for Attained and Sustained Locations and Populations

Table 5.1.1 – Not applicable (no attained districts)

Table 5.1.2 Expected Beneficiary Volume Receiving Minimum Package of Services in Sustained Support Districts

Sustained Support Volume by Group		Expected result APR 17	Yield (%)	Expected result APR 18	Yield (%)
HTS in PMTCT sites	*PMTCT_STAT*	0		5,607	
HTS[1]	*HTC_TST/HTS_POS*	4,506/543	12 %	15,354/1,277	8%
Current on ART	*TX_CURR*	71,147		72,187	
OVC	*OVC_SERV*	75		496	

[1] Results include HTC_TST for Sustained SNUs plus testing in micro-epidemic sites

5.2 Voluntary Medical Male Circumcision

PEPFAR Botswana will support the VMMC program in select sustained districts, including Selibe-Phikwe, Ngamiland and Chobe districts, in close collaboration with the Botswana Defense Force (BDF), District Health Management Teams (DHMT) and an implementing partner. DoD will also offer circumcisions in the Okavango and Bobirwa districts, targeting civilian populations. It is expected that Selibe Phikwe and Ngamiland will reach 35% and 26%, respectively, by the end of FY18.

The scale up of VMMC in high HIV burden areas with low VMMC coverage will help avert new HIV infections and ultimately contribute to the achievement of epidemic control. In FY18, most activities will target males aged 15 to 29 who form the majority of our FY18 target. All demand creation and services delivery activities offered in the scale up districts will also be offered in the sustained districts and this includes technical support to ensure quality of VMMC services through SIMS visit, DQA, EQA and CQI support. In addition, PEPFAR/B, through DoD, will collaborate with the BDF leadership and MoH to initiate joint planning targeting eligible males in the military through time limited campaigns. Addressing partner performance in COP17 will include data triangulation of key MER indicators, SIMS findings, and budget/expenditure data, as well as combined group and individual partner meetings.

5.3 Preventing of Mother-to-Child transmission (PMTCT)

During FY 16, the implementing partner supporting PMTCT conducted site assessments at all sites, trained and conducted mentoring of eligible health care workers on option B+ and conducted remediation in facilities in scale up districts as well as in the two sustained SNUs in Greater Francistown and Serowe/Palapye. The site refinement in 2016 led to an increase in PMTCT sites to a total of 96 sites; 66 of which are in scale-up SNUs and 30 are in sustained SNUs. Partners were still required to use the same budget despite the increase of sites. As a result, the IP is refining the approach to provide relatively less supportive supervision in sustained districts compared to scale-up districts. Note that starting in Q2 FY17, the IP will report PMTCT_ART and EID indicators from sustained sites.

Country data shows that 28 percent of all new infections in the priority districts are from young girls and young women aged 15- 24 years old. Further analysis during prioritization of locations and populations has shown that Serowe/Palapye and Greater Francistown have high unmet needs for ART among female aged 15-24 years old; only 58 and 68 percent are covered on ART, respectively. In order to reach attainment level by end of FY18, i.e. 81% coverage across all age bands, PEPFAR/B, through the implementing partners will provide core package of services in terms of technical assistance to support targeted activities at facility and community levels to facilitate testing, to improve within-facility linkage and prioritize same-day initiation of newly

diagnosed pregnant and breast feeding women. Epidemic control funds will support facility and community based activities in Greater Francistown, facility only in Serowe/Palapye, and community based activities in Ghanzi.

IPs will focus on optimizing retention, through passive strengthening of integration of services at the child welfare clinic to facilitate tacking of mother baby pairs as this is a systemic challenge in Botswana. IPs will support the introduction of cohort registers for tracking mothers and their babies and support adherence, retention, and clinical monitoring especially viral load suppression. Community based partners will provide technical assistance and direct service delivery on community PMTCT and EID activities to the sustained support districts as described above. To strengthen clinical monitoring plans are underway to review the viral load turnaround time (TAT) and utilization of viral load results for pregnant and breast feeding women. The demand creation/VL literacy package will be used to create awareness to providers and patients, to empower clients to seek for services. Community based partners through MOHW authority will test for PMTCT in both scale up and sustained districts as need arises. EID turn-around time (TAT) will be addressed as per barriers identified across the sustained sites, as well as coordination of facility staff in documenting referrals and linkage

Addressing partner performance in COP17 will include data triangulation of key MER indicators, SIMS findings, and budget/expenditure data, as well as combined group and individual partner meetings.

5.4 HTS

Through Epidemic Control funding, PEPFAR/B will implement a tailored HTS program targeting micro epidemics in the sustained districts. Targeted facility and community testing at hot spots targeting young females 15-24 and older men aged 25+ years (who are often the sex partners of 15-24 AGYW) will be implemented. These individuals will be offered HIV testing and will be linked to treatment and care. Index partner testing will be expanded to identify partners and families of HIV+ clients in both community and facility settings. Ghanzi has four target populations that have not achieved saturation: males less than 15 years (33%), females under 15 years (49%), males 15-24 years (39%), and females 25+ years (62%). This streamlined package of services focuses on case identification as well as care and support to help patients remain on treatment. BAIS IV established that 3.6% of the respondents had been diagnosed with TB in the previous 12 months. In 2012 as many as 63% of TB patients were co-infected with HIV. Data from MOHW (annual report 2015) indicated that TB notification at Ghanzi district was 2.5 times higher in comparison to the rest of the country. PEPFAR/B has proposed to have targeted HIV testing among TB presumptive clients, TB patients and their families, AGYW and their partners, males and females 25+ using epidemic control funds.

The second component of the program will target key populations through the implementation of a hot spot and social network testing approach in Francistown, Kasane, Maun, Serowe/Palapye

and Selebi-Phikwe. COP17 will also support the piloting of self-testing targeting 4,000 regular partners of female sex workers. FSW who have accessed HIV testing will be given self-tests and instructions to provide to the regular sexual partners. To overcome the potential challenge of low linkage to care that may ensure through a self-testing; proactive, community-based follow-up by peer and outreach workers (in-person or via telephone/text messages) will be used where HIVST kit was done in community settings (also described in Appendix G).

Addressing partner performance in COP17 will include data triangulation of key MER indicators, SIMS findings, and budget/expenditure data, as well as combined group and individual partner meetings.

5.5 Facility and Community-based Care and Support

In COP 17 PEPFAR/B will continue to support reaching attainment or near attainment across all PEPFAR sustained SNU's, including Greater Francistown and Serowe/Palapye. PEPFAR/B will continue to implement facility and community care programming focusing on building strong linkages between facilities and communities to ensure a continuum of care for all health services along the three pillars of the clinical cascade.

The "Treat All" initiative described in section 4.7 as a recent policy/guideline change was also implemented in sustained districts from the time of the launch. Even though the implementing partner was not initially reporting TX_New in sustained districts, internally they kept a record of treatment initiations at the sustained districts. Over time there was an indication that newly initiated on treatment numbers increased in sustained districts especially after the launch of "Treat All." The national roll-out of Treat All was not without challenges which by far limit the ability of the initiative to optimally achieve FY17 targets. Some of these challenges include stock-out of rapid test kits, baseline labs delaying rapid initiation of treatment, introduction of a new drug (DTG) to the ART formulary, and poor client literacy of early treatment. By the end of FY16 (APR16), OGAC approved PEPFAR/B to count treatment new initiations in sustained districts towards the overall OU achievement.

Greater Francistown was selected as a beneficiary of the Epidemic Control funds to address the unmet need for young women below age 25 and young men aged below 30 (see Appendix G for more details). Support to reach these age/sex bands will include hiring ARV nurses and pharmacy technicians to be trained in adolescent life skills and youth friendly services, training adolescent peer educators and support groups on Life Skills, provision of afternoon and evening/weekend clinic hours to allow for ART initiation appointments, seeking especially to be attractive to working men and adolescents girls and young women.

At a minimum, PEPFAR/B will provide the following care and support services in sustained SNUs:

- HTS targeted in facilities (e.g. TB wards, STI clinics, etc.)
- Routine clinic visits
- Provision of ARVs
- Adherence and retention support, and care package
- Provision of cotrimoxazole prophylaxis to those CD4 count <200, and TB/HIV co-infected for the duration of the treatment
- Therapeutic feeds for malnourished adults and children
- STI screening and syndromic management
- Screening for TB and other OIs
- Provision of condoms
- Positive health dignity prevention minimum package of services
- Provision of laboratory services such as CD4 count, VL testing, EID, TB diagnostics using Xpert MTB/Rif, and early infant diagnostic tests

Through epidemic control funds, community based implementation will entail a package of services (HTS, CBCTS, CTB/HIV and community based PMTCT) as outlined for scale up districts (section 4), but only to specific age/sex bands in hot spots in sustained areas.

Review of projected ART coverage and PLHIV by age/sex bands in sustained districts helped identify two SNUs needing additional support. Greater Francistown has unmet need among Females 15-24 years old (coverage: 68%), and Males 25+ years old (78%). Ghanzi has four target populations that have not achieved saturation: Males under 15 years (33%), Females under 15 years (49%), Males 15-24 years (39%), and Females 25+ years (62%). This streamlined package of services focuses on case identification as well as care and support to help patients remain on treatment.

PRRR funding for the support of cervical cancer activities ends in Q2 FY18. In COP17, PEPFAR/B through technical assistance (training and mentoring) will continue to support the scale up of secondary prevention of cervical cancer.

5.6 TB/HIV

The package of services to addressing TB/HIV is the same in all districts and will include supporting interventions that enhance identification of presumptive TB and TB cases and linking them to HIV testing services (see Section 4.6). PEPFAR technical assistance will also be tailored towards improving ART uptake among the dually infected to address the third 90.

M&E challenges for TB/HIV will continue to be addressed in sustained districts through the operationalization and utilization of OpenMRS for patient management and reporting. Integration of GenExpert through GXAlert to OpenMRS will ensure that TB laboratory results are available for patient management. This will include making OpenMRS fully functional,

supporting facilities to use OpenMRS as a patient level system and integrating OpenMRS with other MOHW electronic systems.

Addressing partner performance in COP17 will include data triangulation of key MER indicators,, SIMS findings, and budget/expenditure data, as well as combined group and individual partner meetings.

5.7 Adult treatment

In COP17, PEPFAR/B will operate in two sustained SNUs: Greater Francistown and Serowe/Palapye. Assuming that targets are reached by the end of FY17, attainment across all age and sex bands for all our priority SNU's would still not have been reached. Within sustained districts there are 30 sites where TA is implemented in the form of training and mentorship for adult care and treatment at the site-level. There are five DSD sites that offer treatment services for key populations and one site that offers HIV care and treatment services to refugees at Dukwi Refugee Camp.

During the COP16 site refinement exercise, support to sustained districts had to be better targeted and the package of services refocused to ensure adequate resources for scale-up districts where the bulk of the untreated population lives. Beginning in FY17 Q2, implementing partners began to reduce the frequency of site visits in sustained districts. Some partners had to move staff from sustained districts to support the scale-up districts, a transition that is consistent with the previous PEPFAR geographic pivot. In addition, the main care and treatment partner providing TA took advantage of a turnover in staff to bring on board additional health management and nursing care specialists to be based in the sustained sites in order to protect the time of roving remediation teams that needed to focus on the scale up sites.

For COP17, PEPFAR/B adult treatment package of services in sustained districts will focus on activities aimed at viral suppression and maintaining clinical services and sites for 81% ART coverage across age and sex bands. There are two approaches for the sustained districts. In the "baseline approach," PEPFAR/B will not be investing in active case detection in these sites therefore linkage and treatment initiation will also be passive. More importantly, there will be customized supportive retention services based on specific age, sex and HIV risk factors related to variable use of prevention and treatment services e.g., teen support groups and after hour clinics for men. Promoting adherence and viral suppression can be accomplished –through multi-month scripting and dispensing for stable patients. As a specific activity, SOPs development will soon start to standardize six-month scripting and a minimum of three months of refill. PEPFAR/B would will set aside funds for to support availability of buffer stocks to accommodate three months refills and also plans to review the viral load TAT and utilization of viral load results as well as build capacity for in-country preparation of viral load proficiency testing panels. Additionally, we will strengthen demand creation/VL literacy for providers and patients.

Currently there are ongoing discussions for transitioning refugee HIV care and Treatment services in Dukwi camp to GoB after FY 17.

In the "epidemic control micro-epidemic" approach, and through the use of Epidemic Control funds in COP17, PEPFAR/B will provide an active role in the provision of youth-friendly services in select sites in sustained districts. Learning from the COP16 strategies to reach targets in scale up districts, sites in sustained districts may adopt similar strategies and implement them in order to reach targets on the age sex band for 15-29 for both males and females. Temporary staff for the positions of ARV nurse prescribers and pharmacy technicians will be hired to support tailor made services for adolescent girls, young women and young men such as: introducing extra afternoon hours to allow for ART initiation appointments, evening/weekend clinic hours for men, youth friendly services, implementation of same-day initiation through numerous innovative strategies including fast tracking initiation for patients presenting well so that they do not wait for baseline lab results, and provision of multi-month scripting and dispensing for stable patients to promote adherence and retention.

At community level PEPFAR/B will implement a reduced package of services (HTS, CBCTS, CTB/HIV and community based PMTCT) as outlined for scale up districts (section 4), but only to specific age/sex bands in hot spots in sustained SNUs. Review of projected ART coverage and PLHIV by age/sex bands in sustained districts helped identify two SNUs needing additional support. Greater Francistown has an unmet need among females 15-24 years old (coverage: 68%), and males 25+ years old (78%). Ghanzi has four target populations that have not achieved saturation: Males under 15 years (33%), Females under 15 years (49%), Males 15-24 years (39%), and Females 25+ years (62%). This streamlined package of services focuses on case identification as well as care and support to help patients remain on treatment.

Addressing partner performance in COP17 will include data triangulation of key MER indicators, SIMS findings, and budget/expenditure data, as well as combined group and individual partner meetings.

5.8 Pediatric Treatment

Botswana has an estimated population of 721,474 children younger than 15 years old. Currently 8,539 children under the age of 15 are living with HIV. By the end of FY16, there were 8,456 children on ART, representing 99% of the estimated PLHIV in the age group. Despite relatively low EID rates, the PMTCT program appears to be effective and few Batswana children are identified as HIV-positive. APR16 showed that 13 HIV exposed infants became infected in scale-up districts (mother to child transmission (MTCT) of HIV rate of 0.7%), and all were enrolled in treatment.

PEPFAR/B will continue pediatric treatment activities including targeted TA at the facility level, DSD for pediatric care, and support and treatment for refugees in sustained districts. In facilities

PEPFAR/B will use passive approach on case detection therefore linkage and treatment initiation will also be passive for children and adolescents living with HIV. Youth-friendly services are key for viral suppression in this age group. As part of COP16 strategies to increase case detection and treatment initiation in scale-up districts, PEPFAR/B plans to support training of HCW on adolescent life skills, training of adolescent peer educators and support groups on life skills. During this timeframe, PEPFAR/B will support the printing of *Teen Talk* Booklets and disseminate them. At community level PEPFAR/B will implement a package of pediatric care and support services, as outlined for scale up districts (section 4.5), but only to specific age/sex bands. We expect that through COP17 these services will be up scaled in hot spots within sustained districts. PEPFAR/B will also review the viral load TAT and utilization of viral load results for this age group and will strengthen demand creation and VL literacy for providers and children and adolescents.

5.9 Orphans and Vulnerable Children (OVC)

Peace Corps is currently providing OVC TA across various districts. In COP17, the program will continue to work at family and community level providing psychosocial support interventions to mitigate the impact of HIV/AIDS and provide a platform for various interventions including DREAMS-like activities for girls aged 10-17, their family members and communities they live in. Volunteers are placed in NGOs providing day care services, Social and Community Development Offices strengthening OVC services, as well as primary, junior secondary and upper secondary schools. Volunteers and their counterparts are trained in the *Journey of Life* methodology used by Government to mobilize the community to meet the needs of children and provide psychosocial support to OVC and their families. Volunteers will also continue to provide youth development, HIV prevention, treatment adherence and referral to social services, gender-based violence prevention and life skills interventions to this population to build self-esteem and resiliency. These services are provided through school lessons, after school clubs, Grass Root Soccer interventions and camps. Volunteers also work with Support Groups for adolescents living with HIV. In COP17, Peace Corps Botswana will expand its programming focused on AGYW through the Let Girls Learn initiative, training volunteers and counterparts to address vulnerabilities and barriers that affect girls' success in education.

Peace Corps Volunteers placed in community organizations with preschools provide early childhood development interventions to the younger aged children. Clinic Volunteers and their counterparts work with mothers' and other groups to encourage good health and nutrition practices for under 5s. In COP17, Volunteers will expand their work to include nutrition education and food security using information and methodology from our newly-introduced perm-gardening training. Peace Corps Botswana will also introduce training to assist Volunteers and their counterparts to work more with parents to improve parenting skills and parent-child communication using such methodologies as *Sinuvuyo* and *Go Families*.

Volunteers submit reports to Peace Corps on a quarterly basis and Program Managers visit Volunteers and counterparts at least annually to discuss progress on work plans and offer

technical support. Peace Corps also has quarterly calls with Volunteers and counterparts/supervisors and holds regular training with Volunteers and counterparts during which challenges and best practices are shared.

5.10 Establishing service packages to meet targets in sustained districts

PEPFAR Botswana does not have attained SNUs in COP17, therefore programming and establishing service packages to meet targets is only for the two sustained SNUs. Botswana is classified a high TB/HIV burden country affecting all districts. As TB incidence is unlikely to fall below the 250/100,000 WHO threshold by FY18. In addition, the gains made by the treatment program will continue to be threatened by the on-going TB/HIV epidemic. Therefore programming for adult and pediatric ART, TB/HIV and PMTCT will continue in all districts to protect the gains made.

The standard GoB package of services for care, support and treatment includes and is not limited to the following:

- HIV testing and counseling targeted for diagnostic among, TB STI etc. and on request
- Routine clinic visits,
- Provision of ARVs,
- Adherence and retention support, and care package,
- Provision of cotrimoxazole prophylaxis to those CD4 count <200, and TB/HIV co-infected for the duration of the treatment.
- Therapeutic feeds for malnourished adults and children,
- STI screening and syndromic management,
- Screening for TB and other OIs
- Provision of condoms,
- Positive Health Dignity Prevention minimum package of services,
- Provision of laboratory services such as CD4 count, VL testing, EID, TB diagnostics using Xpert MTB/Rif, and early infant diagnostic tests.

PEPFAR/B support will mainly be targeted TA for the support of these essential package of services in PEPFAR sustained SNUs. Planning for transition of support to the GoB upon attainment in these sustained districts will also be a focus. The capacity building through training and mentorship of health care workers around this service package instils sustainability beyond PEPFAR support.

Community based implementation will entail a reduced package of services (HTS, CBCTS, CTB/HIV and community based PMTCT) as outlined for scale up SNUs (Section 4), but only to specific age/sex bands in hot spots in sustained areas. Greater Francistown has unmet need among Females 15-24 years old and males 25+ years old. In COP15 and COP16, the Ghanzi District was selected as a site-specific priority area for TB/HIV work. In COP17, Ghanzi will continue to receive a streamlined package of services focusing on case identification as well as care and support.

5.11 Commodities

The country continues to experience perpetual stockouts of key health commodities such as HIV rapid test kits (RTKs) and laboratory commodities. The stockouts is partly attributed to weak systems for collection and analysis of logistics data to inform forecasting and procurement planning. In addition, the MOHW has inadequate capacity for forecasting and procurement planning. Technical advisors will be provided to strengthen supply chain technical capacity of the MOHW staff and set up track and trace systems for health commodities.

In sustained districts, PEPFAR does not have a lot of presence and thus collection of data is relied on GoB which might pose a potential risk of erroneous data, this in turn could affect forecasting and procurement of commodities.

ARVs

- After adopting the "Treat All" strategy, MOHW introduced DTG, which is one of the most effective new ARV drugs to reduce viral load and also has a low risk of side effects. Currently, only GSK/ViiV has capacity to supply the market with sufficient quantities of the branded DTG at a cost of $22.35 per unit. The generic DTG from Aurobindo is expected to be available from March 2017 at a cost $3.75, but they are likely to reach full production capacity between August and October 2017. Therefore, funding for COP 16 will be used to procure the GSK/ViiV DTG. Based on the forecast and procurement plan, COP 16 funds would run out in June 2017. To continue supporting the GoB with procurement of ARVs, COP17 funds would need to be made available in June 2017.
- Currently the GoB policy does not allow ARV treatment for foreign nationals. PEPFAR continues to provide ARVs to refugees at the Dukwi Refugee Camp.
- In COP17 PEPFAR will procure commodities for the PrEP pilot project, targeting FSW and AGYW.

RTKs

- Inadequate supply of HIV RTKs from government has been provided as one of the reasons that hampered Implementing Partners (IPs) from reaching their testing targets. In COP17 PEPFAR will continue to procure HIV RTKs for the PEPFAR IPs.
- PEPFAR will also continue to advocate to MOHW to fast track implementation of serial testing. This will significantly reduce the cost of HIV testing
- HIV self-testing (HIVST) will be piloted as an approach for expanding HTS especially to partners of FSW, youth and their partners who otherwise may not access services through regular testing approaches. Lessons learned from the pilot will be used to inform possible policy change in support of HIVST. COP17 funds will be needed to support the actual pilot of self-testing in both scale-up and sustained districts. Additionally, the funds will support procurement and validation of kits to be used for HIVST. Technical support will be needed to develop standard guidelines for self-testing

VMMC

- Since inception in 2009, the Botswana Voluntary Male Medical Circumcision (VMMC) program has relied entirely on disposable VMMC kits. In an effort to lower costs and to address issues of waste management, the use of reusable kits has been implemented and a pilot is being conducted in two sites in Greater Gaborone districts. To avoid shortage of VMMC reusable kits and prevent autoclaving challenges, the program will run a mixed model with 70% reusable kits and 30% disposable VMMC kits. Disposable kits are ideal for remote and hard to reach areas with no autoclaving infrastructure. If the pilot project is successful, in COP 17 PEPFAR/B will procure reusable kits and retain disposable kits for back up.

Viral Load, TB, and EID

- HIV viral load and EID testing coverage gaps have been identified through MER indicators, SIMS assessments and PEPFAR implementing partner reports, resulting from both equipment breakdown and testing commodities stock outs. GoB provides GeneXpert, viral load and EID reagents plus other supplies. However, the country continues to experience sporadic testing interruptions due to stock outs of reagents and GeneXpert cartridges. For continued monitoring of patients on ART, there is need to strengthen supply chain system of laboratory commodities. In COP17 PEPFAR Botswana will advocate for GoB to adequately fund these commodities to ensure continued testing. PEPFAR/B in COP17 will also purchase stop gap GeneXpert reagents to assist with TB molecular testing technology at PEPFAR sites.

5.12 Collaboration, Integration and Monitoring

A. Technical collaborations and implementation across agencies and with external stakeholders, including the GFATM and MOH.

PEPFAR/B has well-structured interagency coordination. Through the leadership of the PEPFAR coordination office, PEPFAR/B convenes regular country team (PCT) meetings where all hands PEPFAR staff across USG agencies participate, PEPFAR Management Team (PMT) meetings where TWG co-leads and agency leads convene for decision making process beyond PCT capabilities, as well as an agency lead specific weekly meetings. The PEPFAR office also works very closely with the front office at the U.S. Embassy in Botswana to ensure senior USG leadership buy-in and support for the broader PEPFAR policy decision making. Regarding partner management, beyond individual partner agency specific meetings, PEPFAR/B also coordinates joint interagency partner meetings to ensure transparency and collaboration among all PEPFAR implementing partners.

The PEPFAR/B team routinely coordinates and communicates with the GoB, multilateral organizations, GFATM, the private sector, faith-based and CSOs. The Interagency management

team, including the DCM, has conducted monthly meetings with the Permanent Secretary (PS) at MOHW to discuss a common agenda of topics ranging from the PEPFAR pivot to challenges with implementation to plans for the country's move to Treat All. During the COP17 process, PEPFAR/B has made external partner engagement one of its highest priorities.

Feedback from these meetings has led to a series of quarterly engagements between PEPFAR/B, the PS and other MOHW department heads. These are important interactions to help MoH understand and guide the work of partners in districts, communities and at the facility level. The PEPFAR Coordinator is a voting member of the Country Coordinating Mechanism (CCM), sits on the PR Oversight Committee and is in regular communication with the GF Portfolio Manager in Geneva; the CDC Country Director is an alternate CCM member and attends all CCM meetings.

Finally, PEPFAR/B continues to engage with civil society and district-level stakeholders through a series of roadshow seminars called "New Directions in Global Health." The goal is to discuss the latest research and evidence-based programs with stakeholders outside of the capital city, and to build capacity in the media for reporting on these issues. This FY17, the New Directions seminars have been themed, e.g. AGYW, GBV, Treat All, and Key Populations.

Prior to and following DCMM February 2017, PEPFAR/B hosted stakeholder meetings where verbal and written feedback was collected from all participants. Civil society and private sector stakeholders were also convened on more than one occasion to educate them on the PEPFAR/B broader program and COP17 preparations.

B. IP management and monitoring and the implementation of innovative strategies across the cascade, in a timely manner, to improve impact within shorter time periods

Transparency on IP performance across all agencies is an important value in the PEPFAR/B program. A **Dossier of Implementing Partner Profiles** was developed prior to the DCMM. This very detailed document contains at least the following information:

- Site/above site and Project description
- Obligated amounts/current COP funds/Pipeline
- Project sites (village level)
- Sub partners
- Goals and Objectives
- Key PEPFAR Indicators
- Policy Implications
- Justification
    - Why is this intervention important for Botswana?
    - How do program activities align with OGAC Technical Considerations?
- Key Issues and Implementation Challenges

- SIMS Results and MER Results
- Future Planning/Corrective Action Plans

Agencies may add additional information for their own monitoring purposes. The PEPFAR Coordination Office manages the Dossier and the technical staff update the IP information in the Dossier as needed in support of the quarterly POART process with both new data and updated strategy.

Through the PEPFAR/B Coordination Office, PEPFAR/B holds partner quarterly meetings where quarterly achievements versus annual targets, challenges and mitigation plans are discussed. Individual and group partner meetings formerly relied primarily on partners presenting to PEPFAR/B technical staff. Now, PEPFAR/B program staff deep dive into the data to triangulate partner performance, including budget/expenditure data, MER results, and SIMS findings and propose areas of focus for collaborative discussions with IPs. Through such strategies, partners and PEPFAR/B collectively discussed and problem-solved, for example, concerns about being in the right sites, suggestions that TB case finding could lead to increased HIV case detection, and competition among partners.

PEPFAR/B now has combined group meetings with individual partner meetings on the same day, including joint in- and out-brief discussions to consolidate key messages. Through coordinated efforts of implementing partners and PEPFAR/B, partner roles and MER indicators were clarified, and this helped focus on critical areas of collaboration. A new policy for joint supportive supervisory visits of all PEPFAR/B partners quarterly and all partners joining relevant SIMS visits is being implemented in FY17.

Quarterly POART interagency partner meetings also help reinforce areas to strengthen collaboration and eliminate duplication across agencies, and these discussions continue between meetings. There is significantly more focus on transparency and problem solving, with PEPFAR/B technical staff taking the lead and being willing to push the partners whenever necessary; observations are carefully listened to and specific solutions sought for every identified barrier, especially during the annual technical review process for ongoing awards. If new approaches are proposed, partners are required to explain what barrier this will overcome so that resources are focused on impact.

Peace Corps Volunteers submit reports to Peace Corps on a quarterly basis, and Program Managers visit Volunteers and counterparts annually to discuss progress on work plans and offer technical support. Peace Corps also conducts quarterly calls to Volunteers and counterparts/supervisors and holds regular training with Volunteers and counterparts during which challenges and best practices are shared.

Management is also engaged to reinforce the shift to a more proactive and transparent approach. Post DCMM, PEPFAR/B convened an all PEPFAR implementing partner meeting, in partnership

with the P.S. MOHW, DHMT's, MOHW heads of department, and USG staff to discuss how to address the FY17 achievement gap through innovative strategies to improve case detection and treatment initiations.

C. Improved integration of key health system interventions, including HRH and laboratory (VL) activities, across the cascade.

PEPFAR/B support for Viral Load testing is through technical assistance. Staffing for laboratory services continue to experience shortages, especially expert/specialist staffing with advanced lab skills hence relies on outsourcing from other countries.

Since the introduction of Treat All in June, 2016, new treatment initiations increased steadily each month, with an average of about 2600 newly initiated. This translates to the need for laboratory monitoring, especially VL doubling as well. In order to meet the demand for increased VL monitoring, the GoB laboratory services is scaling up viral load services and uptake. The GoB intends to continue with viral load decentralization from the current 24 labs out of 54 to more sites so as to address the referral distances seen in some areas. As new sites get established, laboratory personnel also get trained to provide them the skills needed for VL testing. Alongside the increase in VL sites, GoB is also looking at workload and equipment throughput so as to optimize the testing. Through equipment harmonization exercises GoB utilizes only the few approved equipment at their sites for easy referral and for comparability of data.

During COP16/FY17 (by April) PEPFAR/B in collaboration with the MOHW is going to start assessing the current referral networks to identify some of the inefficiencies and make recommendation for improvement. Additionally standardized sample and result management manuals will be developed and rolled out for use. SOP's for viral load are being reviewed with GoB for implementation and scale up. National quality SOP's developed through PEPFAR/B support also continues to be rolled out by the laboratory quality office.

COP17 PEPFAR/B will continue to improve the specimen and results management through working on registers to track viral load specimens and results both at requesting clinics and testing labs to address the clinic lab interphase. Scale up of the information systems (integrated patient management system (IPMS) to include all PEPFAR/B supported sites will also be done so as to improve the identified turnaround times gaps (see Appendix F, HMIS Proposal). Data from different Information management systems will be inter-phased for better data quality for monitoring and evaluation. PEPFAR/B will implement production of external quality assurance material in-country for cost efficiencies and sustainability.

D. Improving efficiencies of service delivery through improved models of care delivery across community and facility sites.

COP17 PEPFAR/B prioritizes improved service delivery models across the community and facilities to improve case detection, new treatment initiations and retention in care and treatment. Some of these proposed strategies are currently implemented through COP16 and will be further scaled up in COP17.

Case detection:

- Expanding Index Client Partner Testing in the community and facilities
- Expanded PITC in facilities: screen and test all TB suspects, STI patients, patients in inpatient wards, and high risk patients in OPD
- KP and Priority Population Services: social network testing and targeted outreach in communities
- Self-testing pilot to reach partners of FSW and/or MSM

Linkage to Care

- Active linkage to care through integrated facility and community SOPs, building on BCPP's experiences
- Introduce same day treatment without need for referral

Treatment initiation:

- Afternoon hours with appointments for new patients
- Evening/Weekend clinic hours to access men and provide youth friendly services
- Same day treatment initiation by fast tracking initiation of patients presenting well without the need for baseline labs or extensive clinical assessment.
- Immediate treatment readiness and adherence counselling conducted at both community and facility HIV testing sites to avert delays to treatment initiation.

Retention in care and Treatment:

- Introducing multi-month scripting and dispensing
- Strengthen the adherence buddy system at the same time ensuring that it is not a barrier to treatment initiation
- Introducing one stop shop for tracking of mother-infant pair (MIP) and introducing HIV Exposed infant cohort registers
- Pilot testing community-based treatment and retention models, such as CHW ARV distribution to farms in Ghanzi, or community ART groups (CAGs) for AGYW in Greater Gaborone
- Tracking LTFU and linking them back to care

6.0 Program Support Necessary to Achieve Sustained Epidemic Control

For COP17, PEPFAR/B confirmed the system and policy barriers, as well as assessed the above-site gaps to close in order to reach epidemic control. Below is a brief description of any key changes and new activities included in Table 6.1.1-6.3.

6.1 Critical Systems Investments for Achieving Key Programmatic Gaps

PEPFAR/B has identified systems investments that are critical to addressing priority programmatic gaps in the clinical cascade with the implementation of the priority policies of Treat All and new service delivery models. The top three key programmatic gaps in the clinical cascade remain Human Resources for Health, Health Financing, and Supply chain.

Human Resources for Health (HRH)

HRH remains a concern vis-à-vis the implementation of Treat All and provision of comprehensive health care services in general. GoB's HRH policy planning and management is limited at best and the MOHW is still subject to a civil service-wide post freeze. Treat All is contributing to the burden faced by congested facilities with limited staff. In COP17, PEPFAR/B will continue to focus on development and implementation of key policies and guidelines to support Treat ALL as well as capacitating a trained, well-equipped workforce to most efficiently manage HIV/AIDS services for all PLHIV.

The barriers and outcomes in table 6.1.1 have been reorganized to clearly differentiate two main approaches: i) policy and guidelines development and implementation; and ii) supporting a well trained workforce. Benchmarks have also been refined to reflect key, measurable achievements expected over the next two years. PEPFAR/B continues to work with MOHW colleagues and stakeholders on the Integrated Community Service Delivery Guidelines, incorporating learnings from the task-shifting environment assessment completed in year one. Complementary activities include development of tools and materials to operationalize these Guidelines, thereby standing up a well-equipped cadre of community health workers to meet the needs of PLHIV in the communities. Training of providers continues to assure sufficient numbers of HIV prescribers, ARV dispensers, and community-based workers to support patient-centered services. One notable change in table 6.1.1 is the removal of the stipulation that CHWs would be absorbed by the MOHW. Negotiations with the MOHW have confirmed that they will not be able to officially absorb all of the PEPFAR-trained CHWs, rather they want assurance that these CHWs meet minimum competencies and are tracked in one consolidated system such that the MOHW and DHMTs know who is working and where.

Health Financing

The GoB Health Financing Technical Working Group (HFTWG) presented a draft five-year strategy to the Minister and Senior Management Team at MOHW in December 2016. Progress on this strategy has highlighted the need for a comprehensive national health financing approach to address concerns with resource mobilization, allocative and technical efficiencies, and developing an insurance-based system in Botswana. Ongoing activities, this year and next, informed by this

strategy, have been added to Table 6.1.2 to build on our momentum. These new activities include the institutionalization of a health priority assessment unit to evaluate technology and commodity investments and determine how best to strategically use health resources in Botswana. Another new activity is the capacitation of the MOHW's public financial management system, to support tracking of facility expenditures and routine use of the data to inform decision-making.

These activities, while contributing to improving allocative efficiencies, additionally provide some of the key building blocks on which to position an expanded insurance platform. Work in FY17 and FY18, including the costing of a universal health services package, costing of a community-based service platform, and developing an insurance plan blueprint, will further the GoB's interests in designing a comprehensive response to the vulnerability of donor support and sustainable funding.

Supply Chain

In COP16 with the influx of new funding earmarked for commodities and supply chain strengthening, PEPFAR/B relooked at the support needed by the MOHW to run a reliable, functioning Central Medical Stores (CMS). Adjustments to Table 6.1.3 this year reflect the most current thinking about this support to CMS, including: issuing an Invitation to Tender for a new contractor; implementing a tracer system to track DTG orders from procurement to consumption; and embedding two senior-level advisors in CMS with decision-making authority to support forecasting. These efforts serve to address ongoing, critical barriers such as poorly functioning forecasting, procurement and distribution. For example, the current monitoring system, Dynaman Warehouse Management System, does not interface with facility-level systems and does not input new patient data.[22] This system gap along with inadequately trained personnel, result in insufficient stock orders, leading to facility stock-outs and product wastage when future needs are different than past. With the shift to Treat All, a long-term framework contract for DTG and/or generic DTG, is needed to ensure adequate stock amounts and the forecasting will require data management for new patient consumption to determine the new drug's required amounts. Another system barrier is the poor procurement processes. PEPFAR/B is working with the current CMS to revise the system, e.g. by creating separate budget lines for ARVs and HIV laboratory commodities, and managing the procurement processes of these drugs as part of the central TA. Peace Corps has partnered with USAID to address the supply chain challenges in districts and facilities in which volunteers work. In partnership with the MOHW and their counterparts, volunteers are trained in Logistics Management of Health Commodities. Peace Corps has again placed a third-year volunteer at USAID who works with MOHW and CMS, as well as leads the Peace Corps Supply Chain Management Volunteer Committee.

6.2 Critical Systems Investments for Achieving Priority Policies

[22] This tool only collects CMS issues data, and is not integrated with systems at facilities for consumption data.

Policy Barriers to Treat ALL

PEPFAR/B has identified three policy or programmatic barriers that are most critical to support the successful implementation of Treat All. As the Treat All policy was adopted nationally in June 2016, Table 6.2.1 was revised to focus on these barriers to implementation. Moreover, the testing barriers and activities noted in COP16, are being addressed at the site level with our routine testing partners and as such were removed from this table.

The first challenge faced by Treat All is reluctance to accept same-day treatment initiation. Current treatment guidelines, while advocating for rapid initiation among stable patients, are not widely embraced or universally implemented across HIV care and treatment clinics in Botswana. The main challenges facing same-day treatment initiation include: provider reluctance to initiation without baseline lab results; provider reluctance to prescribe DTG; poor patient literacy on benefits of early treatment; and adequate ARV supplies to support same-day treatment.

Data from BCPP showed that before introduction of Treat All, treatment initiation delays routinely exceeded 30 days (54%). However fast tracking treatment initiation without waiting for baseline lab results, most patients (76%) were started on treatment within the same day. Based on these lessons learnt from BCPP the bilateral program will work with GoB to harmonize and standardize fast tracking treatment initiation across PEPFAR/B priority SNU's. Through the use of Epidemic Control funds (refer to Appendix G), PEPFAR/B plans to facilitate the roll-out of same-day treatment initiation. MOHW leadership is now supportive of this implementation and we hope to see written notification via a Savingsgram soon.

The second policy barrier to full implementation of Treat All is the prohibition of providing ARVs and HIV care to non-citizen PLHIVs in public health clinics. Non-citizens, documented and undocumented, are ineligible for publically-funded ARVs. Recent data from BCPP found that while 71% of citizen PLHIVs are on ART, only 27% of non-citizen PLHIVs are receiving treatment. While this is only one data source, it is a startling contrast that begs further investigation. In COP16, PEPFAR/B is developing a policy brief to estimate the size of the untreated population and model the impact of withholding treatment on the course of the epidemic. This information is instrumental to the ongoing health diplomacy efforts to identify and initiate a sustainable funding mechanism for this population.

The third programmatic concern is the lack of controls for quality lab testing. Routine quality monitoring for both testing commodities and testing personnel is needed to ensure minimum standards are met. Post-market surveillance of test kits at national and site level, as well as routine HIV test kit validation procedures, are necessary. Lack of routine competency assessment and certification procedures result in testers, with competencies that were only ascertained as far back as their initial trainings.

PEPFAR/B will continue to address the gaps identified in testing that supports Treat All through developing in COP17 procedures for assessing and certifying commodities and testers (site

assessment of testers) on a routine basis. PEPFAR/B will also validate self-testing kits for in-country use and pilot the use of dried blood spot for viral load testing. In order to support quality assurance for the increased volume of testing due to implementation of Treat All, PEPFAR/B will assist GoB to produce proficiency testing and internal quality control materials to address the inadequacy and to scale-up coverage needed for Treat All.

New and efficient service delivery models

For COP17 Table 6.2.2 was reoriented to highlight discrete activities that contribute to improving patient-centered service delivery models. Specifically, PEPFAR/B activities and outcomes are designed to address two barriers: need for patient-centered service delivery models; and need to maximize the community role in epidemic control.

Two key service delivery strategies have been discussed with MOHW to improve case identification and retention on ART. In COP16 we are seeking GoB approval to use self-testing kits in Botswana and pilot this approach with KPs and hard-to-reach young men through their partners. At the three year mark, we expect to have findings from five self-testing pilots, with an estimated 8,000 persons self-tested. This work will require well designed SOPs to ensure that self-testers are adequately counseled and linked to care as needed.

To improve retention rates and respond to patient requests for easier ART compliance, PEPFAR/B is working with MOHW to promote multi-month dispensing and with CMS to assure that the supply of ARVs is adequate to support this strategy. About 500 facilities are dispensing ARVs and current prescribers often write multi-month prescriptions, yet medications are doled out on a monthly basis only. One of the challenges has been a concern about potential stock-outs, thereby limiting the distribution of ARVs to clients. PEPFAR/B work with supply chain should address this latter concern, and messaging from the MOHW (with inclusion in Treatment Guidelines) will advance this strategy.

To increase community involvement in epidemic control, in COP15, 32 local community quality improvement (QI) teams were established. These teams work with the Kgosi (traditional leader) in motivating community members to practice good health and health-seeking behaviors, to identify opportunities with facility partners, NGOs, and DHMTs to improve access and use of services. While this work has been successful and well –received by the communities and DHMTs, the resources required supporting this number of teams is high. Moving forward in COP17, we are narrowing the focus of this work to implement and test a few community-based, locally-relevant, differentiated models of care, within a QI model to maximize our learnings. For stable patients, differentiated models of care can reduce the burden at facilities by delivering patient-centered care at the community level.

The second continuing activity in COP 17 is the mixed methods evaluation of outcomes among older adolescent OVC. This evaluation is on track with baseline data collection anticipated to be completed by end of FY17; endline data collection is scheduled for FY19. Findings will inform

PEPFAR/B, the GoB and the MOHW future activities to assure they meet the needs of older OVC transition to adulthood.

6.3 Proposed system investments outside of programmatic gaps and priority policies.

Governance:
The National TB Program's current strategic plan (2013 – 2017) is ending in 2017. PEPFAR/B and Global Fund are supporting that national TB prevalence survey, findings and recommendations from this will inform the development of the TB/HIV strategic plan (2018 – 2022) in COP17. Additional TA as needed will be provided to the Program to complete the strategic plan.

Institutional and Organizational Development:
PEPFAR/B will support development and integration of pharmacovigilance for new TB drugs and new treatment regimen (Bedaquiline and delamanid) and DTG in facilities. These are two new drugs introduced in Botswana for HIV and TB. Strong monitoring of the possible side effect of those two drugs is essential.

Laboratory:
Although the Government of Botswana supports a large proportion of the national laboratory health sector response to the HIV/AIDS, gaps remain in areas such as specimen and results management, quality and monitoring of testing, and availability of testing reagents (TB and HIVDR) and commodities management which often results in testing interruptions.
The PEPFAR/B laboratory program will provide support to the different programs through building testing capacity on HIV (self-testing), TB diagnosis, EID and VL. Proficiency testing programs for HIV related tests will also be strengthened through in-country capacity building. To further identify clients with TB and HIV coinfections so as to link them to treatment, PEPFAR will support optimization of GeneXpert TB molecular diagnosis for all presumptive TB cases and scale up the use of fluorescent microscopy for TB case monitoring through training, mentorship, and support supervision.

In order to reduce inaccuracy in laboratory results, quality assurance will be supported through the introduction of the viral load score card for viral load labs, rollout of Strengthening Laboratory Management Towards Accreditation (SLMTA) and gaps will be identified through Stepwise Laboratory Improvement Towards Accreditation (SLIPTA) and site improvement through monitoring systems (SIMS). Facilities will be provided with technical assistance including SOP development and mentorship for QMS implementation.

To assist towards management of patient on ART, new technologies (Cryptoccoccal antigen testing and HPV molecular testing) to screen for HIV-related opportunistic infections will be validated for uptake by government. Integrase inhibitor HIV drug resistance testing capacities in support of newly introduced DTG treatment drug will also be validated and adopted for use among patients failing treatment.

Strategic information (SI) – Information Systems (Also see Appendix F):
Availability of representative and quality data is core in guiding Botswana's HIV program to prioritize geographic locations, populations, and interventions appropriately in order to achieve epidemic control. SI activities strive to improve availability of routine quality data that will better inform planning, and facilitate measurement of the impact of different HIV interventions towards reaching epidemic control. SI system activities will focus on optimizing data from patient-level systems such as Patient Information Management System (PIMS II) and the Integrated Patient Management System (IPMS) through the MOHW's National Data Warehouse. A merged, comprehensive data set will allow for assessments of linkage to care, Treat All ART initiation strategies and final outcomes of HIV positive clients. Real-time data reporting of selected quality indicators through an SMS-based reporting system will continue to be developed and expanded for various aspects of HTC and ARV Treatment, including those focused on PMTCT and TB programs, and pediatric, adolescent, and adult populations. Further development of the TB Open Medical Record System (OMRS) will continue along with activities focused on capturing patient-level information of presumptive TB cases, diagnosed TB cases and information on HIV care and treatment for co-infected patients. In COP 17, TA will support mentoring, supportive supervision and training for GxAlert implementation. Support will also be directed at interfacing GxAlert with other information systems within the MOHW to assure complete TB data. The availability of comprehensive, patient-level HIV information will form the basis of case-based surveillance going forward.

TA will continue to support routine M&E activities to improve data availability and use along the continuum of care. This includes support to conduct data quality assessments, supporting the collection of data on strategic and program planning indicators on OVC, KPs and other priority populations. Linkages between community data collection systems and facility-based systems will be strengthened to better track community-based testing and linkage to care.

Strategic information (SI) – Studies and Surveys:
SI surveillance activities will focus on supporting national surveillance activities, such as the fifth Botswana AIDS Impact Survey combined with the TB Prevalence Survey (BAIS V – TB Prev), the Behavioral and Biological surveillance of HIV/STI among select High-Risk Populations (BBSS II), and National OVC Situation Analysis. These national studies are moving forward under GoB leadership with PEPFAR/B technical assistance. Additionally, we have added a few new, small scale studies to inform our PEPFAR programming, including operations research for the PrEP pilot with KP and AGYW; network analyses to map service provider referrals from the provider and client perspective for DREAMS-like activities; and research to identify leaks along the clinical cascade and solutions to close plug those leaks.

In line with the broader principles of streamlining in COP 2017, the intent of Table 6 (see Appendix C) this year is to stay the course and refine, as needed, the three-year focused systems

investments and outcomes defined in COP16. Outcomes and annual benchmarks will be assessed annually through the POART process.

7.0 Staffing Plan

As part of the COP17 process, PEPFAR/B examined our interagency staffing footprint and organizational structure. The staffing profile reflects cross-cutting technical support to the priority budget codes. The level of effort in M&O is appropriate for the technical team with some CDC M&O associated with administrative staff, whose work in procurement, human resources, facilities management and motor pool supports the office facility shared by CDC, USAID, PEPFAR and DoD, which is not located within the U.S. Embassy compound.

That Botswana is potentially facing reductions in PEPFAR fiscal resources [23] plays a role in planning for staffing over the medium and longer-term. In the short term, with the departure of the CDC/Division of Tuberculosis Elimination (DTBE) at the end of FY17 and the Botswana Combination Prevention Project (BCPP) early in calendar year 2018, a rigorous assessment of the CDC management and operations team was also undertaken, resulting in a reduction of staff.

The CDC/B branch structure was reorganized by mid-COP16 with a focus on programmatic efficiency and cross-cutting expertise as well as promotion of LES to leadership positions (see attached organizational chart). The HIV Prevention and Care and Treatment teams will be combined to create the HIV Services Branch once a Branch Chief is hired to facilitate strategy and programming across the continuum for both HIV negative and positive people in Botswana. The LES position of Associate Director of Science (ADS), was identified as a need during the CDC organizational assessment and is expected to be on board by FY18 through repurposing of a position that will be eliminated due to changes in the focus on the PEPFAR program (Blood Safety).

From May to September 2016, Peace Corps Botswana conducted its annual Integrated Planning and Budgeting System (IPBS) exercise for FY17 to analyze the staffing footprint and interagency organizational structure. Baseline Levels of Effort and the Organizational Chart for FY16 were analyzed against strategic plans anticipated in FY17 operations to determine changes in staffing needs, if any, anticipated in the coming fiscal year. No significant changes in operations impacting PEPFAR were identified during this exercise

DOD has only one technical staff member who is responsible for day to day management of the PEPFAR Program, IP management and also actively participating in the TWGs and is responsible for conducting SIMS and remediation visits. The OSC Chief is the Agency Lead and responsible

[23] The Botswana Country Chair at the DCMM repeatedly called Botswana a “downward trajectory country”.

for Leadership and participating in Inter Agency Leads meetings and discussions at the decision making level.

SIMS - CDC

For most assessments, CDC/B will utilize only two assessors. CDC/B is centralizing and streamlining our SIMS business processes from planning to implementation to data entry, analysis and remediation. CDC/B has trained or will train virtually all staff, with the exception of janitors and chauffeurs, in SIMS assessments so that we can maximize the time and efforts of the technical teams to focus on remediation and quality improvement efforts. CDC has developed a SIMS schedule for FY17 to facilitate comprehensive analysis of performance and remediation plans at the district level.

SIMS - USAID

In order to streamline and effectively manage SIMS business processes, USAID will recruit an M&E Analyst whose job function will include planning SIMS assessments, including communicating with partners, managing data entry, and coordinating follow-up visits and remediation. USAID has developed a SIMS schedule for FY17 that the M&E Analyst will be responsible for managing. This schedule is organized to ensure that staff are able to effectively perform SIMS assessments in a coordinated manner that will maximize their time out of the office. In instances where USAID staff are unable to perform SIMS visits due to staffing challenges, the USAID Southern Africa Regional Mission will provide technical and logistical support in conducting initial SIMS assessments and follow-up visits.

SIMS – DoD

DOD will make two SIMS visits per quarter. Visits to the North will cover 5 sites and in the Southern part of the country 4 sites.

<u>Long-term Vacant Positions</u>

USAID currently has three previously approved positions that remain unfilled – M&E Analyst, Prevention Specialist, and Computer and Facility Manager. These positions are currently in the process of classification and grading with the USAID Southern Africa Regional Mission. The human resources process for these positions has been stalled due to the recent hiring freeze.

With the arrival of the CDC/B country director in the summer of 2016, no recruitment action was taken on some COP16 vacancies until an organizational assessment was rapidly but comprehensively completed and vetted by CDC headquarters, the PEPFAR Interagency Team and the Front Office. Authority to recruit (further delayed as a result of the current hiring freeze) has now been granted and all vacancies are with the Department of State Human Resources Offices for either classification or announcement.

Peace Corps and DoD currently have no long-term vacant PEPFAR positions. The PEPFAR Coordination office has a Health Policy Analyst position open since mid-February 2017. As this is an EFM position, it is affected by the hiring freeze and no recruitment has taken place as of yet

New Position

CDC/B is requesting only one new LES position, an Associate Director of Science. The primary responsibility of the position is to support the delivery of a high quality, high impact, ethically sound research and evaluation program while also building strong scientific skills and greater use of evidence within CDC/B, local stakeholders and the PEPFAR/B team. The position was vetted and approved by the interagency leadership team. The Blood Safety Specialist position was re-purposed for this position.

USAID, DoD and Peace Corps are not proposing any new positions in COP 17.

Major changes to CODB

The CDC/B CODB increased for COP17. In COP16 and previous fiscal years, CDC's PEPFAR funding contributed only a portion of the total cost of the CDC management and operations portfolio in Botswana (including salary/benefits/supplies/equipment for fiscal management, facilities management, motor pool, human resources, etc.). The CDC/Division of Tuberculosis Elimination (DTBE) and BCPP paid the balance of costs through a cost-share mechanism with the PEPFAR operations. With the departure of DTBE at the end of COP16 and BCPP by the end of Q2 in COP17, CDC/B will have to absorb more than $700,000 in expenses that had previously been contributed by those two programs. In addition, estimates for cost of living allowance increases, LES pension fund contributions, etc. are projected at a 3-5% increase. CDC/B will reduce the number of support staff in the management & operations team to help offset the loss of cost share contributions while taking into account lower requirements for support (including building/design architect, budget analyst, two janitors, three chauffeurs and seven staff from the Francistown facility in Northern Botswana). Two technical positions were abolished: 1) the Blood Safety Specialist position was no longer needed due to programmatic reprioritization and 2) one Laboratory Specialist position will not be filled after the unanticipated departure of a staff member. Finally, three unanticipated USDH vacancies are in recruitment and relocation of those individuals and their families must be included in CODB.

USAID's cost of doing business (CODB) decreased by 1.5% in COP17 from $2,855,343 in COP16 to $2,812,298 in COP17. This decrease is the result of a re-purposed previously approved position.

APPENDIX A

Table A.1. SNU Prioritization

SNU	COP15 Prioritization	APR16 Achievement	COP16 Prioritization	Expected Achievement by APR17	COP17 Prioritization	COP17 Target (APR18)
Gr. Gaborone	Scale-up Saturation	61%	Scale-up Aggressive	75%	Scale-up Saturation	88%
Goodhope	Scale-up Saturation	57%	Scale-up Saturation	80%	Scale-up Saturation	89%
Mahalapye	Scale-up Saturation	78%	Scale-up Saturation	80%	Scale-up Saturation	84%
Southern	Scale-up Saturation	86%	Scale-up Saturation	80%	Scale-up Saturation	88%
Gr. Francistown	Sustained	91%	Sustained	73%	Sustained	89%
Serowe/Palapye	Sustained	100%	Sustained	78%	Sustained	101%
Chobe			Sustained - Commodities	9%	Sustained[1]	25%
Ghanzi			Sustained - Commodities		Sustained[1]	
Ngamiland		6%	Sustained - Commodities	21%	Sustained[1]	38%
Selibe-Phikwe			Sustained - Commodities	25%	Sustained[1]	44%
All Other SNUs (9)					Central Support[2]	

[1] Chobe, Ngamiland and Selibe-Phikwe are prioritized as a key population micro-epidemic; Ghanzi has a TB/HIV micro-epidemic.
[2] PEPFAR/B is supplying DTG for the entire country including these SNUs which are otherwise supported by GoB

Table A.2 ART Targets by Prioritization for Epidemic Control

Prioritization Area	Total PLHIV	Expected current on ART (APR 17)	Additional patients required for 81% ART coverage	Target current on ART (APR 18) *TX_CURR*	Newly initiated (APR 18) *TX_NEW*	ART Coverage (APR 18)
Scale-Up Saturation	172,894	121,528	18,517	137,508	2,9731	80%
Sustained	88,899	71,328	680	72,187	8,042	81%
Commodities	34,844		28,224			
Central Support	52,291	1,307	41,049	1,307	7	2%
Total	**348,928**	**194,163**	**88,469**	**211,002**	**37,780**	**60%**

Note: All PEPFAR-funded commodities and related treatment results are reported under the SNU where services were received.

APPENDIX B Budget Allocations

B.1 Planned Spending in COP17

Table B.1.1 Total Funding Level		
Applied Pipeline	**New Funding**	**Total Spend**
$10,942,541	**$38,257,459**	**$49,200,000**

*Data included in Table B.1.1 should match FACTS Info records, and can be checked by running the "Summary of Planned Funding by Agency" report.

Table B.1.2 Resource Allocation by PEPFAR Budget Code (new funds only)

PEPFAR Budget Code	Budget Code Description	Amount Allocated
MTCT	Mother to Child Transmission	$392,782
HVAB	Abstinence/Be Faithful Prevention	$39,411
HVOP	Other Sexual Prevention	$2,870,876
IDUP	Injecting and Non-Injecting Drug Use	$0
HMBL	Blood Safety	$4,684,
HMIN	Injection Safety	$0
CIRC	Male Circumcision	$322,973
HVCT	Counseling and Testing	$6,089,548
HBHC	Adult Care and Support	$8,672,828
PDCS	Pediatric Care and Support	$135,813
HKID	Orphans and Vulnerable Children	$3,406,910
HTXS	Adult Treatment	$6,591,075
HTXD	ARV Drugs	$273,553
PDTX	Pediatric Treatment	$113,263
HVTB	TB/HIV Care	$2,403,094
HLAB	Lab	$137,744
HVSI	Strategic Information	$488,284
OHSS	Health Systems Strengthening	$572,157
HVMS	Management and Operations	$8,028,589
TOTAL		**$38,257,459**

*Data included in Table B.1.2 should match FACTS Info records, and can be checked by running the "Summary of Planned Funding by Budget Code" report

B.2 Resource Projections

PEPFAR/B worked closely with partners to collect accurate expenditure data from IMs during last year's Expenditure Analysis (EA) Initiative, which was used to create the EA Data Nav Tool. The EA Advisor came to Botswana twice in early 2017 to work with the team on analyzing FY16 expenditures as the starting point for estimating required resources for FY18. The EA Advisor

worked closely with program managers from each agency to develop and adjust unit expenditures (UEs) based on current data and real program costs. The exercise involved adjustments with increases and decreases so as to maintain the overall national average in line with available resources.

Adjusting UEs first took into account program management costs based on historical expenditures and more current workplace efficiencies for each IM. For target-based budgeting, the UEs for HIV testing were considered by each modality (CBTC, VCT, PITC and KP). Where historical UEs seemed high, the team used recent research from Botswana or other countries to help calculate more realistic UEs. For calculating the OVC UE, the team did not use EA FY16 as it did not represent a full year of implementation, but rather used percentages for the major cost categories from EA FY15, applied them to the COP16 budget amounts and used FY16 beneficiaries. The VMMC program took into consideration that test kits would no longer be procured by partners in COP17, and adjusted the UE accordingly. Also, VMMC excluded the work of DOD as it was an outlier in the EA analysis. All calculations and data sources used to determine UEs is available for reviewers.

In addition to EA, resource projections and earmarks required from the Funding Letter (Jan. 17, 2017) helped guide program decision making and budgeting process. Using the PBAC and OGAC guidance, the team was able to determine how to program the epidemiological plus-up funding and calculate applied funding. A Package of Services Table – created through an inter-agency effort – and targets set in the COP17 Data Pack helped the budget team determine resources required to achieve program deliverables. Finally, partner performance as measured from APR16 and FY17 Q1 achievements also played a role in determining appropriate funding levels for IPs. During DCMM, when the budget indicated that resources would be insufficient for all desired activities not tied to targets, prioritization and ranking exercises helped PEPFAR/B team to focus on the most important activities to help Botswana achieve epidemic control. The PBAC submitted at the DCMM was balanced with all earmarks reached.

APPENDIX C – Table 6

Section 6.0 Tables: Program Support Necessary to Achieve Sustained Epidemic Control
Tables from Section 6 Excel Workbook should be saved as a PDF and attached here (Tables 6.1.1, 6.1.2, 6.1.3, 6.2.1, 6.2.2, 6.3). Final Excel Workbook should be considered a part of the SDS and submitted at the same time.

Section 6.0: Systems Investments

Included Activities	Excluded Activities
Human Resources for Health (HRH): Systems/Institutional Investments	
Pre-service training; in-service training systems support and institutionalization; HRH performance support/quality; HRH policy planning and management; HR assessments and information systems; other HRH activities not classified as above	N/A
Human Resources for Health (HRH): Personnel Costs for Service Delivery	
In-service training; all HRH support at sites and community across all program areas	Other site-level investments such as purchase of vehicles, equipment and furniture, construction and renovation, and site-level recurrent categories such as ARVs, non-ARVs drugs and reagents, HIV test kits, condoms, travel and transport, building rental and utilities
Governance	
Technical area-specific guidelines, tools, and policy; general policy and other governance; other governance activities not classified as above	N/A
Finance	
Expenditure tracking; efficiency analysis and measurement; health financing; costing/cost modeling; other health financing activities not classified as above	N/A
Systems Development	
Supply chain systems; health information systems (HIS); laboratory strengthening; other systems development activities not classified above	ARVs, non-ARVs drugs and reagents, HIV test kits, condoms, travel and transport, freight for transport of commodities to sites and other supply chain costs incurred at the site-level
Institutional and Organizational Development	
Civil society and non-governmental organizations (NGOs); government institutions; social welfare systems strengthening; other institutional and organizational activities not classified above	N/A
Strategic Information	
Monitoring and evaluation; surveys; operations research; geographic mapping, spatial data, and geospatial tools; surveillance; other strategic information activities not classified above	N/A
Laboratory	
Quality management and biosafety systems; implementation and evaluation of diagnostics (POC	Vehicles, equipment and furniture, construction and renovation for site labs, and recurrent categories

and VL monitoring); laboratory information and data management systems; laboratory workforce; quality management system; sample referral systems; accreditations; technical assistance to assure or improve quality of laboratory services	from site labs such as lab reagents an supplies, travel and transport, building rental and utilities will not be included

FINAL April 19, 2017

Table 6.1.1 Key Programmatic Gap #1: Human Resources for Health (HRH)

Key Systems Barrier	Outcomes expected after 3 years of investment	Year One (COP/ ROP16) Annual Benchmark	Year Two (COP/ ROP17) Annual Benchmark	Relevant Indicator or Measurement Tool	Proposed COP/ROP 2017 Activities	Budget Code(s)	Activity Budget Amount	Implementing Mechanism	Relevant SID Element and Score (if applicable)
1. Lack of Policies and Guidelines to support HRH for Treat ALL	100% of PEPFAR Scale-up SNUs (including PEPFAR Ips) implemented official MOHW SOPs	a. GOB-approved Integrated Community Service Delivery Guidelines (ICSDG)	a. SOPs, M&E tools, IEC materials, curriculum development for community health workers approved	% of SNUs implementing SOPs Approval date for ICSDGs, SOPs M&E tools	1.1. Development of M&E tools, SOPs, and IEC materials to operationalize the ICSDG	HTXS	$400 000	IM: Advancing Partners and Communities Project (APC) 17863, IP: Prime - John Snow,	HRH (6.33) Service Delivery (6.11)
		OUTCOME ACHIEVED ~~b. Assessment of task shifting environment in B'W completed~~	b. Approved task shifting policy allowing a variety of cadres, including community level, to provide services along the	Signed policy	1.2. Revised MOHW guidelines for health facility clinical team make-up and type of responsibilities by level of service delivery (incl. community-based services)	HBHC	Part of larger QI / HRH package with URC	IM: Applying Science to Strengthen and Improve Systems (ASSIST) 16731 IP: University Research Corp,	HRH (6.33) Service Delivery (6.11)
2. Lack of a workforce trained and available to identify and put people on treatment	80% of trained PEPFAR CHWs meet MOHW CHW cadre competencies ~~absorbed by MOH to sustain community based HTC and linkages,~~ and are accounted for in database. 100% of PEPFAR CHWs accounted for in MOHW sustainability database.	400 community-based health care workers (CHWs) trained and working in PEPFAR communities	60% of trained CHWs meet minimum MOHW CHW competencies	Number of CHWs trained; Number of CHWs meeting MOHW minimum competencies	2.1. Revise CHW training curricula and training of CHWs to support new proposed community guidelines	HBHC	Part of APC ICDG activity above	IM: Advancing Partners and Communities Project (APC) 17863, IP: Prime - John Snow,	HRH (6.33) Service Delivery (6.11)
					2.2. Facilitate collaboration between MOHW, DHMT, APC, and ICG stakeholders group to develop competencies and sustainability database for CHWs 2.3. MOHW will develop human resource quality assurance mechanisms to support the task shifting approach. These will include processes and activities that define,	OHSS	Part of larger QI / HRH package with URC	IM: Applying Science to Strengthen and Improve Systems (ASSIST) 16731 IP: University Research Corp, LLC	HRH (6.33) Service Delivery (6.11)
	90% of eligible facility-based HCWs in PEPFAR supported sites will be trained on AIDS Clinical Care Fundamentals, Nurse prescriptions and dispensing	Revised IN-SERVICE curricula for Facility based staff: 1.Clinical staff (Doctors, Nurses,family nurse practitional (FNP), and pharmacists,	Approved integrated curriculum, digitalized.	# of curricula approved # of curricula digitized % of eligible facility-based HCWs in PEPFAR supported sites will be	2.3. Finish piloting of training curricula, revise, and finalize. 2.4. Roll-out training to all PEPFAR supported SNUs.	HTXS	Part of larger training package [however Need additional funds for digitalization]	IM: Capacity Building and Training -17274 IP: University of MD [BUMMHI]	HRH (6.33) Service Delivery (6.11)
TOTAL							**$400 000**		

Table 6.1.2 Key Programmatic Gap #2: Sustainable Health Financing									
Key Systems Barrier	Outcomes expected after 3 years of investment	(COP/ ROP16) Annual Benchmark	(COP/ ROP17) Annual Benchmark	Indicator or Measurement Tool	Proposed COP/ROP 2017 Activities	Budget Code(s)	Activity Budget Amount	Implementing Mechanism	Relevant SID Element and Score (if applicable)
1. Absence of National Health Financing Strategy	Five year HF Strategy that provides blueprint for moving country forward on sustainable health financing (anticipated COP16). ~~Work~~	Approval of Strategy by Parliament	NA for COP17	Date of approved strategy	NA for COP17	OHSS	NA for COP17	IM: Health Finance and Governance (HFG) 16714; IP: Abt Assoc.	Domestic Resource Mobilization (5.56); Technical and Allocative Efficiencies (5.75); Financial/A11:J14
2. Poor allocative efficiency	An investment case for scaleup of national community-based HIV service delivery program informed by cost-effectiveness analyses. ~~Adoption of systems, strategies, actions or service delivery models by MoH~~	Normative costing of the ICGs completed	Retrospective costing and cost effectiveness analyses of community platform completed ~~Economic evaluation report disseminated~~ to inform GoB policies/practices for task	Date of normative costing completed. Date of actuals costing completed. Date of Investment case for community platform	2.1. Retrospective costing (actuals) of community platform implementation by PEPFAR including some cost-effectiveness analyses	HBHC	$100,000 Applied $200,000	IM: Applying Science to Strengthen and Improve Systems (ASSIST) 16731 IP: University Research Corp, LLC	HRH (6.33) Service Delivery (6.11) Technical and Allocative Efficiencies (5.75)
	Completed labor market capacity assessment findings incorporated	NA for COP16	**Completed labor market capacity assessment findings incorporated**	**Completed report disseminated with citations**	**2.2. Joint PEPFAR / GFATM labor market capacity assessment**	OHSS	Funded through central mechanism (USAID HRH2030)	IM: HRH2030	HRH (6.33)
	Minimum semi-annual review of procurement request	NA for COP16	**Institutionalizing a Health Priority Assessment Unit with Terms of Reference**	**Terms of reference developed**	**2.3. Build capacity, develop manuals and procedures to establish a Unit to objectively assess new interventions, benefits**	OHSS	$ 125 000	IM: Health Finance and Governance (HFG) 16714; IP: Abt Assoc.	Technical and Allocative Efficiencies (5.75)
	100% of mentored hospitals routinely reporting costs and outputs to DHMTs	NA for COP16	**50% of hospital costing centers completed PFM assessment and developed remediation plan**	**% of hospital costing centers completing assessment % routinely reporting**	**2.4. Capacitate the MOHW's Public Financial Management (PFM) system through asessment of the PFM system and develop plan to mentor hospital costing centers 2.5. Support**	OHSS	$ 325 000	IM: Health Finance and Governance (HFG) 16714; IP: Abt Assoc.	Technical and Allocative Efficiencies (5.75)
3. Inadequate insurance-based system (ie. poor resource mobilization)	Approved national health insurance model with implementation plan, costs, and	a. Costed UHSP included in national health insurance feasibility study	NA for COP17	Study report	NA for COP17	OHSS	NA for COP17	IM: Health Finance and Governance (HFG) 16714; IP: Abt Assoc.	Technical and Allocative Efficiencies (5.75)

	timeline	b. Completed Insurance Feasibility Study and Insurance Plan Blueprint	**Two stakeholder meetings to build broadbased support for**	**Date of final study report Date of stakeholder meetings**	3.1. Continued coalition building for health financing plan and insurance reform	OHSS	$ 50 000	IM: Health Finance and Governance (HFG) 16714; IP: Abt Assoc.	Domestic Resource Mobilization (5.56); Technical and Allocative
~~4. Tact and Trust Funding sustainability~~ part of strategies above		~~Cost savings from alternative service delivery options modelled~~	~~Continued dialogue and coordination among donors to reduce overlaps/duplication adding to both efficiency~~		~~4.1. Health diplomacy efforts of PEPFAR staff, HQ and front office.~~		~~NA for COP17~~		
							$750 000		

Table 6.1.3 Key Programmatic Gap #3: Supply Chain									
Key Systems Barrier	Outcomes expected after 3 years of investment	Year One (COP/ ROP16) Annual Benchmark	Year Two (COP/ ROP17) Annual Benchmark	Relevant Indicator or Measurement Tool	Proposed COP/ROP 2017 Activities	Budget Code(s)	Activity Budget Amount	Implementing Mechanism	Relevant SID Element and Score (if applicable)
~~1. Lack of an adequate forecasting system~~	~~Decrease in # of health facilities that experience stock outs, expiries and overstock of HIV/AIDS~~								
1. Poorly functioning procurement processes	Contractor in place adhering to international standards	Invitation to Tender (ITT) has been publically issued and candidates reviewed	Awarded supply chain agent contract	Date of awarded contract. Assessment of contractor for adherences to International	1.1. The ITT process will continue to benefit from international best practice TA	OHSS	$1 000 000	IM: GHSCP-PSM 18220 IP: Chemonics	Commodity Security and Supply Chain (6.27)
2. Inadequate Distribution ~~and Storage~~	100% of DTG tracked from procurement to facility receipt to ensure visibility	Tracer system established for DTG	PEPFAR commodities will be tracked-&-traced to facilities through a transparent	Date of system establishment % of DTG tracked	2.1. TA to LMU to implement and monitor DTG tracer system	OHSS			
3. Inadequatae capacity to properly forecast national needs. ~~3. Purchase of commodities to meet the forecasted commodities gap and targeted TA to Supply chain system management, reform and accountability and update service delivery models~~	100% of sites receiving PEPFAR supported ARVS on time.	Minimum 2 technical advisors embedded In CMS with senior decision-making authority	National LMU independently forecasting all health commodities	No emergency procurements No stockouts of essential HIV commodities	3.1. ART facilities will receive TA on capturing, undertsanding, reporting and using treatment and patient data for decision making 3.2. TA to CMS Logistics Management Unit to enhance operational capacities for	OHSS			
							$1 000 000		

Table 6.2.1: ~~Test and START~~ Policy Barriers to Treat ALL									
Key Systems Barrier	Outcomes expected after 3 years of investment	Year One (COP/ ROP16) Annual Benchmark	Year Two (COP/ ROP17) Annual Benchmark	Relevant Indicator or Measurement Tool	Proposed COP/ROP 2017 Activities	Budget Code(s)	Activity Budget Amount	Implementing Mechanism	Relevant SID Element and Score (if applicable)

1. **Delay in same-day" initiation due to provider reluctance and poor client literacy** ~~Clinical assessment & adherence counseling is lengthy/time consuming~~ "In Botswana per BCPP experience, "same-day" may be next day of clinical appointment	**80% of clients with same-day" initiation nationally.** ~~Counseling, testing and other bloodwork, and initiation of treatment will begin even before lab results and/or presence of an adherence buddy are in place.~~	**Revised, final 2016 Botswana 2016 Integrated HIV Clinical Care Guidelines, available and disseminated to all facilities nationwide; incorporated into routine training, mentorship, coaching at 100% PEPFAR sites**	**100% of PEPFAR-supported sites are able to initiate same-day" low-risk, new patients**	Data of final guidelines % of PEPFAR sites implementing rapid treatment initiation % of clients initiated ; IP tracking of time to initiation	**1.1 Advocate with MOHW to allow same-day initiation without completed lab results for stable patients;** **1.2. Strengthen screening for OIS and pharmacovigilance (also in pregnancy);** 1.3. Continue provider trainings on new guidance to accommodate GOB staff transfers; **1.4. Strengthen collaboration btn Facility**	HTXS	$100,000 (Epi Control funds) Note: additional site-level activities (DSD and TA) are covered under Epi Control Funds as noted in Appendix G	IM: Capacity Building and Training 17274 IP: University of Maryland (BUMMHI)	Human Resources for Health (6.33)
		Comprehensive Client Literacy package distributed to	NA for COP17	Client package distributed and used in facilities and communities	NA for COP17	HTXS	NA for COP17	IM: Capacity Building and Training -17274 IP: University of MD [BUMMHI]	
2. Non-Citizens ineligible for ART in public health facilities	**Sustainable mechanism for funding non-citizen treatment identified.**	**Policy brief produced with estimated impact of not treating non-citizens**	**Advocacy by USG nationally and regionally undertaken to support non-citizen**	**Date of brief, Cables, Meeting minutes**	**2.1. Health diplomacy efforts through multilateral stakeholder group committed to**	**NA**	**NA**	**NA**	
~~1. Need for higher yield testing to identify newly diagnosed PLHIV~~	~~Increased HTC yield to an average of 10% across all modalities and 90% of all newly diagnosed PLHIV linked to comprehensive care and treatment in clinical and community settings~~	~~Increased HTC yield to an average of 8% across all modalities~~	~~Increased HTC yield for community testing to an average of 10% across select modalities through refined targeting to reach unidentified PLHIV in priority populations~~	~~HTC_TST HTC_TST_POS~~	~~1.1. Continue to maximize index based testing in community settings to increase yield and provide counseling to encourage linkage and care. 1.2. Refine risk assessment targeting for priority young women and young men to increase knowledge of HIV status and~~	~~HVCT~~	~~Part of larger package of APC community services ($90,000)~~	~~IM: Advancing Partners and Communities Project (APC) 17863 IP: John Snow, Inc.~~	~~Service Delivery (6.1)~~
					~~**1.3. Strengthen IP's community testing program through QI activities to identify and resolve system barriers**~~	~~HVCT~~	~~Part of larger QI / HRH package with URC ($660,700)~~	~~IM: Applying Science to Strengthen and Improve Systems (ASSIST) 16731 IP: University Research Corp,~~	~~Service Delivery (6.1)~~

					1.4. Continue targeted mobile and indoor case HTC for Key Populations, **including network outreach through vouchers**	HVCT	Part of larger package of KP services ($675,000)	IM: Linkages Across the Continuum of HIV Services for Key Populations Affected by HIV (LINKAGES) Project 17862	Service Delivery (6.11)
					1.5. Implementation of high yielding modalities including social network testing,	HVCT	$ 2,500,000	IM: Community HIV Testing and Counseling and KP Suppport 18253 IP: TBD	
			Increased yield for facility based testing 7% to 8%	Part of larger package of APC community services (900,000)	**1.6 Continue to analyze data and maximize implemetation of high yielding modalities including testing of STI patients, TB patients,**	HVCT	$ 3,267,902	IM: Technical assistance to strengthen government health systems 18163 IP: University of Washington	Service Delivery (6.11)
2. Need for strengthening testing and linkage to care	a. Cost effective approaches for delivery of population wide HIV testing and treatment services tailored to the contextual realities and needs of priority areas and population groups with higher or unknown rates of infection. b. 80% 80% of HTC positives identified through community based support	**b. 80% of HTC positives identified through community testing are linked to care.**	**b. 80% of HTC positives identified through community testing are linked to care.**	TX_NEW and HTC_TST_POS analyses	**2.1. CDC implements active linkage to care and treatment using lay counselors /navigators to coordinate with**	HVCT	$ 300,000	IM: Community HIV Testing and Counseling and KP Suppport 18253 IP: TBD	Service Delivery (6.11)
				IP M&E system tracks linkages	**2.2. Develop CHV SOPs and training materials to improve counseling for PLHIV and increase linkages to care.** **2.3. Expand use of SMS based M&E**	HTXS	(see Table 6.1, Activity 1.1)	IM: Advancing Partners and Communities Project (APC) 17863 IP: John Snow, Inc.	Service Delivery (6.11); HRH (6.33)
3. Quality of HIV-related testing including inadequate in-country capacity to produce PT Strengthen quality testing for key HIV related tests - Strengthen results management for HIV related tests - Lack of POCT policy **- Lack of monitoring for VL CQI activities in PEPFAR supported labs**	90% of testing sites are using PT and IQC materials produced in country for HIV and TB	70% of testing sites are using PT and IQC material for Rapid HIV and TB produced in country by BNQAL	80% of testing sites are using PT and IQC material for Rapid HIV and TB produced in country by BNQAL	% of sites using in-country materials SIMS 3.0	3.1Expand BNQAL scope to include preparation of PT for VL and EID	HTXS	$221,070	IM:Capacity building for global HIV/AIDS Microbiological Lab 9915 IP: American Society for	Quality Management; 4.76 Health worker capacity for QM/QI 2.00 Strategic Plan – 1.25
	40% of testing sites are using EID and VL materials produced in country.	**NA for COP16**	**20% of testing sites are using PT and IQC material for VL and EID produced in country by BNQAL**	**% of sites using in-country materials SIMS 3.0**	**3.2 Expand BNQAL scope to include preparation of PT for VL and EID**	HTXS	$106 873	IM: Quality HIV/AIDS Services through Government of Botswana - 18252 IP: The	

	POCT policy developed	POCT guidelines developed	POCT kit and equipment evaluation guidelines printed	Date of guideline approved; Date of Policy developed; SIMS 3.0	3.3 Support NHL in routine kit and equipment evaluation including HIV self testing. ~~3.3 establish a post market surveillance system for diagnostics~~	HVCT	$45 413	IM: Quality HIV/AIDS Services through Government of Botswana - 18252 IP: The	Human Resources for Health (6.33) Quality management; 4.76 Laboratory 5.69
	100% PEPFAR-supported laboratories and all requesting clinics are utilizing EID and viral load specimen and results registers	70% PEPFAR-supported laboratories and 60% requesting clinics are utilizing EID and viral load specimen and results registers	90% PEPFAR-supported laboratories and 80% of requesting clinics are utilizing EID and viral load specimen and results registers	% of labs and clinics utilizing registers for specimens and results	3.4 Develop and rollout lab and clinical registers for tracking VL and EID specimen and results	HTXS	$103 421	IM: Capacity Building and Training - 17274 IP: BUMMHI	Viral load infrastructure 1.11 Qulaity management 4.76 Laboratory 5.69 Strategic Plan – 1.25 Comprehensiveness of Viral Load Data –
	All viral load labs to score minimum of 75% on the viral laod score card	**NA for COP16**	**All labs to attain at least 65% score on the viral laod score card**	**% score on the viral load score card**	**Monitor viral load labs using the viral load score card**	**HTXS**	**$106 850**	**IM: Quality HIV/AIDS Services through Government of Botswana - 18252 IP:The**	**Quality Management; 4.76 Health worker capacity for QM/QI 2.00 Laboratory 5.69**
Support for viral load and EID ancillary equipment maintenance	**80% of VL and EID testing ancilliary equipment in PEPFAR supported labs maintained and**	**NA for COP16**	**50% of VL and EID testing ancilliary equipment in PEPFAR supported labs**	**% of equipment maintained and certified**	**NA**	**HLAB**	**$199 423**	**IM: Quality HIV/AIDS Services through Government of Botswana 18252**	Quality Management (4.76)
TOTAL							**$883 050**		

Table 6.2.2: New and efficient service delivery models

Key Systems Barrier	Outcomes expected after 3 years of investment	Year One (COP/ ROP16) Annual Benchmark	Year Two (COP/ ROP17) Annual Benchmark	Relevant Indicator or Measurement Tool	Proposed COP/ROP 2017 Activities	Budget Code(s)	Activity Budget Amount	Implementing Mechanism	Relevant SID Element and Score (if applicable)
1. The service delivery model needs more patient-centered focus. ~~approach is still highly medicalized~~	**90% of PEPFAR-supported sites are distributing 3 months ARVs to stable patients**	**Botswana HIV Clinical Care Guidelines includes specific allowance for multi-month scripting.**	**50% of PEPFAR-supported sites are distributing 3 months ARVs to stable patients. ARV supplies at 100% of PEPFAR-**	**% of facilities providing MMD % of facilities with sufficient buffer stock, ARV tracer**	**1.1. Official MOHW notification to facilities (Savings Gram) issued to support MMD 1.2. Distribution and training/mentoring on revised Guidelines 1.3.**	OHSS HBHC	**Included in supply chain (6.1.3) and training budgets for BUMMHI**		

	5 self-testing pilots completed with findings disseminated 8,000 self-tested	**Approval from GOB to pilot self-testing for target populations**	**Self-testing pilots launched in 3 KP sites and 2 sites in Gr. Gaborone for young women and men**	**Date of GOB approval for pilots; Date of pilot initiation**	**1.3. Develop SOPs for counseling, tracking and linking to care PLHIV identified through self-testing.** **1.4. Train staff and CHWs on protocols and tracking systems.**	HVCT	Included in community and commodities testing budget	linkages, tvct, apc	
	~~a. A systematic approach to harmonized, standardized and competency based training that is needs-driven and accredited for CHWs to ensure appropriate competencies to undertake the tasks they are to perform is adopted by MOHW.~~ ~~b. MOHW and PEPFAR developed task shifting plan to communities that is appropriately costed and adequately~~								
2. Contribution of the community to epidemic control has been undervalued	MOHW has incorporated community-based models into national services and guidelines, including community-based treatment counselors, adherence clubs, etc	**ACHIEVED: 32 QI Teams operational.** ~~Engagement of community members, facility staff and PLHIV in QI at the community level to build the Botswana specific evidence base for locally relevant community based linkage and~~	Minimum of 2 community-based differentiated models of care to improve patient-centered care implemented with QI activities to improve performance.	Case study reports for each model of care.	2.1. Focused QI teams working with communities, IPs, facilities, and MOHW to test and implement locally-relevant community-based differentiated models of care.	HTXS	Part of larger QI / HRH package with URC	IM: Applying Science to Strengthen and Improve Systems (ASSIST) 16731 IP: University Research Corp, LLC	Performance data(5.77)

		Mixed methods study protocol finalized for evaluation of the impact of community activities on health, education, and labor outcomes among older adolescents transitioning from long-term OVC	Qualitative and quantitative baseline data collection and cleaning completed	Study protocol; Final dataset	2.2.a. Establish sampling frame and complete OVC listing; 2.2.b. Program tablets for data collection; 2.2.c. Conduct focus group and indepth interviews and clean data 2.2.d. Collect and clean quantitative data	HKID	$976,000 (Applied pipeline)	IM: MEASURE Evaluation Phase IV – 17322 IP: UNC at Chapel Hill, Carolina Population Center	Performance data(5.77)
TOTAL							**$976 000**		
FINAL March 9, 2017									
Table 6.3 Other Proposed Systems Investments									
Activity	**For each activity, indicate which of the following the activity addresses: 1) First 90; 2)**	**Outcomes expected after 3 years of investment**	**Year One (COP/ROP16) Annual Benchmark**	**Year Two (COP/ROP17) Annual Benchmark**	**Relevant Indicator or Measurement Tool**	**Budget Code(s)**	**Activity Budget Amount**	**Associated Implementing Mechanism ID**	**Relevant SID Element and Score (if applicable)**
Finance									
Governance									
TA to National TB Program and stakeholders to develop plan supported by external program	**All 90s**	**Approved 5 year national TB strategic plan**	**Minimum of 2 consultative stakeholder meetings held to draft plan.**	**Dissemination of approved strategic plan**	**Date of approval**	**HVTB**	**$284 444**	**IM: Challenge TB 17323 IP: KNCV**	
HRH - Systems/Institutional Investments									
Inst & Org Development									
Capacity building and monitoring of the integrated Pharmacovigilance for Bedaquiline and DTG, development of M & E tools	**All 90s**	**Integrated pharmacovigilance system operational and independently run by MOHW**	**National pharmacovigilance committee reestablished and meeting regularly**	**Site level monitoring using national pharmacovigilance system operational**	**Meeting minutes # of PEPFAR sites with system operational # of PEPFAR and non-PEPFAR sites reporting adverse events**	**HVTB**	**$113 778**	**IM: Challenge TB 17323 IP: KNCV**	
[Add rows as needed]									
Laboratory									

~~ACTIVITY NOT COVERED IN COP 17 1. SUPPORT OPERATIONALIZATION OF THE NATIONAL PUBLIC HEALTH LABORATORY (NPHL):~~ ~~TA will focus on strengthening NPHL capacity to coordinate laboratory programming throughout Botswana.~~ **UPDATE:** Funding to operationalize the public health lab was once off funding required for one year duration activities	~~First 90; Third 90; Sustained Epidemic Control~~	~~**2017:** Dissemination of guidance documentation for public health laboratories on public health laboratory standards policies, and Quality Management System (QMS) standards. **2018:** Dissemination of guidance documentation at central and site level for conducting laboratory based surveys, operational research, post market surveillance of diagnostic test kits, and outbreak investigations and monitoring~~	~~95% of public Health laboratory and QMS documents complete~~	~~None~~		~~HLAB~~	~~170 000~~	~~IM: Capacity Building Assistance for Global HIV/AIDS Labs – 9315 IP: American Society for Microbiology (ASM)~~	~~Quality Management (4.76) Laboratory (5.69)~~
ROLL OUT STRENGTHENING LABORATORY MANAGEMENT TOWARDS ACCREDITATION (SLMTA) PROCESS AND CONDUCT QUALITY AUDITS IN VL,TB, AND EID LABS: - Rollout SLMTA in all PEPFAR supported labs - Conduct SLIPTA audits and institute remediation at laborattories - Support (SOP development,implementation) to pass Proficiency testing and attain accreditation - Mentor and build capacity in local auditors to carry out accreditation evaluation process	First 90; Third 90; Sustained Epidemic Control	40% of PEPFAR supported labs having attained 3 star rating on the SLIPTA checklist	70% of labs at 2 star rating SLIPTA rating	80% of labs at ≥ 2 star SLIPTA rating	% of PEPFAR-supported labs by SLIPTA ratingLAB_PTCQI	HLAB	$256 884	IM: Development of Lab Network and Society 17007 IP: African Society of Laboratory Medicine (ASLM)	Human Resources for Health (6.33) Quality Management (4.76)

SUPPORT CONTINUOUS QUALITY IMPROVEMENT (CQI) AND PROVIDE REMEDIATION FOR HIV TESTING IN PEPFAR SUPPORTED SITES: - Provide on site assessment of testers and testing as part of CQI - Certification of testers annually - Conduct remediation to support CQI - Conduct lot to lot verification of RHT kits	First 90	**On-site lot-to-lot verification conducted at 100% testing sites; 90% of all testers certified annually** ~~On-site assessment conducted at all testing sites~~	**60% on-site lot-to-lot verifications conducted; 60% testers certified annually** ~~80% testers certified annually~~	**80% on-site lot-to-lot verifications conducted; 80% testers certified annually** ~~100% implementation of lot to lot verification at all testing sites~~	% of lot-to-lot verifications conducted; % of testers verified. Data source: SIMS and National QA lab data	HVCT	$202 488	IM: International Training and Education Center for Health (I-TECH)-18163 IP: University of Washington	Human Resources for Health (6.33) Quality Management (4.76)
Build capacity to conduct HIV drug resistance testing in Gaborone through: - Training and mentoring of testing staff - Validation of HIVDR Integrase Inhibitors testing - Procurement of commodities for validation testing	Third 90, sustained epidemic control	90% of drug resistance testing conducted at GOB reference laboratory within national turn-around time guidelines. ~~patients needing drug resistance testing (according to National treatment guidelines) will be tested to guide~~	70% of drug resistance testing conducted at GOB reference laboratory within national turn-around time guidelines.~~80% availability of the HIVDR testing lab~~	80% of drug resistance testing conducted at GOB reference laboratory within national turn-around time guidelines. HIVDR Integrase Inhibitors testing methodology validated	% of drug resistance testing conducted at GOB lab Source: GOB lab data	HTXS	$173 762	IM: Quality HIV/AIDS Services through Government of Botswana - 18252 IP: Government of Botswana	Human Resources for Health (6.33) Quality Management (4.76)
Tuberculosis (TB) diagnosis - Optimize use of fluorescent microscopy to improve monitoring of TB patients by providing mentorship in TB diagnosis at 24 PEPFAR supported district laboratories	Second 90	90% of all TB follow up cases in PEPFAR supported labs monitored using flourescent microscopy	60% of all TB follow up cases in PEPFAR supported labs monitored using flourescent microscopy	75% of all TB follow up cases in PEPFAR supported labs monitored using flourescent microscopy	SIMS/SLIPTA scores	HVTB	$50,000 $54,408	IM: Quality HIV/AIDS Services through Government of Botswana 18252 IP: The Government Of Botswana IM:Capacity building for global HIV/AIDS Microbiological Labs 9915 IP: American Society for	Human Resources for Health (6.33) Quality Management (4.76)
<u>GeneXpert:</u> Mentoring, supportive supervision, and training for all GeneXpert sites and staff	**First 90; Second 90**	**90% of all TB presumptive cases tested using GeneXpert**	**NA for COP16**	**Train minimum of 75% of laboratory and clinical staff on the revised**	**SIMS/SLIPTA**	**HVTB**	**$355 556**	**IM: Challenge TB 17323 IP: KNCV**	Quality Management (4.76) Laboratory (5.69

Validate cryptococcal antigen testing and human papiloma virus (HPV) molecular testing at national level (Gaborone)	**Second 90**	**Validated Cryptococcal antigen and HPV kits approved by GOB**	**NA for COP16**	**Cryptococcal antigen and HPV kits validated**	**Date validation report issued; Date of approval document from GOB**	**HLAB**	**$31,248 (Kits) $15,000 (Validation)**	**IM: Quality HIV/AIDS Services through Government of Botswana 18252** **IP: The Government**	Human Resources for Health (6.33) Quality Management (4.76)
Strategic Information: Information Systems									
TB HIS - GXAlert: Extend Gx Alert Connectivity, maintenance, Data analysis, Develop interfaces between GXAlert (Xpert Real-time reporting system) and other HIS including	**First 90; Second 90; Third 90; Epi Control**	**Real-time data transfer between GXAlert and other TB HIS in 100% of sites**	**Benchmark Achieved ~~GXAlert operational in all 29 district with public hospitals~~**	**Data sharing operational between GXAlert and Open-MRS in 100% of sites with GeneXpert**	**% of TB patients diagnosed with lab results in OPEN-MRS**	**HVTB**	**$100,000 (HISI funds)**	**IM: Challenge TB 17323 IP: KNCV**	**Epidemiological and Health Data (5.48) Public Access to Information (8.00) Human Resources for Health (6.33)**
TB HIS - OPEN MRS: Migration of historical TB data from Electronic TB registers (ETR) to OpenMRS. District roll-out and training for utilization of OpenMRS and the data produced.	First 90; Second 90; Third 90; Epi Control	Quality patient level TB/HIV data available from 100% of PEPFAR supported sites	TB data will be migrated from Electronic TB Register (ETR) to OpenMRS for 100% (n=107) of the PEPFAR supported sites in 11 districts.	All 11 districts will report data monthly through OpenMRS	Number of high volume TB sites using Open-MRS for monthly reporting. % of PEPFAR supported sites with routine DQAs performed. Data Quality Assessment tool &	HVTB	$400 000	IM: International Training and Education Center for Health (ITECH) 18163 IP: University of Washington	Epidemiological and Health Data (5.48) Public Access to Information (8.00) Human Resources for Health (6.33) Quality Management
OpenMRS: Operationalization of OpenMRS as a patient management system for high volumn TB facilities	**First 90; Second 90; Third 90; Epi Control**	**Provider using real-time patient-level data for clinical management of TB patients in 100% of high volume**	**NA**	**50% TB high volume sites using Open-MRS for management of suceptible and MDR**	**% of high volume TB sites using Open-MRS for patient management % of PEPFAR supported sites with quality TB data available for**	**HVTB**	**$225,000 (HISI funds)**	**IM: International Training and Education Center for Health (ITECH) 18163 IP:**	**Epidemiological and Health Data (5.48) Public Access to Information (8.00) Human Resources for Health (6.33)**
Clinical Cascade Analysis with PIMS data: Strengthen data capture, quality, dissemination, and use for decision-making in priority facilities. Mentor HCWs to use PIMS electronic system to collect capture HTC,PMTCT and ART data in the system through a centralized call-in help desk and onsite support	First 90; Second 90; Third 90; Epi Control	100% of PEPFAR sites will be constructing clinical cascades from PIMS	100% of sites scoring a light green or dark green with regard to use of electronic register	100% of patient data from PIMS will be available in data warehouse to construct a clinical cascade	The percentage of PEPFAR Sites reporting using PIMS	HTXS	$600 000	IM: Capacity Building through Training Mentoring for Informatics – 17845 IP: Botswana Harvard AIDS Institute Partnership (BHP)	Epidemiological and Health Data (5.48) Public Access to Information (8.00) Human Resources for Health (6.33) Quality Management (4.76)

PIMS: Upgrade, expand, and train staff to use PIMS II in all eligbile PEPFAR Sites	**First 90; Second 90; Third 90; Epi Control**	**Quality HIV data available for the management of HIV patients in all PEPFAR-supported sites**	**NA for COP16**	**PIMS II Installations done in 100% of eligible PEPFAR supported sites.**	**# of PIMS backups in the DW from district PEPFAR supported sites Number of Non - PEPFAR sites with PIMS installed. Number of HCW trained.**	**HVSI**	**$940,000 (HISI funds)**	IM: Capacity Building through Training Mentoring for Informatics – 17845 IP: Botswana Harvard AIDS Institute Partnership	Epidemiological and Health Data (5.48) Public Access to Information (8.00) Human Resources for Health (6.33) Quality Management (4.76)
IPMS laboratory node: 1Installation and training on IPMS lab module at PEPFAR supported sites with no IPMS for improved results management.	**First 90; Second 90; Third 90; Epi Control**	**Reduced turn around time for lab results by 50%.**	**NA for COP16**	**1.1 IPMS lab nodes installations done at 54 sites on GDN get without IPMS. 1.2 Quality data available at the 15 IPMS sites and 61 IPMS lab nodes 1.3. Case based**	**# of sites with IPMS lab nodes installed. # of HCW trained. % of patient files have lab results provided through IPMS lab modules. Track turn-around time in IPMS lab module**	**HVSI**	**$198,000 (HISI funds)**	IM: Quality HIV/AIDS Services through Government of Botswana - 18252 IP: Government of Botswna	Epidemiological and Health Data
Improve capacity of the MOHW data warehouse (DW) to perform HIV clinical cascades. - Increase data warehouse storage capacity and processing -Build capacity of MoHW Health informatics and M&E units to carry out the extraction, loading and transformation processes of the data warehouse, run data queries and perform analyses - Develop protocols to securely transfer PIMS and community level data to the DW and apply ETL processes and analyses - Data Quality Improvement activity using a similar tool to the one developed by	**First 90; Second 90; Third 90; Epi Control**	**Data warehouse support fully transitioned to MoHW Health Informatics and M&E units Monthly clinical cascade analyses performed and shared with stakeholders for all PEPFAR districts. Case based sureveillance in place.**	**NA for COP16**	**Expanded data warehouse infrastructure (buy servers and licenses). 4 MOHW staff trained on data warehouse management and analysis. SOPs approved for routine data submission from community partners**	**# staff trained Data of approved SOPs # of districts with reports generated from warehouse.**	**HVSI**	**$187,000 (HISI funds)**	**IM: International Training and Education Center for Health (ITECH) 18163 IP: University of Washington**	**Epidemiological and Health Data (5.48) Public Access to Information (8.00) Human Resources for Health (6.33) Quality Management (4.76)**

Data Warehouse - support integration of community service delivery data into the data warehouse	First 90; Second 90; Third 90; Epi Control	100% of PEPFAR community partners submit patient-level data weekly to data warehouse	NA for COP16	Data transfer protocols adopted by all PEPFAR community partners. Modifications to electronic systems to implement SOPs.	Date transfer protocols finalized. % of community partners submitting patient data weekly	HVSI	$50 000	IM: Advancing Partners and Communities Project (APC)	Epidemiological and Health Data (5.48)
							$50 000	Linkages Across the Continuum of HIV Services for Key Populations Affected by	Epidemiological and Health Data (5.48)
							$50 000	IM: Botswana Comprehensive Care and Support for Orphans and Vulnerable Children	Epidemiological and Health Data (5.48)
DISTRICT HEALTH INFORMATION SYSTEM (DHIS): Offer district level support to all the districts for the utilisation and maintanance of DHIS for cluster and SNU reporting. produce districts dashboards that can be used to monitor progress towards cascades. - DHIS support officer seconded to MOHW - Upgrade DHIS to reflect changes in Treat All indicators and update program, SNU, site dashboards.	First 90; Second 90; Third 90; Epi Control	DHIS is dissemination platform for all MOHW data including data warehouse analyses.	System modified to reflect Treat All changes, HCWs trained and dashboards being used at site, SNU, program and national levels.	All districts reporting monthly HIV programme data through DHIS. DHIS pulling data from data warehouse in real-time.	Number of PEPFAR sites reporting complete data, timely through DHIS # of dashboards functioning Number of reports disseminated from DHIS	HVSI	$100 000	IM: Technical assistance to strengthen government health systems 18163 IP: University of Washington	Epidemiological and Health Data (5.48)
District HIV Case surveillance officers to coordinate surveillance activities	First 90; Second 90; Epi Control	Routine monitoring of attainment along the cascade.	NA	District HIV Case surveillance officers in place in all PEPFAR-supported sites. HIV case surveillance being	Quarterly district surveillance reports	HTXS	$200,000 (HISI funds)	IM: Capacity Building and Training - 17274 IP: BUMMHI	Epidemiological and Health Data (5.48)

Establish a secure data network to transfer PIMS and community HIS data to the data warehouse	**First 90; Second 90; Third 90; Epi Control**	**Secure data network established to transfer PIMS and community HIS data to the data warehouse 90% or more HIV data**	**Plans for a secure data network developed and approved**	**Infrastructure for the secure data network established**	**Estimated proportion of HIV data available in the data warehouse**	**HVSI**	**$600,000 (HISI funds)**	**IM: Capacity Building through Training Mentoring for Informatics – 17845 IP: Botswana**	**Epidemiological and Health Data (5.48)**
SMS-BASED EARLY WARNING REPORTING SYSTEM TO IMPROVE SERVICE DELIVERY ~~Continue to support Quality Improvement Technical Advisor position at MoH and~~ Maintain a real-time reporting system based on DHIS2 Mobile to track key programmatic indicators for continuous quality improvement based on current data • Weekly tracking of quality indicators as part of an early warning system for HIV programming ~~• Strengthening of district level QI teams and activities • Integration of CQI into HIV program service delivery • Part of Care and Treatment QI initiatives in priority facilities and districts~~ • Further development to update with new indicators for	First 90; Second 90; Third 90; Epi Control	SMS-based reporting system transitioned to GOB	Upgraded SMS based reporting system reflecting Treat All indicators Over 90% of High volume PEPFAR ART sites reporting data weekly via the upgraded system	Transition system to GOB	# of GOB staff responsible for SMS reporting system.	HTXS	$150 000	IM: International Training and Education Center for Health (ITECH) 18163 IP: University of Washington	Epidemiological and Health Data (5.48) Public Access to Information (8.00) Human Resources for Health (6.33) Quality Management (4.76)
Support a passive surveillance system - Support a position that coordinates data transfer from non-PEPFAR sites and districts to ensure complete data availablity in DW - Travel for officer to	**First 90; Second 90; Third 90; Epi Control**	**Data from 100% of non-PEPFAR districts and 90% of the sites, stored and analysed from the Data Warehouse**	**Position description developed and approved.**	**Monthly, ongoing transfer of HIV data from 80% of non-PEPFAR districts to the data warehouse**	**% of non-PEPFAR districts with % of sites transferring HIV data to the data warehouse**	**HVSI**	**$250,000 (HISI funds)**	**IM: Quality Support Programs via the Govt of Botswana 18252**	**Epidemiological and Health Data (5.48) Public Access to Information (8.00) Human Resources for Health (6.33) Quality**
Strategic Information: Studies & Surveys									
BAIS V - TB/HIV Prevalence Survey	First 90; Epi Control	Final study results for BAIS V & TB Prevalence survey disseminated nationally	Final study protocol approved by GOB and cleared by IRB	Data collection completed; TA provided for data analysis	a) Protocol b) Database populated c) Study dissemination	HVSI	$46 222	IM: ~~Quality Support Programs via the Govt of Botswana 18252~~ **IM: Challenge**	Public Access to Information (8.00) Epidemiological and Health Data (5.48)

ACTIVITY DROPPED ~~Mapping & Size Estimation of Key Populations~~ **UPDATE:** To be completed by Global Fund,	~~Epi Control~~	~~Updated size estimates and hotspots mapped for KPs.~~							
Behavioral and Biological Surveillance of HIV/STI among select High-Risk Sub-Populations (BBSS II)	Epi Control	Final study results for BBSS II study (and size estimates) disseminated nationally	a) Final study protocol approved by GOB and cleared by IRB; b) Data collection completed	Report Completed	a) Protocol b) Database populated c) Study dissemination	HVSI	NA for COP17	IM: Linkages Across the Continuum of HIV Services for Key Populations Affected by HIV (LINKAGES) Project 17862	Epidemiological and Health Data (5.48)
OVC Situation Analysis	Epi Control	Final report with OVC size estimates disseminated nationally	a) Final study protocol approved by GOB and cleared by IRB; b) Data collection	Report Completed	a) Protocol b) Database populated c) Study dissemination	HKID	NA for COP17	IM: 4Children – Coordinating Comprehensive Care for Children 17321 IP: Catholic Relief Services	Epidemiological and Health Data (5.48)
OVC MER 1.5 Indicators	Epi Control	Baseline report of OVC MER 1.5 Indicators disseminated	a) Final study protocol approved by GOB and cleared by IRB; b) Data collection	Report Completed	a) Protocol b) Database populated c) Study dissemination	HKID	$283,090 (Applied pipeline)	IM: 4Children – Coordinating Comprehensive Care for Children 17321 IP: Catholic Relief Services	Performance Data (5.77)
GBV Referral System Operations Research: To support the district level GBV referral system to: - Increase service points using the system - train newly enrolled providers - increase number of survivors served with post-	Epi Control	90% of providers in study sites actively using the GBV-referral system	Final research report with clear Recommendations to Govt of Botswana	NA - OR to end FY17	SIMS OR Study Findings		NA for COP17	IM: MEASURE Evaluation Phase IV 17322 IP: University of North Carolina at Chapel Hill, Carolina Population Center	Service Delivery (6.11)
NEW Activity: Operations research for PrEP pilot with KP and AGYW	**Epi Control**	**90% of high-risk, PrEP-eligible clients received PrEP in participating service delivery points**	**NA for COP16**	**National dissemination of final study report with recommendations applied to service**	**MER, SIMS**	**HTXS**	**$200 000**	**IM: Linkages Across the Continuum of HIV Services for Key Populations Affected by HIV**	**Service Delivery (6.11)**
NEW Activity: Network Analysis to map service referrals (from provider perspective) and client engagements (from client perspective) across DREAMs-like activities	**First 90; Second 90; Third 90; Epi Control**	**80% AGYW in DREAMS-like hotspots know their HIV status** **90% of HIV+ AGYW in DREAMS-like hotspots are linked to care**	**NA for COP16**	**National dissemination of final study report with recommendations for improved support to AGYW, including**	**MER, SIMS**	**HTXS**	**$249 500**	**IM: MEASURE Evaluation Phase IV 17322 IP: University of North Carolina at Chapel Hill, Carolina**	**Service Delivery (6.11)**

NEW Activitity: Identifging and addressing the leaks along the cascade during the initial stages of Treat All in Botswana	**First 90; Second 90; Third 90; Epi Control**	**1. Strategies for highest HIV testing gield, volume and maximal cost-efficiency bg age-sex bands, and geographg identified 2. Barriers and successful strategies for linkage to care, ART initiation, retention.**	**1. Protocol and tools developed and approved. 2. Staffing needs identified and processes in place for hiring and training of staff.**	**1. Study implemente d; 2. Preliminarg results shared with IPs and GoB**	**HTC_TST_POS; TX_NEW; TX_CURR; PMTCT_ARV; TB_ART**	**HTXS**	**$75 000**	**IM: Capacitg Building and Training 17274 IP: BUMMHI**	**Guidance in COP Letter**
TOTAL							**$6 317 618**		
Column E (new column):	Enter the year two (COP/ROP 2017) measurable annual benchmark (i.e., the annual benchmark the indicator should reach by the end of the COP/ROP 2017 implementation cycle).								
Column F:	Enter the relevant indicator or measurement tool that will be used to track progress toward annual benchmarks.								
Column G:	Confirm/update the budget code(s) for each activity								
Column H:	Confirm/update the budget amount for each activity								
Column I:	Confirm/update the implementing mechanism for each activity								
Column J:	Confirm/update the relevant SID element and fill in the cell with the appropriate SID score color (red, yellow, light green, or green) from the COP/ROP 2016 SID.								

APPENDIX D – Acronym List

Abbreviation	Definition
ACHAP	African Comprehensive HIV/AIDS Partnership
AGYW	Adolescent Girls And Young Women
AIDS	Acquired Immunodeficiency Syndrome
APC	Advancing Partnerships in Communities (FHI360)
ART	Anti-Retroviral Therapy
ARV	Anti-Retroviral Drugs
BAIS IV	2013 Botswana AIDS Impact Survey
BBSS	Behavioral And Biological Surveillance Survey
BCC	Behavioral Change Communication
BCPP	Botswana Combination Prevention Program
BDF	Botswana Defense Force
BNQAL	Botswana National Quality Assurance Laboratory
BNTB	Botswana National Tuberculosis Program
BOFWA	Botswana Family Welfare Association
BUMMHI	Botswana University of Maryland Medical Health Initiative
BYRBSS	Botswana Youth Risk Behavior Surveillance Survey
CAG	Community ART Group
CATCH	Community Acting Together To Control HIV
CCM	Country Coordinating Mechanism
CEE	Core Essential Element
CHW	Community Health Worker
CMS	Central Medical Stores
Co-Ag	Cooperative Agreement
CODB	Cost of Doing Business
CQI	Continuous Quality Improvement
CSO	Civil Society Organization
CTBC	Community TB Care
CTS	Community Treatment Supporters
CWC	Child Welfare Clinics
DCMM	DC Management Meetings
DHAPC	Department Of HIV/AIDS Prevention And Care
DHIS	District Health Information System
DHMT	District Health Management Teams
DOT	Directly Observed Therapy
DQA	Data Quality Assessment
DQI	Data Quality Improvement
DSD	Direct Service Delivery
DTBE	CDC/Division of Tuberculosis Elimination
DTG	Dolutegravir
ECD	Early Child Development
EID	Early Infant Diagnosis
EIMC	Early Infant Male Circumcision
EMR	Electronic Medical Record

EMTCT	Elimination Of Mother-To-Child-Transmission Of HIV
EQA	External Quality Assurance
EU	European Union
FP	Family Planning
FSW	Female Sex Worker
GBV	Gender-Based Violence
GDN	Government Data Network
GF	Global Fund
GFATM	Global Fund for AIDS, TB and Malaria
GNI	Gross National Income
GoB	Government Of Botswana
HAART	Highly Active antiretroviral therapy
HCA	Health Care Auxiliary (Worker)
HCW	Health Care Worker
HEA	Health Education Assistant
HEW	Health Education Worker
HFS	Health Financing Strategy
HFTWG	Health Financing Technical Working Group
HISP	Health Information Systems Plan
HIV	Human Immunodeficiency Virus
HIVST	HIV Self Testing
HRH	Human Resources For Health
HTC	HIV Testing And Counseling
HTS	HIV Testing Services
ICS	Integrated Country Strategy
IDCC	Infectious Disease Control Centers
IEC	Information, Education and Communication
IHSP	Integrated Health Service Plan
IP	Implementing Partner
IPBS	Integrated Planning and Budgeting System
IPMS	Integrated Patient Monitoring System
IPT	Isoniazid Preventive Therapy
IT	Information Technology
KP	Key Populations
LCI	Local Capacity Initiative
LMIS	Logistics Management Information System
LTFU	Loss-To-Follow-Up
M&E	Monitoring And Evaluation
MCH	Maternal And Child Health
MDR	Multi-Drug Resistant
MIP	Mother-Infant Pairs
MOHW	Ministry Of Health and Wellness
MSM	Men Who Have Sex With Men
NACA	National Aids Coordinating Agency
NASA	National Aids Spending Assessment
NIH	National Institutes Of Health
NPD	Nurse Prescriber And Dispenser
NTRL	National Tuberculosis Reference Library

OGAC	Office Of The Global AIDS Coordinator
ODK	Open Data Kit
OI	Opportunistic Infection
OMRS	Open Medical Record Systems
OPD	Out-Patient Department
OSC	Office of Security and Cooperation
OU	Outcome Unit
OVC	Orphans And Vulnerable Children
PC	Peace Corps
PCI	Project Concern International
PCR	Polymerase Chain Reaction
PCV	Peace Corps Volunteer
PEPFAR	President's Emergency Plan For AIDS Relief
PEPFAR/B	PEPFAR Botswana
PHDP	Positive Health, Dignity, And Prevention
PIMS	Patient Information Management System
PITC	Routine Facility-Based HIV Testing
PLHIV	People Living With HIV
PMTCT	Prevention Of Mother-To-Child HIV Transmission
POART	PEPFAR Oversight And Accountability Results Team
POC	Point Of Contact
PP	Priority Population
PR	Primary Recipient
PrEP	Pre-Exposure Prophylaxis
PRRR	Pink Ribbon Red Ribbon
PS	Permanent Secretary
PT	Proficiency Testing
PTB	Pulmonary TB
QI	Quality Improvement
QM	Quality Management
RHT	Routine HIV Testing
RTK	Rapid Test Kits
RTR	Real-Time Reporting
SCM	Supply Chain Management
SCMS	Supply Chain Management System
SI	Strategic Information
SID	Sustainability Index And Dashboard
SIDA	Swedish International Development Cooperation Agency
SIMS	Site Improvement Monitoring System
SLMTA	Strengthening Laboratory Management Towards Accreditation
SMC	Safe Medical Circumcision
SMS	Short Message System
SNU	Sub-National Unit
SOP	Standard Operating Procedures
SRH	Sexual And Reproductive Health
STI	Sexually Transmitted Infection
T&S	Test And Start
TA	Technical Assistance

TAP	Treatment As Prevention
TAT	Turn-Around-Time
TB	Tuberculosis
TWG	Technical Working Group
UN	United Nations
UNAIDS	United Nations Programme On HIV/AIDS
USD	United States Dollars
USG	United States Government
VCT	Voluntary Counseling And Testing
VL	Viral Load
VMMC	Voluntary Medical Male Circumcision
WHO	World Health Organization

APPENDIX E – SID Update Table

SID Elements	COP16 Comments	COP17 Comments/Changes
Elements of Greatest Concern		
Commodity Security and Supply Chain (6.27, yellow)	-one of greatest concerns -not adequately captured by the SID questions	-remained the area of greatest concern. -continues to experience serious problems with its contractor, including poor performance and irregularities. -contract concludes at the end of April 2017 - As requested by GoB, the USG agreed to assist with an "open and transparent" Invitation To Tender (ITT) process to find a new contractor -process has not been transparent and there is a lack of adherence to international standards. GoB plans continuing with the existing contractor for an indefinite period of time while going through the ITT process. -PEPFAR developing a plan that will allow commodities distribution to occur in a more efficient and predictable manner, - Plan B will occur at a cost to other areas of programming. -Test kit shortages continue
Quality Management (4.76, yellow)	-Weakness for Botswana -COP15 resources worked to address -Improvement with QM -Expect to see more growth as we continue providing support and resources during COP16 -No QI strategy for HIV within MoH, but a QI framework in developmental stage -Documentation of QI activities a challenge, but programs are working closely with partners on this	-Still no quality improvement (QI) strategy for HIV within the MoH. -QI TWG works with key program areas to identify key QI indicators. These were revised once the Treat All Guidelines were updated. -ITECH assisted with this process and collected information from PEPFAR districts on these indicators. These data are discussed during a routine standing meeting and action plan is generated. -community level, QI is still in place and QI Teams in PEPFAR districts identify QI issues and create suggestions.
Private Sector Engagement (3.08 red)	-Not a PEPFAR Botswana priority -Private sector can be included in gender-mainstreaming activities, external partner engagement and through health diplomacy messaging. -Lack of private sector engagement might present an opportunity for the GoB for more private funding sources	-private sector expenditure on health increased to 28% of THE in 2013/14 from 24 percent of THE in 2009/10. (NHA, 2013/14)
Elements Noted in COP16		
Policies and Governance (6.58, yellow)	-Should increase with Treat All - currently policy is CD4 350	-Treat All adopted but not fully implemented -Guidelines recommend PrEP for high risk populations including key pops -IPT remains an issue -treatment of non-citizens remains an issue -Transitioning from parallel to serial testing is slowly moving forward.
Service Delivery (6.11, yellow)	-Lack of financing of services and service delivery directly targeting key	-GF/SADC have a cross-border initiative. SADC will provide services to key pops regardless of

	populations -GoB does not specifically fund nor provide services directly targeting key populations	nationality – working with NGOs. There is a Memo of Agreement that SADC will fund this for one year. Government are not required to continue this.
Domestic Resource Mobilization (5.56, yellow)	-Can be improved with the inclusion of HIV/AIDS goals/targets in the national budget -GoB faces challenges with spending down budgeted items in supply chain procurement	-GoB supply chain doesn't have money. They need help funding training for moving to serial testing. The money allocated for procurement is not adequate.
Technical and Allocative Efficiencies (6.11, yellow)	-GoB provides funding to all districts with allocation based on facilities per district -National budget by district is not available to determine the proportion of funds allocated to high burden geographic areas - addressing this could raise score	-No updates.
Performance Data (5.77, yellow)	-Could be strengthened by coordination of information systems -GoB is moving in this direction with e-health strategy -Final draft is almost ready -Strategy meant to harmonize these systems and provide guidance moving forward	-e-health strategy is still in draft form
Other Elements – No Updates		

APPENDIX F – Health Information System Plan

Innovation for Sustained HIV Epidemic control post Attainment

Analysis of latest epidemiology and program data for COP17 suggests that Botswana will reach attainment in PEPFAR supported scale-up to saturation districts by end of FY18. This creates an opportunity to strengthen the country's health information systems in order to respond to:

- continued provision of quality clinical care services including clinical support and quality assurance from HIV testing to viral load suppression, and surveillance of key co-morbidities such as cancer and TB among PLHIV.
- sustained attainment: active HIV surveillance to ensure sustained attainment within sex/age bands by regions.
- actionable data: Index case finding and a real time triggered response alert system in order to respond timely to potential emerging micro-epidemics.
- data sharing/dissemination/use via real time dashboards accessible to all stakeholders, including the public
- standard HIV case surveillance and reporting.

Policy Context

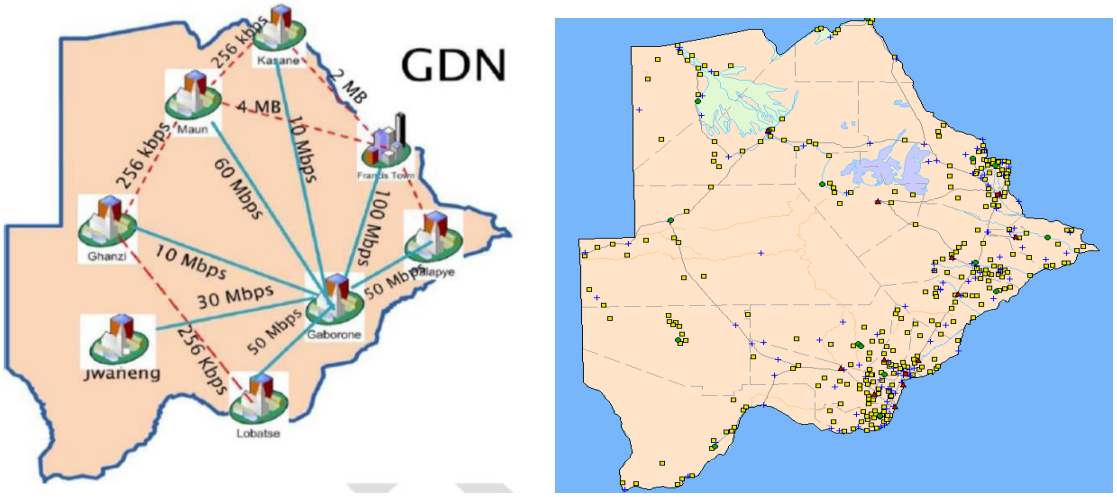
Efforts towards e-Health in Botswana are driven by the 2007 National Information and Communications Technology (ICT) Strategy for Botswana (Maitlamo) which identified health as one of the seven key pillars as well as the Botswana Integrated Health Service Plan (IHSP) 2010 - 2020 which provides strategic context for the e-Health Strategy. To lead e-Health efforts, an e-Health cluster was constituted by Ministry of Health and Wellness (MOHW). The e-Health cluster began by conducting a system rationalization exercise which resulted in 35 MOHW electronic data source systems being reduced to 12. These include the following systems which are key for HIV case surveillance; Tuberculosis (TB) Open-Medical Record System [TB Open-MRS], Patient Information Management System II [PIMS II] (a facility stand-alone HIV-specific Electronic Medical Record, EMR), Integrated Patient Management System (IPMS) (a network-based centralized health integrated EMR with an HIV module), National Health Data Warehouse, National Cancer Registry and District Health Information System 2 [DHIS 2, an aggregate level reporting system]. The e-Health cluster was also tasked with developing a national strategy on e-Health, which establishes the Health Informatics Unit at MOHW. The Health Informatics Unit provides oversight on all e-Health projects and the management of all health-related data centrally.

HIV Information Systems Landscape in Botswana

Implementation of electronic health information systems at health facilities is constrained by the availability of electricity and whether or not the facility is on the Government Data Network (GDN). Currently there are 564 health facilities, 437 electrified, of which 315 have a local area network and 155 are on the GDN. Limited GDN bandwidth has hindered the expansion of the

expansion of the centralized IPMS which currently operates in 27 district/primary hospitals and 18 high-volume clinics with maternity. The GoB has plans to improve and expand the GDN connectivity in the next financial year which starts in April 2017. The advent of the stand-alone PIMS system was in response to the immediate need to collect patient level HIV data while waiting for GoB to expand the GDN bandwidth. Currently PIMS operates in 315 health facilities and is also used as major source of clinical data for multiple components of the PEPFAR sponsored BCPP.

Figure 1. GDN Connectivity and Distribution of Health facilities in Botswana



Lessons learned from BCPP

To avoid re-inventing the wheel, the Health Information System plan (HISp) will leverage lessons learned from the BCPP which has developed tools, processes and systems for data capture, collection, collation, analysis and Data Quality Improvement (DQI). In particular, the HISp will leverage on and/or expand the BCPP data network to ensure secure data exchange between health information systems and data warehouse, adapt DQI tools and protocols for PIMS, IPMS and community data, business rules/logic developed for PIMS/IPMS and community data exchange and business rules/logic for merging and de-duplicating data through the use of the national unique identifier "Omang". BCPP expertise will be sourced as well in terms of expanding data warehouse capacity through infrastructure upgrade and training of key MOHW personnel. With the ultimate goal of developing a robust HIV case surveillance system the HISp will adapt data-driven case finding algorithms/approaches from BCPP.

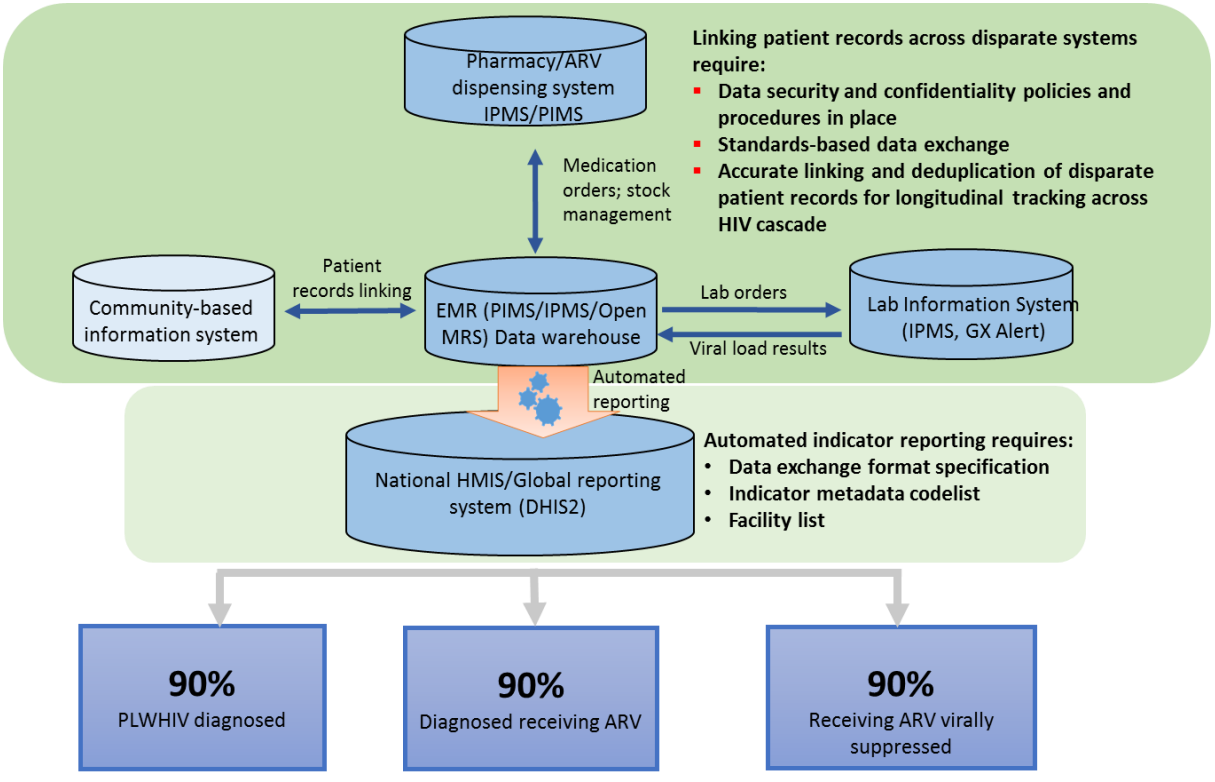
Systems to support 90:90:90

In the case of Botswana several disparate systems support different aspects of 90:90:90. For the 1st 90, the community testing employs different data systems to capture HIV testing data such as mobile-based applications (e.g. Open Data Kit, ODK). For facility based systems, PIMS 2 and

IPMS contain modules for entry of HIV test results. These data can be used in combination with community-based data capture systems to fully characterize the 1st 90. Based upon BCPP experience, HIV test results are not always routinely entered into PIMS or IPMS. Data entry for HIV testing has generally been better in PIMS 2 with more data missing in IPMS. Merging and de-duplicating data are key to properly measuring the first 90.

To support the 2nd 90, PIMS and IPMS work in tandem; PIMS for facilities that are not connected to the GDN and IPMS for facilities with adequate GDN connectivity to support such a robust system. IPMS also supports laboratory information and in some cases is installed as single node to support resulting of laboratory tests performed. Other systems include Open-MRS for the TB data, GXAlert for the support of Xpert MTB/RIF testing and the Cancer Registry for HIV case detection and patient management. To access data along the continuum of care, the data warehouse is a central repository of all HIV-related information where a single longitudinal patient record can be constructed detailing testing, care and treatment and outcomes (retention, viral suppression). This has the potential to facilitate case-based surveillance. It also provides complete and reliable information to help in assessing the country's progress towards the UNAIDS 90: 90:90 goal as envisioned in Figure 2 where information is shared across the disparate system, extracted and stored centrally, then analyzed and used for reporting and planning purposes.

Figure 2: Botswana's vision for Interoperable Health Information Systems



Current challenges for health information systems include, but are not limited to,

- Disparate information systems for the management of HIV and TB patients (Open-MRS, PIMS, IPMS, Cancer Registry, Community)
- Low GDN bandwidth leading to down time and resulting in data quality issues.
- Lack of automated data transfer/sharing protocols between systems in order to share key patient data (lab results, linkage & retention outcomes) across systems.
- Lack of robust methodology for de-duplication of patient data merged from multiple data sources.
- Lack of integrated systems necessitating the need for a data warehouse in order to construct a longitudinal record for patients.
- Changes in guidelines/policy leads to system modifications
- Inadequate system maintenance support, including support for sites outside the PEPFAR pivot.
- High unmet training needs among HCWs to utilize the systems and among MOHW HIS staff to manage the systems.
- Inadequate human resources to coordinate active case surveillance activities in the districts

Areas of HIS Support

The HISp will support data requirements, systems requirements and capacity building for system utilization, reporting and management. The following proposed activities will be implemented as part of the $3 million central funding. These activities are grouped into two categories, one time projects and ongoing projects and sustainability plans

One time Projects

1. Modify and improve system reporting functionality of PIMS II to respond to latest changes in clinical guidelines due to adoption of "Treat All" and rollout the latest version to all eligible (with electricity but no electronic system or with an earlier version of PIMS) sites within PEPFAR districts.
2. Develop/Adapt Protocols/Standard Operating Procedures (SOPs): The program will adapt business rules/logic developed by BCPP for PIMS/IPMS and for the community and develop business rules/logic for the TB and Cancer programs.
3. Unique identification: The program will adapt business rules/logic developed by BCPP for merging and de-duplicating PIMS, IPMS and community data through the use of the national unique identifier called "Omang". The program will also explore interfacing with the Births and Deaths Registry and with the National Registration (Omang) Registry both of which are with Ministry of Labor and Home Affairs. Validation of Omang for adults 16 years and above and birth certificate data for pediatrics is very critical as these are unique identifiers that will be used by all systems to link up with the data warehouse.

4. Timely availability of lab results: The program will roll out IPMS lab nodes to PIMS sites on the GDN in PEPFAR supported sites. The program will also interface GXAlert with Open-MRS and IPMS.
5. Secure data Exchange: The program will explore leveraging on and/or expanding the BCPP data network and the GDN where feasible to transfer data files from facility and community systems to the data warehouse.
6. Data Quality Improvement: The program will adapt a DQI tool/protocol developed by BCPP for PIMS/IPMS. This will be further expanded to other facility systems and further adapt the tool to the community systems. Data quality gaps will be addressed retrospectively by hiring temporary staff who will impute the data at the facility level.
7. Training of healthcare workers: Central funds will be used to train health care workers following system rollout.
8. Expand Data warehouse capacity: The program will upgrade DW infrastructure, train key MOHW personnel to manage and conduct key analyses to inform 90:90:90 and to timely pick any new cases and respond very quickly in the event of a possible outbreak.

Ongoing projects and sustainability plans

1. System maintenance, training and mentoring: As part of continued system maintenance, funds will be needed for support to provide ongoing training and mentoring mainly for new staff and staff who transfer into PEPFAR districts from other districts. The plan is during FY18, PEPFAR Botswana will work with MOHW to establish an MOHW resourced help-desk with system development capacity to make any subsequent system modifications and to lead any training and mentoring requirements for all districts. This should transition system development and maintenance support, including training and mentoring of staff on system utilization to MOHW helpdesk by FY19.
2. Passive surveillance of non-PEPFAR sites: The program will provide help-desk system support to MOHW to enable them to collect Patient level HIV data from non-PEPFAR sites in PEPFAR and non-PEPFAR districts. The long term solution for this is to explore using the expanded GDN once GoB has implemented the expansion. There is also an opportunity to leverage the existing BCPP network once the project transitions the infrastructure to GoB.
3. Capacity for active case surveillance: The program will hire district HIV case surveillance officers in PEPFAR districts for not more than two years. These officers will ensure that key surveillance data are transmitted timely and securely for decision making and also ensure that their districts are implementing set HIV case surveillance protocols/SOPs developed for their districts. Best practices including developed protocols/SOPs will be shared with non-PEPFAR supported districts on regular basis. For sustainability, PEPFAR Botswana will work with MOHW to ensure District M&E officers and other relevant program officers are able to perform HIV case surveillance activities within their scope of practice and have enough support to perform those duties

Proposed Budget

Activity	Budget (USD)
One Time Projects	
Improve reporting functionality of PIMS II, rollout the latest version to all eligible sites within PEPFAR districts and train HCWs on PIMS II	940,000
Expand availability of HIV lab results to PIMS sites through rollout of the IPMS lab module to sites with GDN connectivity	198,000
Rollout Open-MRS to TB high volume sites for TB/HIV patient management	225,000
Expand capacity of the DW (infrastructure, training of key MOHW staff, DQI)	187,000
Establish a secure data network to transfer PIMS and community data to the DW	600,000
Interface GXAlert with IPMS, Open-MRS to improve timely availability of TB results to patients	100,000
Strengthen Community Data Capture	150,000
Sub-Total	2,400,000
Recurrent Activities	
Passive surveillance system to ensure data transfer from non-PEPFAR sites and districts to ensure complete data availability in DW.	250,000
District HIV Case surveillance officers to coordinate surveillance activities around "same day diagnosis-same day initiation" strategy	200,000
SMS-based Early Warning Indicator Reporting System for Program Quality Improvement	150,000
System maintenance, training and mentoring*	0
Sub-Total	600,000
Grand Total	**3,000,000**

*For COP17 funded partly under Central funds budget and under regular COP17. Will require ongoing support

Monitoring Plan

Milestones (one to two years outputs and third year outcomes where applicable) for each of the activities are outlined in Table 6 of the SDS.

APPENDIX G – Epidemic Control Plus-Up Funding

SUMMARY:

For COP17, PEPFAR/B is eligible for $10 million in Epidemic Control funding to implement the following: care and treatment activities of identified age-sex groups in hot spots located in sustained areas; care and treatment in the highest burden areas with an emphasis on same day initiation; case finding (including HIV self-testing in under 25 year old women and under 30 year old men); and prevention of new infections in young women and men through DREAMS-like activities.

Table 1: Proposed budget allocation by Activity

Activity	Amount
Care and Treatment - hot spots in sustained districts	$3,000,000
Same day initiation	$2,105,875
Self-Testing	$102,109
DREAMS-like Activities	$4,792,016
TOTAL	**$10,000,000**

SECTION A: Care and Treatment - Hotspots in Sustained Districts - $3m

Table 2: Breakdown of the $3m for Hotspots by Activity and Implementing Partner

Activity		Amount	Implementing Partner
Support for staff salaries (ARV nurse prescribers, Pharmacy Technicians, M&E Clerks), training and capacity building & printing IEC material	$	600,000	BUMMHI
PMTCT testing	$	142,560	ITECH
Targeted PITC	$	170,200	ITECH
Community Based Testing and Counselling (CBTC) (Francistown)	$	315,120	APC
Ensuring HTC Quality (training and certification of providers, PT and retesting of HIV positives prior to ART initiation)	$	582,340	ITECH
Community Based Care & Treatment Services (CBCTS), TB and community based PMTCT/EID (Francistown)	$	500,000	APC
CBTC (Ghanzi)	$	189,780	APC
CBCTS TB and community based PMTCT/EID (Ghanzi)	$	500,000	APC
Total	**$**	**3,000,000**	

Description of Activities:

Geographic Focus: PEPFAR/B identified Greater Francistown and Ghanzi as the sustained SNUs to implement Care and Treatment activities in hot spots. Table 3 below illustrates National ART coverage as of September 2016 (National Treatment Program -MASA). Greater Francistown was chosen for additional C&T resources due to the large concentration of PLHIV, the second largest PLHIV population in the country. The under-served population age sex bands are females aged 15 to 24 years and males aged 25+ years. Greater Francistown coverage for females 15-24 was at 68% while that for males 25+ was 78%. In order to reach Attainment, 81% coverage, by end of FY18, there is a need to focus efforts on these two population groups.

Covering these groups will ensure interruption of transmission and reaching attainment in Greater Francistown. Serowe Palapye has slight less numbers of the under-served in those age bands. Although Ghanzi is serving a much smaller population, PEPFAR, in agreement with the Global Fund Principal Recipient, committed to serving this TB/HIV micro-epidemic. Ghanzi has four target populations that have not achieved saturation: Males under 15 years (33%), Females under 15 years (49%), Males 15-24 years (39%), and Females 25+ years (62%). Additional C&T funds will allow for reaching young women and men who are under-served across all age bands.

Table 3: FY16 National ART Coverage

			FY16 ART Coverage					
SNU	COP16 PSNU	COP17 PSNU	<15, Male	<15, Female	15-24, Male	15-24, Female	25+ Male	25+, Female
Greater Gaborone	ScaleUp Agg	ScaleUp Sat	58%	60%	43%	36%	50%	74%
Serowe/Palapye	Sustained	Sustained	62%	94%	56%	58%	74%	133%
Mahalapye	ScaleUp Sat	ScaleUp Sat	49%	59%	60%	61%	66%	91%
Greater Francistown	Sustained	Sustained	86%	84%	92%	68%	78%	103%
Southern	ScaleUp Sat	ScaleUp Sat	107%	97%	72%	57%	74%	100%
Goodhope	ScaleUp Sat	ScaleUp Sat	87%	42%	212%	32%	87%	48%

Table 4 below shows data for Greater Francistown from the Botswana Youth Risk Behavioral Surveillance Survey (BYRBSS) of 2015, demonstrating sexual behavior and HIV related outcomes for both males and females aged 14-19. This data shows very high numbers for early sexual debut, multiple concurrent partners, transactional sex and HIV prevalence.

Table 4: Behavior and HIV Related Indicators for Youth aged 14-19

	Behavior and HIV related indicators	Males	Females
	14 - 19 years (n)	227	266
Sexual Behavior	Ever had sex (n)	111	66
	% Ever had sex	48.9%	24.8%
	% Had sex in past 12 months	26.4%	12.0%
	% Forced sex at debut (among those ever had sex)	10.8%	19.7%
	% Used condom use during last sex	62.2%	78.8%
	% With first partner >=5y different	27.9%	24.2%
	% Who ever had transactional sex	10.8%	13.6%
HIV - Related	% Ever tested for HIV	60.4%	28.2%
	Tested and received result (n)	131	63.0
	% HIV positive (among those with result)	6.1%	9.5%

Ghanzi district was identified as a hot spot for TB in COP15 and is an appropriate location for youth hot spot activities. It currently has four target populations that have not achieved saturation: Males less than 15 years (33%), Females under 15 years (49%), Males 15-24 years (39%), and Females 25+ years (62%).

Implementing Partners: Implementation of activities will benefit from the PEPFAR/B community-facility model using the following partners: Botswana University of Maryland Medical Health Initiative (BUMMHI), University of Washington (I-TECH) and FHI360 Advancing Partnerships in Communities (APC).

Package of services: Includes HTS (facility and community) and Care and Treatment (Facility and Community).

Facility Based HTS (service delivery and ensuring HTC quality) :

Through Epidemic Control funds, the University of Washington (I-TECH) will implement a targeted PITC/RHT program to address an unmet need among AGYW, including pregnant women and their sex partners (older men 25 years+) in the sustained district of Greater Francistown. Through a direct service delivery approach, I-TECH will perform 4,097 tests (PITC & PMTCT) in 12 facilities in the SNU and identify 434 new cases. The 12 facilities are currently supported through a treatment partner, BUHMMI and include Borolong, Nata, Tonota, Area W, Botshelo, Botswelelo, Gerald Estate, Jubilee, Masego and Tati Siding clinics, in addition to Tutume Primary Hospital and Nyangabwe Referral Hospital. Of the 12 facilities, 8 are high volume PITC/RHT sites (identifying at least 20 or more cases per month). While Nyangabwe Referral Hospital is not a high volume site for ART initiation (refers new HIV cases to feeder sites for ART initiation) it will be supported for PITC due to the high number of cases that can be identified at the site. A very strong linkage to treatment program will be supported to ensure that all cases

identified at the hospital are tracked and linked to initiating sites linked to the hospital. A within-site linkage protocol will be implemented for other facilities to ensure that cases identified from different service delivery points within that site end up on ART at that site. Specific plans for case identification are similar to those proposed for scale-up districts (Refer to Section 4.4 for detailed description on specific activities). A brief summary of these plans include:

i) Expanding PITC beyond ANC to screen and test eligible high risk AGYW and their sex partners seen in STI clinics, inpatient wards and at outpatient department to increase identification of new cases. AGYW and older men who are presumptive TB patients will also be targeted for HIV testing in addition to all those who are TB patients. Targeted testing for AGYW including pregnant women will also be implemented through youth friendly health facilities manned by Health Care workers trained to respond to the needs of youth.

ii) Expanding Index Client Partner testing to identify the sex partners (older men 25 years+) and families of HIV+ AGYW to offer testing services and linkage to care within facility settings. This will include implementation of voluntary partner notification services for tested clients. The facility based partner will collaborate with community testing partners to relay information about any needed community based testing for partners who failed to show up at health facilities for testing

To minimize risks of misdiagnosis during HIV testing, Epidemic Control funds will support activities related to assuring the quality of testing. The Botswana National HTS guidelines include HIV testing quality assurance activities. These includes training requirements and annual certification of providers, participation in national proficiency testing (PT) for all HIV testing sites and ensuring that all HV positive patients are retested prior to initiation into ART treatment. Botswana National Quality Assurance Laboratory (BNQAL) has challenges providing the required biannual rapid HIV testing PT panels to sites due to a lack of technical capacity in managing the PT program. During FY16 implementation, a significant number of sites participated in only one PT survey. Through Epidemic Control funds, the plan is to provide BNQAL with technical support in the preparation and distribution of PT and quality control samples to all the testing sites. Additionally, the funds will be used in supporting other continuous quality improvement initiatives such as monitoring performance of RTKs, including weekly testing of quality control samples at all testing sites and kit lot-to-lot comparisons.

The move by the country to transition from parallel to serial testing algorithm included verification of all individuals testing positive before ART initiation as a requirement to ensure only HIV infected individuals are put on treatment. Accordingly, verification of all positives will be monitored as part of CQI to detect any discordancy and implementation of corrective action as necessary.

Community Based HTS

FHI360 APC will implement community based HTS in the sustained districts of Greater Francistown and Ghanzi. In addition to the gap already discussed above, Ghanzi District is characterized as a desert environment, sparsely populated with poor transport and infrastructure and limited access to centralized government services. Unlike the rest of Botswana, where the majority of people have access to a health facility within 15 km radius, in Ghanzi District, this is only the case for 60% of the population[24]. Most of the people live in informal settlements that border private farms with most of the residents being able to access government health services through mobile clinics. Ghanzi has four target populations that have not achieved saturation: Males less than 15 years (33%), Females under 15 years (49%), Males 15-24 years (39%), and Females 25+ years (62%).

Community-based HIV testing approaches remain a critical avenue for achieving early diagnosis, reaching those not accessing the health system such as first-time testers and asymptomatic PLHIV, which can include males, key populations, and other priority populations such as hard-to reach men. This streamlined package of services focuses on case identification and immediate active linkage to care and treatment to ensure people are initiated on treatment timely. PEPFAR/B has proposed to have targeted HIV testing among TB patients and their families. Using Epidemic Control funds PEPFAR/B will test 8,378 clients, identify 1032 positives and link them to treatment and care.

Service delivery model to be used will employ a multi-disease approach that will be combined with access to screening for TB, cervical cancer, STI as well as referral for reproductive health services. APC will use SOPs to guide the implementation of targeted community HTC services. The following strategies will form the basis of community HTS:

i) Index case testing, targeting sexual partners or family members of PLHIV, TB patients, presumptive TB cases, PMTCT clients, OVC and their family members and AGYW whose partners do not seek HTC. Experience from using a similar approach obtained the highest HIV positivity yield at 15.7%, compared with VCT which yielded 3.3%.
ii) Targeted home-based testing will involve community health workers conducting individual risk assessment of the household members to screen those in need for HIV testing.
iii) Targeted programming campaigns which will cover hotspots, including “shake-shake (local brew) outlets.
iv) Partnering with facilities and facility based IPs to expand coverage, reaching more through sexual and social networks of the index clients.

[24] GoB, 2003

A very strong linkage to treatment program will be supported to ensure that all cases identified in the community are linked to facilities thereby initiating treatment as soon as possible. To ensure immediate linkage to a treatment site, the IP will implement both counselor-managed referrals and peer-led referrals. For counselor-managed referrals, the HTC counselors will process the follow-up of newly diagnosed PLHIV to ensure that they enroll into treatment and care at the earliest opportunity. For peer-led referrals, peer PLHIV will support newly diagnosed PLHIV to complete their referrals and enroll into treatment and care. Follow-ups to assert referral completion will be made through phone calls and home visits.

Facility Based Care and Treatment

BUMMHI implements the PEPFAR/B facility care and treatment interventions. BUMMHI is supporting the GoB to implement innovative strategies for increasing new ART initiations. These include providing afternoon and evening/weekend clinic hours to allow for ART initiation appointments to attract working men and AGYW; implementing same-day initiation through innovative strategies including fast tracking initiation for patients presenting well so that they do not wait for baseline lab results; and providing multi-month scripting and dispensing for stable patients, including men who cannot frequent the facilities, to promote adherence and retention. In addition to working on the above strategies, BUMMHI will also implement the following activities with Epidemic Control funds:

- Support of temporary staffing (e.g. ARV nurses, pharmacy technicians) to 12 sites to facilitate youth friendly center set up services.
- Train 40 health care workers on adolescent life skills to be based at the youth friendly centers
- Train 25 adolescent peer educators and support groups on Life Skills
- Print and disseminate Teen Talk Booklets
- Print and disseminate client literacy packages to improve patient knowledge on early treatment initiation and virologic suppression.

Community Based Care and Treatment

FHI360 APC will implement a limited package of services at community level comprising of Community Based Care and Treatment Services (CBCTS), Community TB/HIV, and Community based PMTCT, targeting specific age/sex bands and hot spots. This streamlined package of services will focus on case identification as well as care and treatment to help patients initiate, remain on treatment, and attain viral suppression. Extending hours to increase service availability to early morning, evening hours, or weekend coupled with bundled health services will be key to expanding access for community based care and treatment services. The following activities are planned to be implemented:

- Activities that support same day initiation;
    - ART readiness through adherence counselling and psycho-social support
    - Demand creation and treatment literacy.
    - Active patient tracking for previously diagnosed clients and linking them to treatment
- Alternative service delivery models to decongest facilities to allow for rapid initiations, address barriers to initiation and adherence and improve patient-centered focus. This will include innovative approaches to service delivery, with reduced frequency of clinic visits, multi-month drug pick-ups for stable patients, and increased availability of services in the community to improve retention while also reducing wait times. Introduction of these new approaches will be done in close coordination with District Health Management Teams, facility and community IPs, and communities themselves to ensure that the approach is patient-centered.
- Retention and Viral suppression:
    - Comprehensive interventions tailored to the recurring needs of PLHIV such as use of peer counselors, mobile phone text messages and home visits which have demonstrated improved adherence
    - Increased patient literacy on treatment adherence and viral load suppression
    - Tracking LTFUs and linking them back to care and treatment
    - Positive Health Dignity Prevention (PHDP) minimum package
    - Pharmacovigilance especially for patients newly initiated on DTG
- Integrated Community TB/HIV services
- Community PMTCT
    - Patient tracking, linkage and retention

Targets:

Greater Francistown:

IP	Indicator	Target (% yield)
I-TECH	HTC_TST	1,721
	HTC_TST_POS	195 (11%)
I-TECH	PMTCT_HTC	2,376
	PMTCT_STAT_POS	239 (10%)
BUMMHI	TX_NEW	655
FHI360 APC	HTC_TST	5,215
	HTC_TST_POS	642 (12%)

Ghanzi:

IP	Indicator	Target (% yield)
FHI360 APC	HTC_TST	3,163
	HTC_TST_POS	390 (12%)

SECTION B: Same Day Initiation, Case Finding and DREAMS - $7m

Table 5: Breakdown of the $7m by Activity

Activity	Amount
Same day initiation	$ 2,105,875
Self-Testing	$ 102,109
DREAMS	$ 4,792,016
TOTAL	$ 7,000,000

1. Same Day Initiation

Table 6: Budget for Same day Treatment Initiation by Activity and Implementing Partner

Activity	Amount		Implementing Partner
Stakeholder Engagement	$	50,000	BUMMHI
Linking and tracking positives from blood donation centers	$	200,000	BUMMHI
Development of "same day" treatment initiation SOP - incorporating BCPP best practices	$	50,000	BUMMHI
Staff salaries: ARV nurse prescribers, Pharmacy Technicians, M&E Clerks to support "same day" treatment initiation surge	$	900,000	BUMMHI
ART readiness - treatment literacy adherence counseling	$	905,875	APC
Total	**$**	**2,105,875**	

Description of Activities:

Implementation of same day treatment is not standardized across HIV care and treatment clinics in Botswana. The main challenges can be categorized as:

- Provider issues:
  - Reluctance to initiate without baseline lab
  - Reluctance by nurse providers to prescribe DTG
- Patient issues: Poor patient literacy on benefits of early treatment
- System challenges:
  - Baseline laboratory investigations results prior to initiation delays
  - Treatment Guidelines with specific guidance not finalized and disseminated
  - Drug availability and differentiated service delivery model to support same day treatment

Figure 1 below highlights data from the Botswana Combination Prevention Project (BCPP) which showed that before introduction of "Treat All", treatment initiation could delay for as long as more than 30 days (54%), however with fast tracking treatment initiation, without the use of baseline labs, most patients (76%) were started on treatment within the same day. Based on these

lessons, the program intends to harmonize and standardize fast tracking treatment initiation across PEPFAR/B priority SNU's.

Figure 1: BCPP ART Initiations by Time: Pre-UTT vs. Post-UTT

ART Initiation	Same Day	1-7 Days	8-14 Days	15-30 Days	> 30 Days
Pre-UTT N= 1,359* (Pre June 2016)	0 (0%)	79 (6%)	171 (14%)	321 (26%)	682 (54%)
Post-UTT N=1,362** (June-Nov 2016)	1012 (76%)	189 (14%)	51 (4%)	33 (2%)	38 (3%)

*Pre-UTT – ART timing missing in 106 (8%) of the 1379 ART Initiations
** Post-UTT – ART timing missing in 34 (3%) of 1362 ART Initiations

The Implementing Partners will use the community-facility model where BUMMHI will conduct the clinical aspects of implementation and FHI360 APC will implement the community aspect.

Package of services

Clinical:
The following are planned care and treatment activities to be implemented by BUMMHI:

- Stakeholder engagement bringing together, PEPFAR, clinical experts, guidelines committee as well as PLHIV to have a common understanding of same day treatment initiation.
- Development of same day treatment initiation SOP - incorporating BCPP best practices
- Retrospectively tracking and linking immediately to treatment HIV positives from blood donor centers as well as proactively developing a system to immediately detect HIV positive blood donors and start them on treatment the same day
- Staff salaries for ARV nurse prescribers, pharmacy technicians and M&E clerks to support same day treatment initiation surge of clients
- Printing and dissemination of client literacy package including other IEC materials.

Community:
The Community partner, FHI360 APC, will actively support linkage to treatment and utilize different strategies to reduce loss between testing and treatment initiation. To better understand and address gaps in achieving treatment targets, APC will work closely with BUMMHI and GoB to strengthen coordination and the tracking of PLHIV. The partner will also effectively carry out a thorough program analysis for both the HTS and care and treatment programs to identify the unique needs and barriers to effective linkage to care and rapid initiation and develop strategies

to overcome the identified barriers. The following outlines a list of activities that will be implemented to support same day initiation:

- Demand creation
- Patient literacy
- Treatment readiness support and adherence counselling both at community level and at the health facilities
- Active patient tracking for pre-ART and linking to treatment

To ensure enhanced implementation of same day initiation, community systems strengthening will be very important. The partner will work with other PEPFAR Implementing Partners to strengthen the M&E system to avoid double counting of clients across the cascade. This will be coupled with expansion of community-facility QI interventions to closely monitor progress of efforts and collectively act on remediation of identified challenges to implementation. Working closely with the facilities, the community partner will identify activities that can be task shifted to community health workers to decongest clinics and fast track same day treatment initiation. Finally, partner collaboration through regular meetings will be core to the success of same day initiation implementation, and partners will consult regularly to monitor progress.

2. Case finding (including HIV self-testing in under 25 women and under 30 men)

Table 7: Budget for Case Finding by Activity and Implementing Partner

Activity	Amount		Implementing Partner
Self-testing: Regulatory Evaluation of Test Kits	$	43,487	I-TECH
Self-testing: Procurement of Test Kits	$	58,622	PSM
Total	**$**	**102,109**	

Description of Activities:

The revised 2016 Botswana HIV Testing Services Guidelines mention the use of self-testing as an additional strategy for expanding testing to underserved populations, including key populations. Pilot studies on HIV self-testing also show good uptake results among unserved populations who are less likely to go to health facilities.

In order to implement self-testing, there is need to evaluate test kits to ensure that they meet the required standard for self-testing. Thus, Epidemic Control funds will be used to evaluate HIV self-test kits for use in-country. In addition, a HIV Self-Test pilot is being proposed under DREAMS programming. PEPFAR/B will purchase a total of 10,856 units of the self-test kits to serve these two purposes: the evaluation and Self-Test pilot.

3. Prevention of new infections in young women and men through DREAMS-like activities

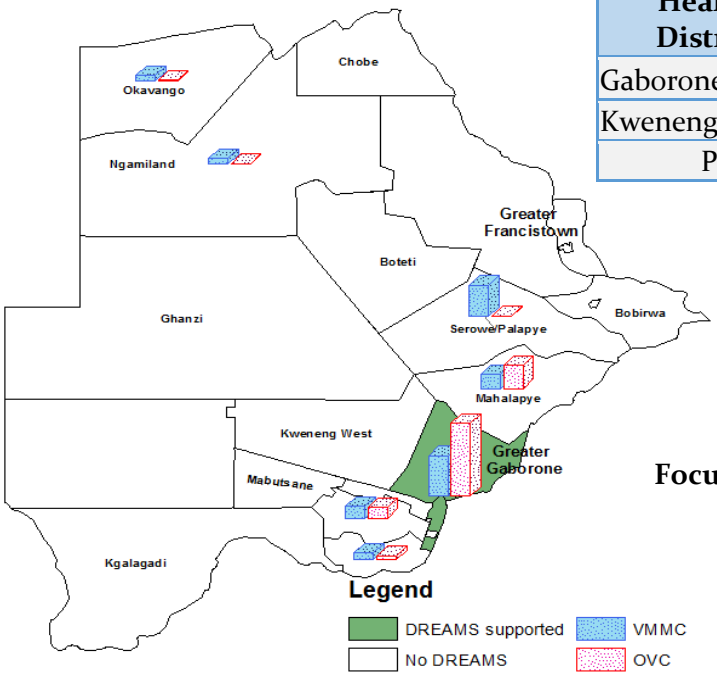
Table 8: Budget for DREAMS by Activity and Implementing Partner

Activity	Amount		Implementing Partner
(PP_Prev) including condom promotion and provision and community mobilization norms change	$	822,750	APC
HIV Testing and Counseling – Community #1	$	312,445	
PrEP (service delivery pilot for AGYW) #1	$	361,200	
Expand improve contraceptive method mix	$	249,060	
Post violence care	$	350,000	
Mapping: referral network and service uptake	$	250,000	MEASURE Evaluation
HIV Testing and Counseling – Community #2	$	354,671	BUMMHI
HIV Testing and Counseling - Facility	$	791,890	I-TECH
Post violence care - PEP	$	350,000	BUMMHI
PrEP (service delivery pilot for AGYW) #2	$	250,000	
Expand improve contraceptive method mix	$	150,000	
Community Mobilization and Norms Change (VMMC)	$	350,000	ACHAP
Coordination of DREAMS-like activities	$	200,000	GoB
Total	**$**	**4,792,016**	

n.b. Table 8 above shows budget allocations based on the DREAMS core package of services. As per COP17 Guidance "OVC partners should fully engage in DREAMS-like activities for young women younger than 18 years" and "OVC platforms in particular should be leveraged to enable girls and adolescents, aged 10-17, to access a comprehensive package of prevention and treatment services". The current DREAMS budget above does not include any allocation to OVC IPs. This is due to the limited PEPFAR/B budget for DREAMS activities. PEPFAR/B prioritized program areas that would not get any allocations within the core budget and use existing OVC platforms to leverage DREAMS programming. The existing OVC platforms were already designed with DREAMS in mind hence partners will not have to make huge lifts to adjust their programming.

Description of Activities:

Figure 2: **Geographic Prioritization:** DREAMS-like activities will be implemented in Greater Gaborone, a scale up saturation SNU focusing specifically in Kweneng East and Gaborone.



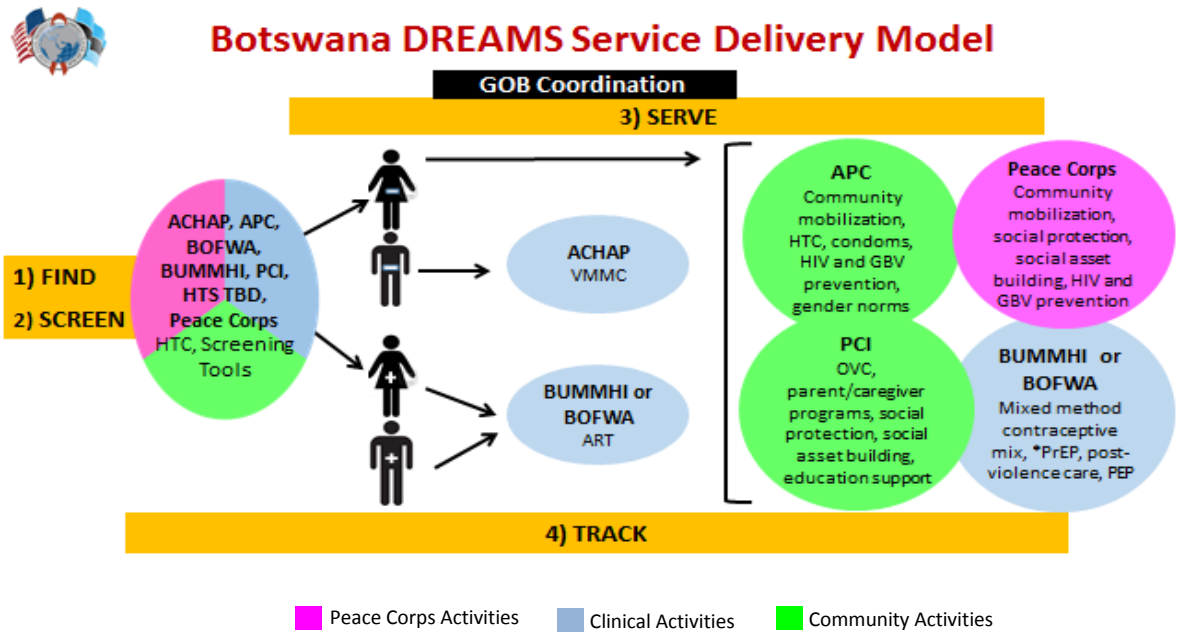
Health District	SNU Class	Total AGYW	PLHIV AGYW
Gaborone	SU: Saturation	33,692	2,432
Kweneng East	SU: Saturation	32,914	2,879
Percent of Total		37.7%	33.9%

Focus Districts: Gaborone and Kweneng East

Partner Analysis: A partner analysis informed by the DREAMS Guidance and the core package of interventions was conducted. The results of the analysis revealed that Greater Gaborone is best suited for the implementation of the core package of DREAMS interventions. Existing community and clinical partners in Greater Gaborone will be able to deliver core DREAMS services immediately. Greater Gaborone is also an ideal location to pilot DREAMS activities in Botswana as layering of services and coordination of these partners - Peace Corps, Project Concern International (PCI), I-TECH, FHI360 APC, African Comprehensive HIV/AIDS Partnerships (ACHAP) and Botswana University of Maryland Medical Health Initiative (BUMMHI).

Service Delivery Model: Based on the interpretation of the DREAMS guidance, a service delivery model was developed based on the four pillars of 1) Find, 2) Screen, 3) Serve and 4) Track:

Figure 3: Botswana DREAMS Service Delivery Model



i) ***Find*:** All the Implementing Partners are currently finding AGYW and their male sexual partners in their day-to-day work. PEPFAR/B team with IPs will work together on refining strategies of identifying/targeting HIV negative AGYW who are at high risk of HIV acquisition and are eligible for DREAMS programming.

ii) ***Screen*:** AGYW will be screened for HIV infection, intimate partner violence and high risks behaviors such as having multiple sexual partners, unprotected sex and others. Their identified male partners will also be screened for HIV infection.

iii) ***Serve*:** AGYW and their sex partners will be served with appropriate interventions based on risks identified during screening by community and facility partners. HIV negative AGYW eligible for DREAMS will be linked to appropriate programming. HIV positive AGYW will be linked to care and treatment services. HIV negative male partners will be linked to VMMC services while HIV positive male partners will be linked to care and treatment services. IPs screening will either provide the needed service(s) directly or link with another appropriate IP to provide the service(s).

iv) ***Track*:** To ensure AGYW are receiving appropriate services, that services are layered appropriately and that referrals are taking place and being completed, the team will adapt a tracking system that has proven to be successful in other countries with similar contexts and experience implementing DREAMS programming. For example other countries are using Passports for DREAMS.

Service Delivery Package: The service delivery package was informed by the DREAMS core package of services as outlined in the DREAMS Guidance. Interventions are for AGYW, their families, sexual partners and the communities they live in. Below is a summary of the interventions that will make the core-package of services for DREAMS like programming in

Botswana.

Empowering girls and young women and reducing their risk:

The delivery of services will be provided by a mix of community and facility partners as both DSD and TA. Because the package is made of several pieces and that implementation involves more than one partner, a very detailed referral system will be developed with input from Implementing Partners to ensure AGYW are reached with the necessary layer of services.

a. *Condoms promotion and provision*: As part of risk reduction, condom use education and demonstration will be part of HIV prevention programming to ensure AGYW have the knowledge, skills and are empowered to use condoms correctly and consistently. Both male and female condoms will be promoted and made available for AGYW in community and facility settings including settings that provide HTS, OVC and other prevention services. Activities will also focus on addressing barriers that prevent AGYW from using condoms consistently. The partners will track the number of people reached with education messages and the number of condoms distributed.

b. *HIV Testing and Counseling*: Analysis of both national and program ART data reveals that the gap in ART coverage is higher in young women aged 15-24 than their male counterparts. Among the older age bands, the trend is reversed with more men 25 years+, (who are often the sex partners of 15-24 AGYW) not on treatment than older women. Ensuring access to HTS for AGYW and their male partners is the focus of HTS COP17 strategy. Concerns about confidentiality and privacy are one of the key barriers to HIV testing services for adolescents. WHO recommends that HIV testing be conducted by trained lay providers or peers. COP17 will support activities related to training, ongoing mentoring and supportive supervision for HTS health care workers (HCW) providing services to AGYW. This will ensure that HCW know how to engage with girls and offer youth-friendly services. Additional support will include provision of outreach HIV testing services and provision of mobile services targeted toward high-risk AGYW. HTS providers will ensure active linkage of AGYW to other services including care and treatment within the shortest possible time for those testing HIV positive, effective prevention services such as PrEP for those testing HIV negative to ensure they remain uninfected and SRH services including condoms and contraceptive mix to decrease adolescent or unplanned pregnancies. HTS will also reach out and provide services to sex partners of AGYW; linking those testing positive to treatment services and to VMMC those testing negative.

   To increase identification of HIV-infected AGYW in DREAMS districts of Gaborone and Kweneng east, 4,000 at risk AGYW and their sex partners will be targeted through self-testing in both facility and community settings. AGYW in antenatal care, postpartum care and high risk AGYW will be given self-test kits to distribute to their sexual partners who in most cases are older men 25 years+. As part of the instructions package, it will be

explained to clients that self-testing is a screening test and does not itself provide an HIV diagnosis and thus individuals whose self-tests are reactive (indicating that they may be infected with HIV), will need to seek further verification testing at a health facility. To improve linkage to care, brochures and flyers will be distributed together with HIVST kits, containing information on HIV testing services, HIV prevention, treatment and care. The name and phone number of the contact person and facility where services can be sought will also be provided. Contact details for the client provided with the self-test kit will be collected and used for follow-up by the facility health education assistant (HEA) in the case of public health distribution and community-based follow-up by peer and outreach workers (in-person or via telephone/text messages) will be used where HIVST kit distribution was done in community settings.

c. *PrEP*: A key part of Botswana's DREAM program package is provision of PrEP to AGYW. The Botswana 2016 integrated HIV Clinical Care Guidelines state that it will be available in the public sector in 2017 but it is not yet available and the guidelines do not specifically mention AGYW. UNAIDS is currently leading efforts to have PrEP offered in public health facilities as it is currently only available through the private sector and most AGYW do not have resources to access it there. For COP17, PEPFAR/B will implement a pilot in the DREAMS SNUs targeting 600 AGYW with PrEP. This will be implemented by two IPs – APC and BUHMMI. APC will provide direct service delivery while BUHMMI will provide training, mentoring and supervision to APC and staff in BUHMMI supported sites.

d. *Post violence care*: Preventing, screening for and treating the outcomes of violence in AGYW are an effective way to reduce risk as well as identify those at greater risk for HIV infection. As part of risk reduction, violence education (physical, emotional and sexual) using standardized curricula will be part of HIV prevention programming to ensure AGYW and girls 10-14 have the knowledge, skills and are empowered to take the necessary steps to protect themselves and to bring their perpetrators to face the law. Some of the platforms for this programming include schools, adolescent financial literacy groups, parenting/caregiver groups, HTS settings and other community based group work especially with out of school AGYW.

   Implementing Partners will screen all AGYW they come in contact with for violence and will ensure that all those experiencing violence receive the minimum package of post violence care which includes HTS as well as STI screening, treatment and counseling other than for HTS. In addition to HTS and STI screening, treatment and counseling, AGYW who have experienced sexual violence will receive post exposure prophylaxis (PEP) if reached within the first 72 hours; emergency contraception if reached within the first 120 hours; and counseling services other than HTS. Violence survivors will also be assisted to access ongoing social protection services from community providers including shelter where necessary and legal services. IPs working in health facilities will work to build capacity of health care workers to provide youth friendly post violence care services to

AGYW needing these services.

Once the results of the VACS (conducted in 2016) become available, interventions will be further reviewed to ensure they are adequately responding to the findings.

e. *Expanding and improving the contraceptive method mix*: Ensuring AGYW have access to a wide range of contraceptive method mix ensures prevention of adolescent and unplanned pregnancies. In addition to offering, both community and facility partners will educate AGYW on contraceptive method mix (their use, benefits and where to access them if they are not offering them). Health care workers will be trained and mentored on providing adolescent friendly services to ensure that providers are comfortable in working with adolescents on sexual reproductive health issues and that they are offering appropriate services.

f. *Social asset building*: Social asset building for AGYW forms part of the Botswana DREAMS-like interventions for COP17. This will mainly be offered by Peace Corps and community partners. The intention for providing social asset building within the program will be focused on working with AGYW to build their self-esteem, confidence, problem solving abilities and exposing them to social networks that support increased education and economic participation. Interventions will take the form of group work using financial literacy and ready to work programs as platforms for social asset building interventions. The program will also incorporate use of mentors from the communities where AGYW live in. The mentors will provide guidance and support to AGYW to become resilient and to work towards reaching their full potential. In addition to focusing on the social asset building, the platforms will also be used as avenues to provide health education and links to needed health services.

Mobilizing the community for change

a. *School based HIV and violence prevention*: Peace Corps and community based partners have existing relationships with the Ministry of Basic Education and are currently doing HIV prevention programs in some schools. Issues related to harmful gender norms, as well as abuse and violence prevention are integrated in this work. Additionally, a few years ago, Ministry of Basic Education, with support from CDC Botswana, developed a life skills curriculum "*Living – Skills for Life: Botswana's Window of Hope*" which integrates issues of HIV/AIDS prevention, risk reduction and sexuality. This curriculum was developed for use by teachers. For COP17, efforts will also go towards working with the schools in PEPFAR supported SNUs to establish extent to which the curriculum is being used, provide technical assistance (training and mentoring) to teachers who have been not been trained in using the curriculum to increase its utilization. Additionally efforts will go towards updating the curriculum to ensure it has up to date HIV and violence prevention interventions. Efforts will also go towards exploring utilization of other evidence based

interventions such as Project AIM (Adult Identity Mentoring) to augment and strengthen school based HIV prevention interventions. Go Girls! Methodology will also be adapted to deliver HIV prevention programs for out of school adolescent girls.

b. *Community mobilization and norms change*: Peace Corps, community and facility based partners are mobilizing communities to change norms that contribute to HIV infection and violence. Implementing Partners are working with local leadership, police, social workers, teachers, child protection committees and community members at large. Partners use methodologies such as Journey of Life (JOL) and community conversations to conduct community mobilization activities with most of the activities resulting in community action plans to address challenges identified. In COP17, under DREAMS like programming, partners will also adapt the Families Matter Program to further assist with norms change and address violence prevention.

Strengthening families

a. *Parenting/Caregiver Programs*: Peace Corps and community based partners are already implementing parenting/caregivers programs. Programs implemented through this platform are those aimed at household economic strengthening and better parenting. For COP17, implementation methodologies such as Sinuvuyo, Go Families and Families Matter Program will be used to implement these programs.

b. *Social Protection Programs*: Botswana has some social protection programs in place and OVC partners especially are working with the relevant GoB Ministries and Department to ensure OVC and their families access these services. For COP17, OVC partners including Peace Corps will ensure AGYW 10-17 are particularly linked to these programs (education, welfare, health etc.) as appropriate.

Decreasing risk in sex partners of AGYW:

Botswana completed VACS in 2016. The findings will be used to inform DREAMS-like programming in terms of profiling sex partners of AGYW. The results of the profiling will be shared with HTS, VMMC, male and female condom promotion and ART programs so that they can increase focus on these men and target them with services.

Monitoring and Evaluation: Per the DREAMS COP17 Targets FAQs Requirements Considerations document dated February 6, 2017, DREAMS-like countries must set DREAMS SNU targets and report on finer sex/age dis-aggregations for PP_PREV and age/sex/service dis-aggregations for OVC_SERV. PEPFAR/B will adhere to the requirement for PP_PREV. S/GAC DREAMS M&E team approved PEPFAR/B to follow the MER 2.0 guidance for OVC_SERV dis-aggregation for the DREAMS SNUs and not the DREAMS dis-aggregations as there are no DREAMS funds going towards OVC programming.

Monitoring and Evaluation: PEPFAR/B will adhere to the DREAMS M&E framework by setting targets for the following MER indicators using the DREAMS sex/age/service dis-aggregations: PP_PREV and OVC_SERV.

PEPFAR/B is also proposing to map the referral network used by providers as well as map the use of services by young people. To better understand the use of health and social services by young women and men, we propose network analyses from two perspectives: the client and the provider. Mapping how and when young people access services will provide patient-centered preferences; mapping how and with whom referrals are made will provide information on established systems. Bringing these two streams of information together will offer opportunities to reorient the health system to respond to the needs of young people in a more holistic manner. This activity will be implemented by MEASURE Evaluation or URC/ASSIST.

Coordination: PEPFAR/B has made a decision to engage the GoB to coordinate the DREAMS efforts. This plan builds on country ownership and sustainability for the program. Funding has been programmed through the GoB co-agreement for coordination purposes. Coordination will be at multiple levels including:

- Across implementing partners to ensure each partner is providing the necessary services and that they are linking AGYW and their male partners to other services. A forum will also be convened on a quarterly basis where implementing partners can report on progress, achievements, challenges and share lessons;
- With other donors such as Global Fund to eliminate possible duplication and share best practices;
- With other GoB Ministries and Departments serving AGYW (Health, Education, Local Government and Rural Development, Youth) to ensure support for implementation of the program and build buy in and ownership.

In addition to coordination by the GoB, there will be a PEPFAR inter-agency forum that tracks DREAMS-like implementation.

APPENDIX H – BCPP Programmatic Transition Plan

Overview of Transition Plan Strategy

This BCPP programmatic transition plan outlines the measures necessary to responsibly complete BCPP study implementation, enhance the likelihood that key components of study interventions are sustained beyond study completion where feasible, and work with key stakeholders to leverage best practices and lessons learned from the project to improve Botswana's HIV response and health system in the future. Certain programming will be continued or adapted with support of the PEPFAR program in FY18 via COP17 programming, other aspects will be continued by the Ministry of Health and Wellness (MOHW) and some activities will cease without continuation at the close of the study.

*Please note that additional steps necessary to fully complete and closeout the study by June 2018 are documented in the separate **BCPP Study Closeout Plan** that is not a part of the SDS; this includes some data management and lab support that will be transitioned to PEPFAR and/or MOHW.*

Key Principles of Closeout Plan:

- **BCPP Intervention Communities:** BCPP's support for HIV testing, linkage to care and male circumcision interventions will end on September 30, 2017 and support for HIV clinical care at the IDCCs will end on December 31, 2017. BCPP has conducted a PEPFAR "attainment" analysis for the BCPP intervention sites to determine the appropriate type of PEPFAR support post-study. Table 1 lists the intervention communities in the priority districts that will receive COP 17 PEPFAR support by program area and district type. See the attainment analysis section below for a detailed explanation of COP17 plans.

- **BCPP Control Communities:** The PEPFAR team included the BCPP control communities when selecting priority sites for COP16 support and thus they are considered to be part of the bilateral PEPFAR program and are subject to the same criteria as all other PEPFAR sites. The control communities in scale up districts were thus included in the PEPFAR site refinement analysis implemented in Q3 of FY17 and utilized for COP17 planning. Table 2 lists the control communities in the priority districts that will receive COP 17 PEPFAR support by program area and district type. There are no changes from the approved FY17 site refinement plan with regard to this support in COP17.

- **Evaluation:** The evaluation effort will cease at the close of the study with no continuation of activities. Findings from the evaluation will be published in peer-reviewed journals and shared with key stakeholders.

Table 1: BCPP Intervention Communities to Receive COP17 PEPFAR Support by Program Area & District Type

Intervention Community	COP17 Facilities	District Type	COP 17 Program Areas	Description of Program Support
Otse	Otse Clinic	Saturation	ART, PMTCT, TB	SDS Section 4 – ART, PMTCT, TB
Oodi	Oodi Clinic	Saturation	ART, TB	SDS Section 4 – ART, TB
Lerala	Lerala Clinic	Sustained		SDS Section 5
Tati Siding	Tati Siding Clinic	Sustained		SDS Section 5, Appendix G

Table 2: BCPP Control Communities to Receive COP17 PEPFAR Support by Program Area & District Type

Control Community	COP17 Facilities	District Type	COP 17 Program Areas	Description of Program Support
Bokaa	Bokaa Clinic (Kgatleng)	Saturation	ART, PMTCT, HTS, TB	SDS Section 4
Metsimotlhabe	Metsimotlhabe Clinic	Saturation	ART, PMTCT, HTS, TB	
Mmathethe	Mmathethe Clinic	Saturation	ART & TB	
Molapowabojang	Molapowabojang Clinic	Saturation	TB	
Ramokgonami	Ramokgonami Clinic	Saturation	TB	
Nata	Nata Clinic	Sustained		SDS Section 5, Appendix G
Sebina	Sebina Clinic	Sustained		SDS Section 5

Attainment Analysis & Strategy for PEPFAR Support to BCPP Intervention Sites

For COP17 planning, PEPFAR Botswana has classified the BCPP intervention communities (CPCs) as sub-national unit 2s (SNU2) within the health district which is SNU1. PEPFAR Botswana will program COP17 activities based upon the attainment analysis summarized below. Since BCPP has supported robust HIV combination prevention interventions in the CPCs over the last three years, we assume that these SNU2s may be closer to attainment than PEPFAR SNU1s. Thus, the study team has conducted an attainment analysis by age-sex band based upon the 81% ART coverage target to help PEPFAR Botswana determine the type of COP17 support most appropriate for these communities. Please note that the two younger age-sex bands differ slightly from the PEPFAR definition because of the study eligibility criteria (16-64 years of age).

Attainment Analysis Methodology:

We used the following methods to estimate ART coverage gaps for the BCPP CPCs at each age-sex band:

1. Denominator consists of PLHIV estimates by age and sex derived from Harvard's baseline household survey results triangulated with 2011 Botswana census data.
2. Numerator consists of:

a. BCPP Current on ART results as of January 1, 2017 (Q1 FY17), note that the Current on ART estimates for study referrals have been adjusted upwards assuming 20% of PLHIV newly diagnosed or not on ART are already on treatment at facilities outside the study communities.
b. BCPP TX_NEW estimated achievements for Jan. 1 – Sept. 30, 2017 were calculated as follows:
    i. BCPP estimates adding 110 additional PLHIV on ART per month across the 15 CPCs based upon Q1 trends yielding an estimated 990 ART initiations over 9 months.
    ii. The 990 ART initiations were distributed across the 15 CPCs based upon the % of study cohort referrals (PLHIV newly diagnosed or not on ART) not yet initiated on ART.
    iii. For each CPC, the estimated new ART initiations were distributed across the age/sex bands by calculating for each CPC the % of Current on ART (#1 above) by age/sex band and then adding 10% to the 16-24 age group and subtracting 10% from the 25+ age group for both men and women. Intensive HIV case finding efforts are currently underway to identify younger men and women.
c. The estimated TX_Curr coverage as of Oct. 1, 2017 was calculated by combining a) and b) above for each age/sex band within each CPC.

3. The gap analysis table was calculated by subtracting the estimated total TX_Current as of Oct. 1, 2017 from the total PLHIV needed on ART to reach 81% coverage for each age/sex band by CPC.

The results of the BCPP attainment analysis are summarized in Tables 3 & 4 below:

Table 3: Attainment Analysis Results for BCPP CPCs – Projected ART Coverage at 1 Oct 2017

Community	COP17 SNU1	SNU1 Type (COP17)	% of PLHIV on ART (1 Oct 17)	Female < 16	Female 16-24	Female 25+	Male < 16	Male 16-24	Male 25+
Digawana	Goodhope	Saturation	73%	42%	201%	90%	106%	68%	46%
Otse	G. Gaborone	Saturation	73%	23%	100%	77%	7%	122%	70%
Lentsweletau	G. Gaborone	Saturation	125%	30%	155%	129%	7%	130%	126%
Oodi	G. Gaborone	Saturation	65%	8%	99%	73%	0%	151%	54%
Mmankgodi	G. Gaborone	Saturation	82%	0%	211%	83%	0%	198%	78%
Lerala	Serowe/Palapye	Sustained	79%	7%	87%	84%	11%	217%	67%
Maunatlala	Serowe/Palapye	Sustained	111%	98%	117%	126%	59%	21%	88%
Shoshong	Mahalapye	Saturation	92%	60%	72%	97%	39%	126%	83%
Tati Siding	G. Francistown	Sustained	71%	27%	72%	80%	20%	109%	59%
Nkange	G. Francistown	Sustained	79%	30%	58%	86%	64%	43%	77%
Mathangwane	G. Francistown	Sustained	101%	77%	85%	114%	52%	59%	87%

Community	COP17 SNU1	SNU1 Type (COP17)	% of PLHIV on ART (1 Oct 17)	Female < 16	Female 16-24	Female 25+	Male < 16	Male 16-24	Male 25+
Gweta	G. Francistown	Sustained	99%	55%	82%	114%	61%	43%	81%
Gumare	Okavango	None	111%	38%	88%	127%	49%	165%	93%
Sefhare	Mahalapye	Saturation	81%	23%	78%	87%	30%	79%	74%
Masunga	G. Francistown	Sustained	91%	70%	54%	103%	196%	116%	81%

Table 4: Unadjusted Attainment GAP Analysis: Estimated PLHIV to Add on ART to Reach 81% Coverage

Community	COP17 SNU1	SNU1 Type (COP17)	Female < 16	Female 16-24	Female 25+	Male < 16	Male 16-24	Male 25+	TOTALS (New on TX)
Digawana	Goodhope	Saturation	4	(14)	(19)	(1)	2	63	68
Otse	G. Gaborone	Saturation	5	(8)	23	10	(6)	35	72
Lentsweletau	G. Gaborone	Saturation	7	(28)	(195)	11	(7)	(92)	18
Oodi	G. Gaborone	Saturation	9	(10)	43	9	(8)	95	156
Mmankgodi	G. Gaborone	Saturation	13	(29)	(12)	15	(11)	11	38
Lerala	Serowe/Palapye	Sustained	10	(5)	(29)	13	(12)	63	85
Maunatlala	Serowe/Palapye	Sustained	(1)	(10)	(163)	2	12	(16)	14
Shoshong	Mahalapye	Saturation	5	7	(117)	10	(10)	(9)	21
Tati Siding	G. Francistown	Sustained	8	10	7	9	(7)	126	160
Nkange	G. Francistown	Sustained	5	12	(18)	1	8	6	32
Mathangwane	G. Francistown	Sustained	0	(3)	(160)	3	9	(17)	12
Gweta	G. Francistown	Sustained	3	(1)	(151)	2	16	0	22
Gumare	Okavango	None	6	(6)	(269)	4	(12)	(46)	10
Sefhare	Mahalapye	Saturation	7	2	(31)	7	1	19	35
Masunga	G. Francistown	Sustained	1	25	(109)	(9)	(7)	0	25
TOTALS TO BE ADDED ON ART BY AGE/SEX			**84**	**54**	**72**	**95**	**46**	**418**	**769**

Since the age eligibility for BCPP study interventions is 16-64 years old, coverage of pediatric treatment remains a gap. This gap represents 84 females and 95 males < 16 years old, respectively (table 4). Ten of the 15 SNU2s have total gaps of 40 or less additional patients. In order to close these relatively small gaps towards attainment and epidemic control and to reduce the burden on the PEPFAR program in COP17, the PEPFAR program will work with BCPP to provide assistance to these CPCs to close these gaps prior to the end of the study.

Adjusted Analysis and Final Assignment of COP17 Support to each BCPP Intervention Community

PEPFAR Botswana considered providing COP17 support to the 5 SNU2s highlighted in Table 5 and subjected these sites to further analysis as described below.

Table 5: BCPP SNU2s Potentially Requiring Ongoing PEPFAR COP17/FY18 Support to Reach Attainment

Study Community	COP17 Facilities	SNU1 Type (COP17)	Female < 16	Female 16-24	Female 25+	Male < 16	Male 16-24	Male 25+	SNU2 Total TX_NEW to Reach 81%
Digawana*	Digawana Clinic	Saturation	4				2	63	68
Otse	Otse Clinic	Saturation	5		23	10		35	72
Lentsweletau	Lentsweletau Clinic	Attained	7			11			18
Oodi	Oodi Clinic	Saturation	9		43	9		95	156
Mmankgodi	Mmankgodi Clinic	Attained	13			15		11	38
Lerala	Lerala Clinic	Sustained	10			13		63	85
Maunatlala	Maunatlala Clinic	Attained				2	12		14
Shoshong	Shoshong Clinic Sheleketla Clinics	Attained	5	7		10			21
Tati Siding	Tati Siding Clinic	Sustained	8	10	7	9		126	160
Nkange	Nkange Clinic	Attained	5	12		1	8	6	32
Mathangwane	Mathangwane Clinic	Attained				3	9		12
Gweta	Gweta PH & Clinic	Attained	3			2	16		22
Gumare	Gumare PH & Clinic	Attained	6			4			10
Sefhare	Sefhare PH	Attained	7	2		7	1	19	35
Masunga	Masunga PH & Clinic	Attained	1	25					26
	TOTALS (Blue SNU2s Only)		45	10	72	55	0	330	512

* Digawana is a low volume site that does not meet the site refinement criteria used to assess sites in Saturation districts to warrant PEPFAR COP 17 support.

For the 15 SNU2s, PEPFAR Botswana will program using three different models for the health facilities in these communities as follows:

1. "Attained type" support for SNU2s where we expect to reach attainment by the end of BCPP includes HIV surveillance support through the COP17 HIS Impact Funding Proposal (Appendix F). Note that APR 2016 shows viral suppression in these 10 SNU2s is approximately 93%. All clinical services will transition to MOHW.

2. "Saturation type" support (see SDS Section 4) for SNU2s in COP17 saturation districts where we do not expect to reach attainment by the end of BCPP. These facilities were further subject to the FY17 site refinement criteria to determine which program areas will provide support to reach attainment. Otse and Oodi meet the criteria for COP17 support per Table 6 below. Since Digawana did not meet site refinement criteria in any program area, this site will be fully transitioned to the MOHW post-study.

   Table 6: Type of PEPFAR Support in COP17 for BCPP CPCs (SNU2s) in Saturation Districts Based Upon Site Refinement Criteria

SNU2	SNU1 Type	TB/HIV	PMTCT	ART
Otse	**Saturation**	**x**	**x**	**x**
Oodi	**Saturation**	**x**		**x**

3. "Sustained type" support (see SDS section 5 for Lerala and SDS section 5/Appendix G for Tati Siding) for SNU2s in COP17 sustained districts where we do not expect to reach attainment by the end of BCPP.

In summary, two BCPP sites in saturation districts and two sites in sustained districts will receive support consistent with the approaches described in COP17.

Transition Plans for Combination Prevention Intervention Package

I. HIV Testing

A. Costing Studies: BCPP is conducting two cost analyses for the various testing modalities employed by the study as follows:

1. Community: Estimate costs of home-based testing and mobile testing during the community-based HTC campaigns, including costs per person tested and per new HIV case identified.
2. Strengthening Facility-Based Testing: Estimate incremental costs and outcomes of strengthening facility-based routine HIV testing relative to the standard of care.

Transition Plan: *The results of the two cost analyses outlined above will be shared with the MOHW and other key stakeholders by no later than March 31, 2018.*

B. Community-Based Testing: BCPP has supported community-based HIV testing (both home-based and mobile testing) since the beginning of the study in Oct. 2013 to identify and describe the HIV status of as many people in the CPC communities as possible. In Round 1, BCPP employed two testing teams of about 35 lay counselors each to conduct testing campaigns in the CPCs over roughly a two-month time period. In Round 2, BCPP employed two or more lay counselors per CPC to conduct targeted testing of priority populations throughout the calendar year.

Transition Plan:

- *BCPP support for community testing activities in the CPCs will terminate on September 30, 2017.*
- *Saturation Districts: Based upon the attainment analysis and site refinement criteria, none of the BCPP intervention sites meet the threshold for HTS programmatic investment in COP17.*
- *Sustained Districts: Based upon the attainment analysis, Tati Siding will receive sustained and "hotspot" HTS support in alignment with the package of services described in COP17 SDS section 5/Appendix G, Epidemic Control Funding. Lerala will receive HTS support in alignment with the standard package of services for sustained districts as reflected in COP17 SDS section 5.*
- *By December 31, 2017, the BCPP study team will meet with DHMTs, facility-level staff and community leadership to share the HIV testing achievements and lessons learned for each CPC.*
- *Results of the cost analyses outlined above will be shared with the MOH and other stakeholders by no later than March 31, 2018.*

C. Routine HIV Testing: BCPP has supported routine HIV testing (RHT) within the health facility as a component of the Round 2 intervention package beginning in April 2016. BCPP placed lay counselors in 8 of 15 combination prevention communities with a focus on sites that lacked adequate staff to conduct RHT activities properly.

Transition Plan:

- *BCPP-supported RHT counselor employment will terminate Sept. 30, 2017.*
  - *Starting in June 2017, BCPP will work with each CPC health facility to transition RHT activities to at least one MOHW healthcare worker at each CPC.*
  - *BCPP will emphasize continued implementation of best practices including testing in OPDs and inpatient wards, testing of all patients with suspicion of TB, other opportunistic infections and STIs, index client partner testing, and 3rd trimester retesting for HIV-negative pregnant women.*

- *Saturation Districts: Based upon the attainment analysis and site refinement criteria, none of the BCPP intervention sites meet the threshold for HTS programmatic investment in COP17.*
- *Sustained Districts: Based upon the attainment analysis, Tati Siding will receive sustained and "hotspot" HTS support in alignment with the package of services described in COP17 SDS section 5/Appendix G, Epidemic Control Funding. Lerala will receive HTS support in alignment with the standard package of services for sustained districts as reflected in COP17 SDS section 5.*

II. Linkage to Care

BCPP has conducted robust linkage to care activities in the CPCs for all HIV testing activities conducted for the Evaluation and Intervention components of the study. Referrals of HIV-positive individuals are captured and transmitted electronically to the study laptop at the IDCC in each CPC. For the Evaluation component, patient data including demographic details (name, residential location, phone numbers, etc.) are captured using MacBook Air laptops while similar data capture for the Intervention component is executed using tablets and the Open Data Kit (ODK) software platform. At the study clinic, the Site Coordinator generates an HIV-positive referral report daily. The report is cumulative for the life of the study and shows all HIV+ patients referred to the IDCC from community-based HIV testing efforts along with the appointment dates given by community counselors.

The linkage intervention package for BCPP includes: 1) counseling at time of diagnosis on the importance of immediate treatment initiation and adherence with appointments made for PLHIV not already in care; 2) SMS appointment reminders; and 3) tracking and tracing of persons who miss appointments at the IDCC. In addition, to enhance linkage rates, patients wishing to receive care and/or initiate ART outside of their community are able to link to any MOH IDCC.

Transition Plan:

- *BCPP technical staff are working with the PEPFAR HTS and Care and Treatment program leads, PEPFAR implementing partners and the MOHW to develop a SOP for linkage to care that is feasible to implement within the public health program context. Once completed, key staff at the IDCCs in the CPC communities will be trained to maintain linkage to care efforts at the health facility using this SOP. BCPP staff will work with the facility in-charge and other staff at each CPC site to determine which staff will perform tracking and tracing activities. Designation and training of MOHW staff to implement the LTC SOP will be completed by no later than Sept. 30, 2017.*
- *BCPP information technology leads will assist PEPFAR staff and the appropriate implementing partners to explore developing tablet-based applications for LTC using ODK or a similar software platform.*

- *In addition, BCPP is conducting a cost analysis for the linkage to care intervention which will assess the impact, cost and outcomes of expanded linkage and tracing activities. The results of this cost analysis will be shared with the Ministry of Health and other key stakeholders by no later than March 31, 2018.*
- *Saturation Districts: Based upon the attainment analysis and site refinement criteria, none of the BCPP intervention sites meet the threshold for LTC programmatic investment in COP17.*
- *Sustained Districts: Based upon the attainment analysis, Tati Siding will receive sustained and "hotspot" LTC support in alignment with the package of services described in COP17 SDS section 5/Appendix G, Epidemic Control Funding. Lerala will receive LTC support in alignment with the standard package of services for sustained districts as reflected in COP17 SDS section 5.*

III. Rapid ART Initiation & Streamlined Follow-Up Care Under UTT

Since adoption of UTT as national guidelines, BCPP has implemented rapid ART initiation to increase the rates of treatment initiation among patients who successfully link to the MOH health facility. The approach begins with post-test counseling at the community level on the importance of initiating ART as soon as possible for individual health benefit and reduced risk of transmission. On the day the patient links to the IDCC, multiple steps are conducted including: 1) routine patient registration in PIMS2 or IPMS at the IDCC; 2) verification of HIV status at IDCC; 3) WHO staging including screening for opportunistic infections; 4) collection of blood for baseline labs; 5) adherence counseling on the day the client links to the MOH health facility; 6) ART initiation the same day for stable patients once all prior steps are completed. In addition, stable patients on ART for more than 12 months move to clinician follow-up visits every six months and dispensing of a 3-month supply of ARVs. Also, blood is typically drawn the same day as consultation visits when possible to reduce the frequency of clinic visits with patients called back within one month if lab results are abnormal. BCPP employs one nurse prescriber and one healthcare assistant (HCA) for each CPC IDCC to strengthen HIV patient management and data collection.

Transition Plan:

- *BCPP-supported nurse prescriber and HCA employment will terminate Dec. 31, 2017. BCPP has already communicated these contract end dates to the MOHW and, beginning in June 2017, BCPP will consult formally with the MOH to determine whether these well-trained and experienced professional staff can be retained within the MOH system to continue providing quality care in MOH health facilities.*
- *Regular MOH staff remaining at the CPC health facilities will continue implementing UTT per national guidelines once the study is concluded. BCPP will work with the CPC and ECC facility MOH staff beginning June 1, 2017 to ensure efficiency measures for ART*

initiation and streamlined patient follow-up are sustained in both study arms beyond December 2017.

- *Saturation Districts: Based upon the attainment analysis and site refinement criteria, Otse and Oodi meet the threshold for ART programmatic investment in COP17. These two sites will receive the standard package of PEPFAR support for ART service delivery (see COP17 SDS section 4).*
- *Sustained Districts: Based upon the attainment analysis, Tati Siding will receive sustained and "hotspot" ART support in alignment with the package of services described in COP17 SDS section 5/Appendix G, Epidemic Control Funding. Lerala will receive ART support in alignment with the standard package of services for sustained districts as reflected in COP17 SDS section 5.*

IV. Retention & Adherence in HIV Care

HIV-positive patients who have missed IDCC appointments or pharmacy ARV prescription refills are contacted by MOH clinic staff by phone or home visits and asked for verbal consent to receive retention support from community counselors. If the patient consents, BCPP deploys community-based lay counselors to provide additional retention support including SMS appointment reminders, rescheduling of appointments, and tracing and supportive counseling through home visits and telephone calls for defaulters (> 14 days late for appointment or pharmacy refill) and patients lost to follow up (LTFU is 90+ days late for appointment). BCPP also facilitates coordination between the MCH and IDCC units at each CPC health facility to ensure that post-partum HIV-positive women are retained in HIV care and remain on ART indefinitely. In addition, per national treatment guidelines, IDCC staff use self-reports, pill counts, pharmacy refill data and viral load test results to monitor treatment adherence. These adherence monitoring strategies are promoted in all study sites.

Transition Plan:

- *BCPP technical staff will begin consulting with the MOHW in June 2017 to determine a sustainable package of retention and adherence support activities using existing MOHW personnel at the CPC health facilities. Once agreement is reached, BCPP will train MOH IDCC staff beginning Oct. 1, 2017 to continue essential retention and adherence support activities beyond Dec. 2017.*
- *Saturation Districts: Based upon the attainment analysis and site refinement criteria, Otse and Oodi meet the threshold for ART programmatic investment in COP17. These two sites will receive the standard package of PEPFAR support for ART service delivery (see COP17 SDS section 4).*
- *Sustained Districts: Based upon the attainment analysis, Tati Siding will receive sustained and "hotspot" ART support in alignment with the package of services described in COP17 SDS section 5/Appendix G, Epidemic Control Funding. Lerala will receive ART*

support in alignment with the standard package of services for sustained districts as reflected in COP17 SDS section 5.

V. Male Circumcision

BCPP provides referrals for all HIV-negative men who express interest in safe male circumcision (SMC). In Round 1, BCPP supporting circumcision teams which moved along with the HIV testing teams to conduct circumcisions in the CPCs. In Round 2, BCPP continued to collect referrals and provide transportation for men to the nearest available MOH or PEPFAR-supported SMC service delivery point. BCPP SMC activities including transportation and community mobilization will cease on Sept. 30, 2017. The MOH and PEPFAR will continue to support SMC activities in the areas of greatest unmet need in Botswana through existing SMC service delivery sites nearest to the CPCs.

Transition Plan:

- *The overall findings and lessons learned from BCPP's SMC activities will be communicated to the MOH's national SMC program and other relevant stakeholders by no later than December 31, 2017.*
- *If a control or intervention study site falls within the PEPFAR priority districts of Goodhope, Southern, Greater Gaborone and Mahalapye, then those sites will receive continued PEPFAR support in COP17 for male circumcision service delivery through mobile or outreach services from existing static sites within the SNU. Study sites in Greater Francistown, Serowe/Palapye and Kweneng West districts qualify for Global Fund-supported SMC service delivery.*

VI. Post-Study Support for Antiretroviral Treatment

Transition Plan: *As part of the USG's support for HIV-clients identified and initiated on ART through BCPP, OGAC originally agreed to provide $6.1 million for procurement of ARVs post-study for BCPP participants who were initiated on expanded ART outside the national treatment eligibility criteria. For patients initiated on ART per national guidelines, Botswana's Ministry of Health and Wellness (MOHW) agreed to support all ART costs. Given that Botswana has since adopted Test & Start, all BCPP participants are now eligible to receive ART per national guidelines. Therefore, Botswana's MOHW resources will provide ARVs for all BCPP participants post-study. The USG will fulfill its commitment to provide $6.1 million in FY18 to support procurement of ARVs for the Botswana national treatment program, thereby completing the USG funding commitment and ethical obligation to continue ART for BCPP participants post-study.*

APPENDIX I – Supply Chain and Commodities

Background on the Botswana national supply chain system

The goal of PEPFAR in the Botswana national supply chain system is to ensure uninterrupted supply of health commodities and that they reach the intended patients; with the overarching objective of assisting the country to achieve HIV epidemic control.

Background

The Government of Botswana (GoB) has had major challenges with their supply chain system, particularly with contract management, partly because of inadequate expertise within the Ministry of Health & Wellness (MOHW), including Central Medical Stores (CMS). These deficiencies impact on forecasting and procurement planning. As a result the country continues to experience stockouts at the central and facility level, especially for HIV test kits (RTKs) and lab commodities. GoB has also communicated to PEPFAR that they are experiencing shortage of funds for the procurement of commodities like RTKs; as well as for the training of testers required for transitioning from parallel to serial testing as mandated under the Treat All strategy. The highlighted issues have the ability to negatively impact on the country's efforts to reaching the desired HIV epidemic control.

In 2014 the MOHW outsourced warehousing and distribution of health commodities, IT, and facilities maintenance of CMS to a third party in an effort to improve the national supply chain. The two audits that were conducted by e-Government (e-Gov) and the Public Procurement and Asset Disposal Board (PPADB) revealed that the service provider was underperforming. The contractor did not meet many of the service standards specified in the contract, particularly on a range of critical issues such as IT systems, information reporting, management of the maintenance and capital expenditure budgets, and maintenance of accurate inventory records. This in turn, has led to CMS failing to meet the set targets and requirements of the MOHW to satisfactorily provide the necessary health care to the nation at large in accordance with their mandate. Moreover, this has raised questions on whether the national supply chain is well equipped to properly and reliably manage and/or distribute the PEPFAR procured drugs to patients who require them

PEPEFAR Involvement: The Invitation to Tender

At the request of the GoB, PEPFAR/B agreed to assist with an international "open and transparent" Invitation to Tender (ITT) process through offering technical assistance (TA) and advice for the follow-on contract. The PEPFAR team, working with the MOHW and CMS on the retendering, have expressed concerns at the slow pace and inefficiencies that may have the potential to negatively impact achieving the objective for an open and transparent international

bidding. As a result of the slow progress with the ITT, MOHW is forced to extend the current contract by the allowable maximum of up to nine months; the team is hopeful that the new contract will be finalized and in place by then. It is envisioned that successful implementation of outsourced services will deliver improved levels of performance in the CMS supply chain. Order management and distribution functions will then meet the service targets set by the MOHW and ultimately translate into an improved and more effective national supply chain system.

PEPFAR/B provided TA in developing a Project Charter outlining the purpose and scope of the project, project timelines and deliverables, and key roles and responsibilities. The charter was signed by representatives of the MOHW, CMS, USG and other GoB stakeholders.

Treat All Strategy

After adopting the "Treat All" strategy in June 2016, the MOHW introduced Dolutegravir (DTG), which is one of the most effective new ARV drugs to reduce viral load and also has a low risk of side effects. In COP17 PEPFAR/B will also procure Truvada as this is required for first line, together with DTG.

Since the GoB HIV treatment policy does not extend provision of ARVs to foreign nationals currently residing in Botswana, PEPFAR continues to provide ARVs to refugees at the Dukwi Refugee Camp in COP17. In addition, PEPFAR will also procure ARVs for the Pre-exposure Prophylaxis (PrEP) pilot project targeting Key Population (KP) and Adolescent Girls and Young Women (AGYW).

Quantification and Procurement Planning

Forecasting and procurement planning requires timely and accurate logistical data. Currently, the success of this planning is impeded by facility-level barriers impacting the Logistics Management Information System Report (LMIS), the mandatory report influencing planning decisions. The tardy and inaccurate nature of data submission is associated with a largely manual reporting system and there is no visibility of supply chain data between CMS and the health care facilities. There is a need to support the automation of reporting processes at facility-level and to link CMS systems with the systems of facilities. Without using accurate data to quantify stock, procurements will not match demands. As a result facilities will either have inadequate supply leading to stockouts or overstocked supply leading to expiries.

The ARV Costing and Forecasting TWG, comprising of members from the MOHW and development partners, generated a forecast for DTG requirements. The forecast is for new initiations (TX_NEW) at a projected rate of 2,700 new initiations per month, treatment switch to DTG (TX_CURR) due to toxicity at a rate of 526 patients per month and also a switch from Aluvia at a rate of 6,500 patients per month for six months (total 39,000 patients). Based on this forecast, PEPFAR/B developed a procurement plan for the COP16 and COP17 funds.

Currently, only GSK/ViiV has capacity to supply the market with sufficient quantities of the branded DTG at a cost of $22.35 per unit. The generic DTG from Aurobindo is expected to be available by mid-2017 at a cost $3.75, and likely to reach full production capacity by the last quarter of 2017. In light of that, COP16 funds will be used towards the procurement of the GSK/ViiV DTG. Based on the forecast and procurement plan, COP16 funds would likely get exhausted around June 2017. To continue supporting the GoB with procurement of ARVs, USAID HQ has agreed to use available Working Capital Funds (WCF) to bridge any gap in timing of receipt of COP 17 funds, and ensure uninterrupted flow of drugs to Botswana. This agreement is based on the understanding that the WCF will be replenished with COP17 funds once they become available.

PEPFAR/B has made a commitment to GoB to support with procurement of both DTG and Truvada. Table 1 below outlines two scenarios of the total number of patients that will be put on DTG and Truvada when procuring both the ViiV branded DTG and Aurobindo generic DTG. Currently ViiV has full production capacity to supply adequate quantities of DTG. The first order of Aurobindo generic DTG has been placed and delivery to Botswana is expected in July 2017.

Scenario 1 represents the total number of patients that can be put on treatment and the associated cost if Aurobindo reaches full production capacity of generic DTG by August 2017. In this scenario, PEPFAR/B will procure the ViiV DTG from April to June 2017 and thereafter procure the Aurobindo DTG from July 2017 onwards. The allocated funds will be able to treat patients until November 2018.

Scenario 2 represents the total number of patients that can be put on treatment and the associated cost if Aurobindo reaches full production capacity of generic DTG by October 2017, Similar to scenario 1, in this scenario PEPFAR/B will procure the ViiV DTG from April to June 2017 and thereafter receive the order of Aurobindo DTG in July 2017. If Aurobindo is unable to supply the next shipment until October 2017, PEPFAR/B will procure stock for the months of August and September 2017 from ViiV and then start procuring the generic DTG again from October 2017 onwards. In this case the allocated funds will be able to treat patients until September 2018.

Table 1:

	Scenario 1	Scenario 2
	DTG + Truvada (Generic full Production Capacity Aug 2017)	DTG + Truvada (Generic full production Capacity Oct 2017)
Total Patients	134,717 by November 2018	128,265 by September 2018
Total Cost	$17,753,035 by November 2018	$17,715,679 by September 2018
Summary	ViiV DTG will be procured Apr-Jun 2017, Procurement of Aurobindo Generic DTG from July 2017 onwards	ViiV DTG will be procured Apr-Jun 2017 & Aug 2017 Aurobindo Generic DTG will be procured July 2017 and then October 2017 onwards

The total number of patients in both scenarios reflect national targets, of which PEPFAR targets are a sub-set.

RTKs

Inadequate supply of HIV RTKs from government has hampered Implementing Partners (IPs) from reaching their testing targets. In COP17 PEPFAR will continue to procure HIV RTKs for the IPs. PEPFAR will also continue to advocate to MOHW to fast track implementation of serial testing. This will significantly reduce the cost of HIV testing.
HIV self-testing (HIVST) will be piloted as an approach for expanding HTS especially to partners of FSW, youth and their partners who otherwise may not access services through regular testing approaches. Lessons learned from the pilot will be used to inform possible policy change in support of HIVST. COP17 funds will be needed to support the actual pilot of self-testing in both scale-up and sustained districts. Additionally, the funds will support procurement and validation of kits to be used for HIVST. Technical support will be needed to develop standard guidelines for self-testing

Strategic Support

The Logistics Management Unit (LMU) of CMS is responsible for monthly collection and processing of facility-level logistics data. Continued technical assistance is required to strengthen the unit's information management, particularly in analysis and dissemination of information to enable evidence based national supply chain decisions. PEPFAR/B will embed two technical advisors at CMS to guide the DTG scale-up and to strengthen capacity of the LMU.

There is also need to support DHMTs to strengthen logistics management reporting by providing consistent facility support and on-the-job training. Therefore PEPFAR/B is seeking to place 11 Supply Chain Advisors at the district-level to collect logistics management information (LMIS) (consumption, stock status and re-supply data), provide TA, and on the job training as per necessary to a total of 75 sites. Furthermore, U.S. Peace Corps Volunteers (PCVs) are placed in several healthcare facilities and catchment areas directly impacted by Botswana's supply chain challenges. In February 2017, 38 PCVs alongside their local counterparts were trained in Supply Chain Management and Standard Operating Procedures in order to strengthen the efforts to avoid stock outs as well as overstock of key commodities. The Committee for Supply Chain Management (CSCM) of Peace Corps Botswana trained these volunteers and counterparts with collaboration from MOHW personnel. This committee is composed of a group of current volunteers and lead by a third year volunteer attached with USAID. Ultimately, the goal of the committee is to conduct more training targeting health professionals in order to increase capacity to manage health commodities in the country.

PBAC Narrative

HTXD

Truvada (TDF/FTC): The total procurement quantity for Game Changer is 1,286,217 units and quantities for PrEP is 12,167 units for the PrEP pilot project, targeting Key Populations (KP) and Adolescent Girls and Young Women (AGYW), unit price is $5.50

Dolutegravir (DTG) for Game Changer: The total procurement quantity is 1,283,784 units of the Aurobindo Generic DTG at unit price of $3.75. The expectation is that by beginning of COP 17 in October 2017, Aurobindo would have reached full production capacity of the generic formulation.

DTG for the Red Cross: The total procurement quantity is 1,164 units of the ViiV DTG at a cost of $22.35. Procurement is expected to be done before October 2017. Aurobindo may not be able to supply generic DTG by then, hence budgeting for ViiV DTG.

Atripla (TDF/FTC/EFV): The total procurement quantity for the Red Cross in 6,999 and the procurement quantity for PEP is 100 units for post exposure prophylaxis (PEP) for post rape/sexual violence patient care, the unit price is $8.10

In cases where the same item is captured in separate lines, this means the funds will be provided to different mechanisms. For procurement under HHS/CDC, the funds will be provided through the Quality HIV/AIDS Services through GoB mechanism. Under HHS/CDC, the intent is to pay GoB for all estimated costs associated with caring for the Dukwi Refugee Camp but not to be responsible for procuring commodities. The funding is an estimate of the costs that GoB will absorb.

Attribution of PEPFAR DTG Procurements for Botswana, COP17

PEPFAR Contribution

In COP16 and COP17, PEPFAR will procure Dolutegravir (DTG) and/or generic DTG, plus Truvada, to meet the entire country's forecast needs for the new DTG-based ART regimen. These ARVs will be distributed nationally and provided to new patients initiated on treatment and to patients switching from older regimens to the new DTG-based regimen. The first shipment is expected in April 2017 and will be received and distributed through the Central Medical Stores (CMS) with a tracer system to track product from procurement to consumption.

Proposed Attribution

The MoHW Costing and Forecasting TWG, together with implementing partners, have forecast the quantity of DTG needed to meet the national needs. This quantification translates into an estimated number of patients supported by DTG-based regimens, including newly initiating patients and those transitioning to DTG. To account for these patients supported by PEPFAR/B procurement, we propose the following.

- PEPFAR-supported sites will continue to report quarterly on all TX_NEW and TX_CURR clients that these sites serve (i.e., sites receiving TA or DSD directly from BUMMHI, LINKAGES, BCPP, and Dukwi)
- Any TX_NEW and TX_CURR counts exceeding those attributed to IPs will be attributed to PSM in PEPFAR and non-PEPFAR SNUs
- Reporting by PSM will be done annually, using logistics data triangulated with clinical services data to apportion clients on DTG between TX_NEW and TX_CURR
- PSM reporting will be aggregated to the 29 ART Distribution sites located across the country

Background & Justification

To meet PEPFAR/B's obligation to procure DTG for the whole country, PSM, USAID, and the GoB have been working together to forecast the national ARV needs and quantify how those ARV purchases translate to patients served. This forecasting and quantification counted newly initiating patients expected in COP17, current patients who transition to a DTG-based regimen during COP17, plus all existing patients who started or transitioned to DTG during COP15 and COP16. Transitioning patients include those who shift from Aluvia to DTG and those who shift to DTG due to toxicity concerns. Of note, procurement planning and re-supply of ARV commodities does not translate one-to-one to target setting by IPs.

The total TX_NEW patients projected for COP17 and supported by DTG procurement is 32,400, split between PEPFAR-supported sites (n=17,278) and non-supported sites (n=15,122) (Table 1). TX_CURR counts include: 12,596 patients new to DTG during COP15; 57,324 patients new to DTG in COP16; and 25,812 patients projected to transition to DTG in COP17. Given that all these patients will either start or

transition to DTG before (or during) COP17, they represent TX_CURR for COP17 and equal 95,732. These attributions are split between PEPFAR-supported sites (n=54,036) and non-PEPFAR sites (n=41,696).

One of the key challenges with attributing TX results to PSM, a supply chain partner, is the different data tracked in a logistics management information system (LMIS) versus a patient-level health information system (HIS). The LMIS tracks doses distributed by site and can estimate numbers of patients served by those doses at that site; however the LMIS does not track the type of patient (new or current) treated with those doses, nor does it record when doses are distributed to a patient versus held in stock. The only way to differentiate between new and recurring DTG patients is to triangulate the PSM logistics data and patient data tracked by PEPFAR IPs and the GoB. Currently the GoB patient treatment data is produced monthly however there is a quarterly delay due to data aggregation and analysis. Using COP17 HIS Impact funds, PEPFAR/B will be working with GoB to improve data completeness and timeliness, but we do not expect those improvements to be realized in the first quarters. All other commodities-related MER indicators are reported by PSM annually. We propose counting TX_NEW and TX_CURR results attributed to PSM annually only.

The Central Medical Stores (CMS) currently distributes ARVs to 29 ART sites nationwide. These 29 sites serve more than 300 satellite sites. These 29 sites will be entered into DATIM and counts will be reported aggregate to these sites. Entering and reporting on over 300 sites for DTG-related results is not practical. PSM jointly with CMS will also provide some TA to these 29 sites and will assess them quarterly to ensure that the distribution site is managing stock and records appropriately. The assessment tool used will adhere to international standards and will include select SIMS questions as appropriate.

Table 1. Attribution of DTG-related treatment targets

SNU / District	TX_NEW Attribution		TX_CURR Attribution	
	PEPFAR Treatment IPs	PSM (ARVs Only)	PEPFAR Treatment IPs	PSM (ARVs Only)
Gr. Gaborone	8,234	1,828	25,216	4,516
Serowe/Palapye	1,774	699	5,886	1,422
Mahalapye	2,125	1,337	6,743	3,488
Gr. Francistown	3,729	1,270	11,765	3,004
Southern	993	386	2,935	1,142
Selibe-Phikwe	45	944	138	2,785
Ngamiland	35	356	135	1,019
Goodhope	307	188	1,000	462
Ghanzi	0	677	0	2,000
Chobe	28	245	77	731
Bobirwa	0	1,809	0	5,346
Boteti	0	1,744	0	5,154
Hukuntsi	0	195	0	577
Jwaneng	0	469	0	1,385
Kgalagadi	0	911	0	2,692
Lobatse	0	1,093	0	3,231
Okavango	7	969	142	2,743
Total	**17,278**	**15,122**	**54,036**	**41,696**

128,132 with COP17 Support COP15/16/and switches to DTG

OGAC Response: April 12, 2017 from Jason Roffenbender the Botswana SI Advisor

"This email is to confirm that the COP17/FY18 TX_NEW and TX_CURR results from the PEPFAR Botswana DTG procurement only need to be reported in Q4 in DATIM. The targets do not need to be reported in DATIM; however, the OU level TX_NEW and TX_CURR targets associated with the DTG procurement need to be included in the SDS. The TX_NEW and TX_CURR targets and the "Attribution of PEPFAR DTG Procurement for COP17" file should be included in the final SDS. The team can either include it with appendix I or it can be its own standalone appendix. The DRG procurement TX_NEW and TX_CURR targets should be clearly identified."

APPENDIX J – PEPFAR Botswana Stakeholders

PEPFAR Botswana Stakeholders 2017

Government of Botswana

- Ministry of Health and Wellness
- Ministry of Local Government and Rural Development (Department of Social Protection and Department of Community Development)
- Ministry of Basic Education
- Ministry of Nationality, Immigration and Gender
- Ministry of Youth, Empowerment and Cultural Development

Implementing Partners

- African Comprehensive HIVAIDS Partnership (ACHAP)
- Botswana Harvard Partnership
- Botswana Red Cross Society
- Botswana Univ. of Maryland School of Medicine Health Initiative
- Botswana-UPenn Partnership
- Catholic Relief Services
- FHI 360
- International Training and Education Center for Health
- Jhpiego
- KNCV Foundation/ Challenge TB
- Measure Evaluation
- Project Concern International
- Tebelopele Voluntary Testing and Counseling Centre
- University Research Corporation

Local Implementing Partners

- BORNUS
- Botswana Baylor Children's Centre of Clinical Excellence
- Botswana Christian AIDS Intervention Program (BOCAIP)
- Botswana Family Welfare Association (BOFWA)
- Botswana Network of HIV/AIDS, Ethics and Law (BONELA)
- Botswana Network of People Living with HIV (BONEPHA)
- Hope World Wide Botswana
- Humana People to People
- Matsheng Community Development Association Trust
- Mean and Gender for Justice
- Mothers Union
- Nkaikele Youth Group
- Pilot Mathambo Foundation
- Silence Kills
- SISONKE
- Stepping Stones International

Multilateral Organizations

- European Union
- Global Fund CCM
- IOM
- UN Women
- UNAIDS
- UNDP
- UNESCO
- UNFPA
- UNICEF
- WHO

Civil Society Organizations

- Bakgatla Bolokang Matshelo
- Bomme Isago Organization
- Bona Naledi Society
- Botswana Association for Psychosocial Rehabilitation
- Botswana Council of NGOs
- Botswana Family Welfare Association
- Botswana Scouts Association
- Centre for Youth of Hope
- Ditshwanelo Centre for Human Rights
- Family of Hope Services
- Gender Links Botswana
- Hope World Wide
- Human Network International
- Kagisano Society Women's Shelter
- Lesbians, Gays, and Bisexuals of Botswana
- Light and Courage Centre Trust
- Machaneng Achievers Association
- Marang Child Care Network
- Men and Boys for Gender Equality
- Molao Matters
- Ngamiland Council of NGOs
- Positive Moments Support Group
- Rainbow Identity
- Sentebale
- Sisonke
- Skill Share International
- THC Foundation
- WoMen Against Rape
- Young Love (Young 1ove)
- Youth Health Organization