Rwanda

Country Operational Plan 2017

Strategic Direction Summary

May 4, 2017

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1.0 Goal Statement

With declining donor resources and a still-increasing number of PLHIV,[1] rapid and focused action is critical to breaking the epidemic in Rwanda, a goal that remains within reach. Although Rwanda's epidemic is generalized with a 3% adult prevalence, Kigali has a prevalence rate 2.5 times higher than the rest of the country, and women in all regions have a higher prevalence than men, a disparity that is particularly apparent in Kigali.

An intensive approach to reach new PLHIV and achieve epidemic control is outlined in the Strategic Direction Summary (SDS) for COP17, focusing on unmet need of PLHIV in Rwanda with a heightened focus of resources and effort in Kigali, the capital city. This approach focuses to reach those who are less likely to access testing through the existing nearly universal couples testing for marriage and pregnancy, which may miss younger, single and more urban PLHIV. The intensive COP17 approach to reach additional PLHIV across all provinces, with a focus on Kigali, aims at reaching key populations (commercial sex workers (CSWs) and their clients) as well as adolescent girls, young women, and young men (age 15-25 and 25 -35 respectively) in order to prevent infection and interrupt transmission. Specific strategies to reach those populations include national index/family case testing of sexual partners and children of all new and enrolled PLHIV, community outreach and mobilization testing for high risk populations, targeted provider-initiated testing and counseling (PITC) and voluntary counseling and testing (VCT), accelerated same day facilitated initiation of ART, and strengthened linkage and reporting of all individuals who test positive to treatment. Joint, integrated stakeholder data review meetings will be held to enhance partner accountability, improve partner management, and revise program strategy.

Prior to the start of COP16 implementation, Rwanda rolled out Test and START (Treat All) nationally, as well as a new differentiated service delivery model (DSDM) with multi-month scripting (MMP) for stable HIV patients in Rwanda. This rapid roll out required that the PEPFAR Rwanda team work closely with the Government of Rwanda (GOR) and Ministry of Health (MOH), along with all stakeholders in the national HIV response (i.e., Civil Society Organizations, implementing partners, other donors, etc.) to develop and implement tools, train health care workers, and inform patients. As a result, by September 30, 2016, the number of PLHIV in Rwanda on treatment rose to 175,398, increasing the proportion of PLHIV enrolled in care that are receiving life-saving antiretroviral drugs (ARVs) to 97%, up from 89% one year before.

The DSDM aims to increase capacity to provide HIV care and treatment to all patients, focusing more intensive services toward higher-risk unstable patients and reducing the frequency of routine clinical visits and drug pickups for stable, low-risk patients. Therefore, under DSDM, stable patients attend clinical visits every six months, instead of every three months; stable patients pick up ARVs every three months, rather than monthly, under MMP. Unstable patients continue to have monthly ARV pickups and quarterly clinical follow-ups combined with community support services. In addition to routine data, a monitoring plan has been designed, with the protocol under review, to support collection and analysis of enhanced data on DSDM to guide further implementation and patient management.

[1] *[REDACTED]* Per agreement between PEPFAR and GOR/MOH at the D.C. Management Meeting (March 7-10, 2017), the results of the draft Spectrum model will be redacted if the final Spectrum model is not published in time for publication of this COP17 Strategic Direction Summary.

Overall viral load (VL) suppression is high in Rwanda (91%)[2]; however close monitoring is required to ensure that is sustained as treatment numbers increase, and improvements are needed to accessing timely testing and results. Along with MOH, the PEPFAR team is working in COP17 to ensure that systems are in place to maintain Treat All, DSDM, MMP, linkage of all HIV positives to ART and VL suppression, as well as rapidly review the real-time data from these models to increase efficiencies at the site level for the benefit of patients and clinical staff, and to foster sustainable cost savings.

[REDACTED][3]

PEPFAR has found efficiencies across all COP17 program areas in order to increase investment in these intensive strategies to significantly increase the number of PLHIV identified as HIV positive and linked to treatment. Continuing in COP17 are reductions to MOH staff salaries and PEPFAR agencies' cost-of-doing-business (CODB), funding of national commodities based on clear rationale and programmatic analysis, more focused testing and further refinement of systems investments with achievements in one-year benchmarks.

2.0 Epidemic, Response, and Program Context

2.1 Summary statistics, disease burden and country profile

Rwanda's 2012 Census reported a population of 10,513,973, with 41% under the age of 15 and an annual population growth rate of 2.6%. Projection from the census estimates the 2017 population at 11,809,295. HIV prevalence has remained stable at 3.0% for adults *[REDACTED]*.[4] The 2010 DHS reported that 77% of women and 73% of men reported having ever had an HIV test, which increased to 86% of women and 81% of men in the 2015 DHS, although the proportion of PLHIV who knew their current positive status at that time is unknown.

[REDACTED][5]

By the end of FY16, Rwanda rolled out Treat All nationally, which resulted in the national number of PLHIV on treatment in Rwanda increasing to 175,398. Within the first quarter of Treat All, 68% of all pre-ART PLHIV in care nationally were initiated on life-saving treatment, increasing to 82% by December 2016.

With the expansion of Treat All, measuring viral suppression is of increasing importance in Rwanda's efforts to control the epidemic by ensuring that clients are less likely to experience HIV-related morbidity or mortality and are less likely to infect others with the virus. Two studies conducted in 2009 and 2013 assessed the proportion of those on ART with an undetectable VL (<40 copies/ml) at 83% and 82% respectively and these results did not vary by time on ART.[6]

[2] PEPFAR APR16
[3] *[REDACTED]*
[4] *[REDACTED]*
[5] *[REDACTED]*
[6] The following two studies: Elul B et al. High Levels of Adherence and Viral Suppression in a Nationally Representative Sample of HIV-Infected Adults on Antiretroviral Therapy for 6, 12 and 18 Months in Rwanda.

These studies were prior to full rollout of routine VL testing.[7] PEPFAR monitoring and evaluation data from all supported Rwandan health facilities in FY16 showed viral suppression to be 91% among those tested, with 76% of all eligible ART patients having a recorded annual result. Furthermore, PEPFAR is monitoring the cost savings effect of DSDM and multi-month drug pick-ups, not only for the cost benefit to the patient and clinic staff but also for the potential cost savings to the overall program.

Donor funding to the national HIV program has decreased in the past years, a five year trend that is expected to continue. Rwanda's gross national income is 700 USD per capita,[8] it ranks 159 in UNDP's Human Development Index 2016,[9] and significant financial barriers remain to achieve a sustained domestically-funded HIV response in the near future.

Rwanda faces gaps to attain epidemic control and an AIDS-free generation, including systems and financial issues needed to support Treat All, development and implementation of cost-effective and sustainable service delivery models, supply chain management, greater use of data-driven approaches to identifying new infections, and shifting to a wellness model to manage HIV-positive patients.

Rwanda's HIV epidemic is generalized, with higher key population (KP) infection rates, and an urban prevalence of 6.2%, compared to a 2.2% rural prevalence. Women have a higher HIV prevalence than men (3.6% vs. 2.2% nationally, 8.0.% vs. 4.4% in Kigali) and young women aged 20-24 have nearly twice the rate of infection males the same age (1.8% vs. 1.0%).[10] Sixty-five percent of transmission is estimated to be in stable heterosexual relationships, while 20% of new infections are attributed to sex workers, their clients, and their partners.[11] Female sex workers (FSWs) have an estimated HIV prevalence of 45.8%,[12] while men who have sex with men (MSM) prevalence data shows 4%.[13]

PLOS ONE 2013 DOI: 10.1371/journal.pone.0053586, Nsanzimana S et al. HIV care continuum in Rwanda: A cross-sectional analysis of the national programme. Lancet HIV Mar 2015

[7] Rwanda currently has nine viral load testing sites. Previously only the National Reference Lab and the University Teaching Hospital Laboratory (Butare) were offering VL testing but, currently nine public facilities conduct VL testing. Viral load testing is now routinely required for all Rwandans on ART, six months after initiation, and then annually after that. In 2015, VL testing was added to the list of PBF indicators, which in combination with decentralized VL testing facilities has increased the number and proportion of VLs being done. PEPFAR provides support to national lab services strengthening, including systems to improve the quality of testing, delivery of results to facilities and implementation of information systems to aggregate quality usable data for national planning.

[8] 2015, World Bank.

[9] United National Development Programme, Human Development Report, 2016.

[10] Rwanda DHS 2015

[11] UNAIDS Modes of Transmission Study (MOT) 2013.

[12] Female Sex Worker Behavioral Sentinel Survey (BSS) 2015. Preliminary findings from the BSS report ~51% FSW national HIV prevalence.

[13] MSM Behavior Surveillance Survey 2015. Previous MOT MSM estimated prevalence is 5%.

Table 2.1.1 Host Country Government Results																
		Total		<15				15-24				25+				*Source, Year*
				Female		Male		Female		Male		Female		Male		
	Year of Result	N	%	N	%	N	%	N	%	N	%	N	%	N	%	
Total Population	2016	11,533,449	100%	2,292,298	19.9%	2,287,070	19.8%	1,166,862	10.1%	1,123,908	*9.7%*	2,491,767	21.6%	2,171,544	18.8%	NISR Census Projection 2016
[REDACTED]	*[REDACTED]*		*[REDACTED]*						*[REDACTED]*		*[REDACTED]*		*[REDACTED]*		*[REDACTED]*	*[REDACTED]*
[REDACTED]	*[REDACTED]*	*[REDACTED]*		*[REDACTED]*				*[REDACTED]*								*[REDACTED]*
[REDACTED]	*[REDACTED]*	*[REDACTED]*		*[REDACTED]*				*[REDACTED]*								*[REDACTED]*
Incidence Rate /1000 PYO	2015							2.7 (2.1 - 3.4)								RAIHIS 2014
[REDACTED]	*[REDACTED]*	*[REDACTED]*		*[REDACTED]*				*[REDACTED]*								*[REDACTED]*
Annual births	2015	343,077														NISR Census, 2012
% of Pregnant Women with at least one ANC visit	2015	99.2%														DHS, 2015 (Table 9.2)
[REDAC	*[REDAC*	*[REDACTED]*														*[REDAC*

TED]	*TED]*													*TED]*
Orphans (maternal, paternal, double)	2014	720,619		359,345		361,274								NCC, MVC Assessment Report, 2014
Notified TB cases/Year	2016	5,721		76		77		387		513		1407	3261	HMIS, 2016 (TB & ORD Division, RBC)
% of TB cases that are HIV infected	2016	1,245/5595	22.3%	12	1.0 %	18	1.4 %	Females = 443 (35.6%) Males = 772 (62.0%)						HMIS, 2016 (TB & ORD Division, RBC) <15 and 15+
% of Males Circumcised	2015	N/A				N/A				34.2%			26.4%	DHS 2015 (Table 13.22)
Estimated Population Size of MSM*	N/A	N/A												
MSM HIV Prevalence	2015	N/A						4.0%						MSM BSS Rwanda 2015
Estimated Population Size of FSW	2010	12,500	100%											BSS Female Sex Workers, Rwanda 2010
FSW HIV Prevalence	2015		45.8%						33.6%				53.9%	BSS Female Sex Workers, Rwanda 2015

Estimated Population Size of PWID	N/A	N/A	N/A													
PWID HIV Prevalence	N/A		N/A													
Estimated Size of Priority Populations (Specify)	N/A	N/A	N/A													
Estimated Size of Priority Populations Prevalence (Specify)	N/A	N/A	N/A													
		If presenting size estimate data would compromise the safety of this population, please do not enter it in this table.* ***N/A: Not Available* ***[REDACTED]***														

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

Epidemiologic Data (2016)					HIV Treatment and Viral Suppression(2016)			HIV Testing and Linkage to ART (2016)		
	Total Population Size Estimate[+] (#)	HIV Prevalence* (%)	*[REDACTED]*	PLHIV diagnosed[^] (#)	On ART[++] (#)	ART Coverage (%)	Viral Suppression *** (%)	Tested for HIV (#)	Diagnosed HIV Positive (#)	Initiated on ART^^ (#)
Total population	11,533,446	1.9%	*[REDACTED]*		175,398	81%	91%	3,945,141	26,384	27,579
< 15 years	4,579,367	.2%	*[REDACTED]*		8,580	59%	76%	341,806	791	1,363
15+ years	6,954,079	3.0%	*[REDACTED]*		166,818	83%	91%	2,637,734	20,874	22,800
15-24 years	2,290,667	1.5%	*[REDACTED]*		17,945[#]	94%	84%[##]	965,601	4,719	3,416

[+] 2012 Rwanda Population and Housing Census
*Source: DHS 2015
** 2016 EPP Spectrum estimates
[^] diagnosis data is currently unavailable in Rwanda
++ Rwanda HMIS data Sept 2016
*** PEPFAR APR16 data (represents 52% of PLHIV on treatment in Rwanda)
[^^]Initiated on ART calculations include pre-ART patients initiated on ART as a result of Treat All
[#] calculated for national based on PEPFAR % of adults on treatment who are age 15-24
[##] PEPFAR APR16 viral suppression for 15-19 year olds

Figure 2.1.3 [REDACTED]

2.2 Investment Profile

In FY16, Rwanda's HIV response was funded primarily by three sources – PEPFAR (43%), the Global Fund (GF) (43%), and the national government (13%).[14] Overall donor funding for the Rwanda HIV program continues to decrease; since FY09, PEPFAR funding to Rwanda has decreased annually by an average of 10%. In FY16, GF HIV funds remained at $59m down from $100m annually in 2013 and 2014.[15] For the 2018-2020 GF funding cycle, Rwanda has been allocated $154m for HIV, which represents an average of $51.3m per year. PEPFAR base funds decreased from $72m in FY17 to $64.8m in FY18.[16] While GOR percent contribution to total HIV expenditures increased from 10 to 13 percent from FY15 to FY16[17], GOR's budget allocation to HIV decreased slightly from $24.3M[18] in FY16 to $23M[19] in FY17. Anticipated decreases in GF and PEPFAR funding will create particular challenges for Rwanda's HIV program and will place pressure on Rwanda's health system, especially in light of limited domestic resources to fill the donor funding gap.

Total expenditures for FY16 may not reflect overall expenditures on the HIV response in Rwanda due to differences in fiscal cycles (PEPFAR's FY16 is October 1, 2015 to September 30, 2016; GF's FY16 is January 1, 2016 to December 31, 2016; and GOR's FY16 is July 1, 2015 to June 30, 2016) and expenditure reporting. MOH reports GF and GOR expenditures not by program area as shown in Table 2.2.1 but by HIV National Strategic Plan (NSP) cost categories: human resources, technical assistance, training, health products and equipment, medicines and pharmaceuticals, procurement and supply management costs, infrastructure and equipment, communication materials, monitoring and evaluation, living support to clients, planning and administration, and overhead. In addition, at the time the 2015-2016 Rwandan HIV Annual Report was published PEPFAR had not completed its 2016 Expenditure Analysis and only provided budget figures (totaling $82,016,957), not actual expenditures ($76,610,977). Therefore, examination of expenditures towards the national HIV response in Rwanda by program area may not represent an accurate account of the proportion of support from PEPFAR, GF, and GOR for these areas.

The MOH's ability to continue to reduce inefficiencies to realize cost savings, as well as to secure additional domestic funding for human resources and other system costs no longer funded by GF or PEPFAR in the long-term, is still being assessed. Significant financial barriers remain to achieve a sustained domestically-funded HIV response in the near future.

[14] PEPFAR 2016 Expenditure Analysis; Rwanda HIV Consolidated Operational Plan, 2013-2015; National HIV Annual Report, 2015-2016. Note that various sources with non-aligned time frames are used for the investment profile analysis. Depending on the timeframe/data view, Rwanda's national HIV response is funded roughly 42% PEPFAR, 45% GF, 12% GoR, and 1% other sources using total national HIV program expenditures of $182.4m for GoR fiscal year from July 2015 to June 2016.
[15] GoR fiscal year 2015/16, July 2015 to June 2016.
[16] PEPFAR COP16 base funding level was $72m, COP17 base planning level is $64.8m.
[17] COP16 SDS Table 1.2.1 compared to COP17 SDS Table 2.2.1
[18] Rwanda HIV Annual Report 2015-2016
[19] Email from RBC Corporate Services Division

PEPFAR and GF are coordinating with GOR to maximize USG and GF investment, and strategically align with domestic and other available resources to achieve epidemic control. USG initiated discussions with GOR addressing long-term financial sustainability of the program in 2015, although no strategic plan is in place. Rwanda is the first country to participate in GF's Results Based Financing (RBF) Model and is the largest non-commodities PEPFAR implementing partner through the USG's MOH cooperative agreement (MOH CoAg), providing direct services to 98% of PEPFAR-supported patients on ART.

Table 2.2.1 Annual Investment Profile by Program Area

Program Area	Total Expenditure FY16	% PEPFAR	% GF	% GOR	One UN
Clinical care, treatment and support; HTS	$61,690,835	36.4%	45.5%	18.1%	
Community-based care	$7,241,158	35.3%	47.0%	17.7%	
PMTCT	$8,342,751	58.5%	13.6%	28.0%	
VMMC	$3,806,466	37.7%	62.3%	0.0%	
Laboratory; blood safety; IC	$22,758,101	44.2%	52.6%	3.2%	
Priority population prevention; PEP	$2,694,586	78.9%	21.1%	0.0%	
Key population prevention	$3,680,425	58.8%	41.2%	0.0%	
OVC	$10,604,608	76.1%	23.9%	0.0%	
SI, survey, and surveillance	$1,034,114	13.0%	83.0%	4.0%	
HSS; HRH	$54,792,761	41.5%	43.0%	15.6%	
					$1,718,550
Total	$178,364,355	43.0%	42.6%	13.5%	1%

1 PEPFAR 2016 Expenditure Analysis; National HIV Annual Report, 2015-2016; Rwanda HIV National Strategic Plan 2013-2018. Note that various sources with non-aligned time frames are used for the investment profile analysis. Depending on the timeframe/data view, Rwanda's national HIV response is funded roughly 43% PEPFAR, 43% GF, 13% GOR, and 1% other sources using total national HIV program expenditures of $178.4m for GOR fiscal year from July 2015 to June 2016.

[2] GOR fiscal year 2015/16, July 1, 2015 to June 30, 2016; PEPFAR/USG fiscal year 2016, October 1, 2015 to September 30, 2016; Global Fund implementation from January 1, 2016 to December 31, 2016.

Table 2.2.2 Annual Procurement Profile for Key Commodities°

Commodity Category	Total Projected Costs FY18	% PEPFAR^	% GF	% GOR *	% Other
ARVs (National Quantification incorporating COP17 strategy)	$28,952,860	54%	45%	0%	0%
Rapid test kits	$3,988,117	38%	49%	0%	0%
Other drugs	$983,240	0%[a]	44%	0%	0.003%[+]
Lab reagents	$7,767,147	43%	52%	0%	0%
Other HIV/AIDS commodities (Hepatitis B and C medicines)	$6,677,960	0%[a]	44%	0%	0%
Total	$48,369,324				

°Total projected costs, % GF, % host country, % other figures are taken from the Rwandan National Supply Chain HIV Quantification and PEPFAR Steering Committee discussions during COP17 planning. Discussions are still ongoing and percent contributions do not add to 100%
^PEPFAR contribution % is taken from PEPFAR COP17 planning
[a] PEPFAR is phasing out of this commodity area in Rwanda
[+] Pfizer

Table 2.2.3 Annual USG Non-PEPFAR Funded Health Investments and Integration

Funding Source	Total USG Non-PEPFAR Resources	Non-PEPFAR Resources Co-Funding PEPFAR IMs	# Co-Funded IMs	PEPFAR COP Co-Funding Contribution	Objectives
USAID Non-HIV	$44,000,000	$13,200,000	5	$37,310,671	USAID non-PEPFAR resources are focused on MCH, FP, Malaria, Nutrition, Health Promotion, Health Systems Strengthening and WASH. When combined with PEPFAR funds, the focus is on improving access to service delivery in Nutrition, Water, MCH, FP activities and commodities availability.
CDC Influenza	$50,000	$0	0	$0	Sustaining influenza surveillance networks and response to seasonal and pandemic influenza by national health authorities.
Total	**$44,050,000**	**$13,200,000**		**$37,310,671**	

Table 2.2.4 Annual PEPFAR Non-COP Resources and Central Initiatives

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	$3,112,210		0	4	$407,570	Non-COP one-time central VMMC funds to support the scale up of VMMC activities in Rwanda added to COP16 funding contribution. IMs co-funded through a combination of COP16 funding and central funding.
HRH Evaluation	$3,000,000		0	1	$0	One-time central funds to evaluate human resources for health in Rwanda to improve efficiencies in service delivery through adequate workforce staffing to reach site-level targets and 90-90-90 goals.
Total	**$6,112,210**				**$407,570**	

2.3 National Sustainability Profile Update

COP17 planning incorporates the results of the Sustainability Index and Dashboard 2.0 (SID 2.0), which was conducted in January 2016 jointly by PEPFAR and GOR/MOH, into the assessment of systems investments to overcome barriers to achieve targets, as well as to assist in defining investment activities, budgets, and progressive benchmarks. These systems investments are incorporated into Section 6.0 of the SDS for COP17, *below*.

The application of the critical priority areas defined by SID 2.0 to continuing systems investments in COP17 shows that, although Rwanda has made progress in diagnosing, treating and virally suppressing HIV-positive individuals, challenges persist in identifying and bringing into the cascade the remaining HIV-positive individuals.

Critical priority areas defined in SID 2.0's domains continue to be the focus of COP17 to address programmatic gaps and barriers in supply chain management capacity and to support full achievement of targets. The following areas, as defined by SID 2.0, continue to require strengthening for continued progress toward epidemic control:

- Ability to measure progress toward epidemic control;
- Analysis of financial expenditure/efficiency, improving unit cost estimates and optimizing service delivery models;
- Availability of data on pediatrics and key populations;
- Availability of domestic financial resources for health and HIV/AIDS programming; and
- Responsiveness and efficiencies of facility-based and community-based HIV services.

Both PEPFAR and the Global Fund (GF) have invested substantially in Rwanda's national HIV response. There is a limited domestic budget to fully fund the HIV program, and donor funding, including funding from PEPFAR, is rapidly reducing. Nearly 50% of PEPFAR funding and all GF support are delivered through the GOR, which demonstrates the high capacity of GOR and MOH systems.

2.4 Alignment of PEPFAR investments geographically to disease burden

HIV care in Rwanda is widely available, and in FY16 56% of the ART patients received treatment in PEPFAR-supported facilities. The proportion of facilities and patients on ART, as well as the HIV services that are supported by PEPFAR, varies widely by district within provinces. In addition to direct clinical support, PEPFAR funds other programming, such as OVC and key and priority population testing and prevention services that do not correlate with the proportion of funded clinical support. PEPFAR expenditures may not reflect overall expenditure per PLHIV in the province, because higher proportional expenditures can be due to PEPFAR supporting the majority of facilities or patients in the province, and lower expenditure per PLHIV may indicate that few or no facilities are supported by PEPFAR. Therefore, examination of PEPFAR expenditures alone does not account for the full picture of support for PLHIV in Rwanda.

PEPFAR spent on average $384 per PLHIV in Rwanda in FY16,[20] a reduction from an average of $391 in FY15 and $570 in FY14. Adult HIV prevalence is highest (6.3%) and estimated ART coverage is lowest (74%) in Kigali province, which is where 19.6% of PEPFAR resources were spent in FY16. When comparing FY16 PEPFAR expenditures by province (Figure 2.4.1), PEPFAR expenditures align closely with the proportion of PLHIV on ART supported by PEPFAR. For estimated ART coverage, the western province is an outlier, which may be due to cross-border movements. ***[REDACTED]*** COP17 focuses an additional concentration of resources in Kigali province to address its 6.3% prevalence and to fund the intensive index/family testing and scale-up of prevention activities among key and priority populations.

Data for Figure 2.4.1 ***[REDACTED]***

[20] Based on PEPFAR FY16 Expenditure Analysis data. This amount includes PEPFAR expenditures for commodities and the military.

Figure 2.4.1 ***[REDACTED]***

2.5 Stakeholder Engagement

COP17 was jointly developed with the GOR/MOH from the Technical Working Group (TWG) level to the senior leadership level within MOH (including the Minister of Health, Minister of State, and the Permanent Secretary).[21] During the same COP17 planning period, the GOR/MOH was planning and developing its Concept Note submission to the Global Fund (GF) for the allocation period January 1, 2018 to December 31, 2020.[22] Rwanda's GF HIV grant is a results-based funding model (RBF), and the Country Coordination Mechanism (CCM) oversees the allocation of the grant within the frame of the HIV NSP.[23]

Civil society, private sector, PEPFAR Implementing Partners and other stakeholders provided inputs for the COP17 working groups through participation in a strategic planning retreat held at the US Embassy in Rwanda in January/February 2017. These stakeholders joined the PEPFAR team on February 3, 2017 to discuss the priorities of COP17 from the TWG level, review PEPFAR Oversight, Accountability and Response Team (POART) data and results and offer feedback and suggestions. During the meeting, stakeholders shared information on innovative approaches to finding and reaching PLHIV and linking them to treatment. The meeting engaged numerous community partners and their constituencies, including UNAIDS, CSO umbrella groups working in HIV, as well as the GF CCM Secretariat. CSO umbrella groups, UNAIDS, PEPFAR and the GF CCM Secretariat meet monthly for regular engagement sessions to discuss the HIV response at all phases – implementation, planning, and reporting. Stakeholders will continue to be engaged through the COP17 planning and implementation process, and have been given opportunity to comment on the SDS for COP17.

Joint COP17 development, adaptation and analysis of planning tools, emphasis on epidemic control and the required increased efficiencies in resource deployment will help engage stakeholders in the POART quarterly review process. Given the anticipated decline in donor funding, strengthening Rwanda's HIV program sustainability plan remains critical.

[21] COP17 planning processes included joint data analysis and program priority setting, which the USG team set the budget elements and reviewed them with GOR/MOH.

[22] GOR/MOH also involved the USG PEPFAR Rwanda team in GF Concept Note development at the Technical Working Group level and at the GF Country Coordinating Mechanism (CCM) level, at which the PEPFAR Rwanda Country Coordinator is a voting member. GOR/MOH is expecting to submit the GF Concept Note on March 20, 2017. For the periods January 1, 2018 to December 31, 2020, the GF proposed allocations of $154,462,907 toward HIV, $14,154,994 toward TB, and $41,460,255 toward malaria.

[23] As part of the development of GOR/MOH's GF Concept Note, the NSP required revision and extension. The GF CCM approved the proposal to extend the HIV NSP during this time frame.

3.0 Geographic and Population Prioritization

The PEPFAR and MOH teams are focused on the UNAIDS 90-90-90 targets and beyond to achieve epidemic control in Rwanda. *[REDACTED]* Epidemiological estimations and program performance data suggest that with more focused planning and resource allocation, overall saturation in all provinces (and for nearly all age and sex groups) is achievable by the end of FY18, with the exception of under age 15 in Kigali, Northern and Southern provinces and over age 25 in the Northern province. *[REDACTED]*[24]

The PEPFAR and MOH planning teams jointly set geographic priority areas during COP15 development, which remained in effect for COP16. Unmet need for ART was the most important determinant of prioritization and resource allocation because Rwanda's shift to achieve epidemic control relies heavily on ART saturation. Districts in Rwanda are relatively small geographically, with an average of 844 square kilometers and a range of 134-1937 square kilometers, having an average population of 350,532. Given the small geographic size and inter-district movement of people within Rwanda, as the country moved toward saturation, many districts showed ART coverage >100%. Additionally the DHS prevalence estimates are powered only to the provincial level, and no accurate district prevalence figures are available. Given the limitations with the accuracy of the estimations, the district coverage >100%, the small geographic areas and the mobility of the population, for COP17 the SNU of prioritization for Rwanda was changed to the provincial level, the level between national and district. This change allows a more accurate regional assessment of where additional resources are needed to ensure that all PLHIV have access to ART.

[REDACTED]

While the level of prioritization was the province, targets were set at the site and sector level. In particular for key and priority populations, planning began at sector-level hot spots and community, based on the location and need of the identified populations. Size estimations for some KPs are available at the sector level in areas with hot spots and these data were used to inform prioritization decisions for targets, resources, and service-delivery package planning.

Given the strength of Rwanda's screening program for HIV through marriage and pregnancy of both men and women[25], COP17 focused on strategies that would reach PLHIV with unknown status who were less likely to be reached through antenatal care (ANC) or marriage testing. These strategies include approaches for reaching and testing KPs (FSW and MSM) and PPs, CSW clients, STI symptomatic individuals, out of school youth and adolescent girls and young women (AGYW). Targeted PITC and VCT and will be implemented in all health facilities. Index testing, recency testing and family testing will be offered to all newly identified positives in all PEPFAR supported health facilities. In addition, medical records for all PLHIV enrolled in PEPFAR supported facilities will be reviewed and index/family testing will be offered to those whose records do not indicate this has been done previously.

Analysis of ART coverage by age and sex was used to determine where the gaps were greatest, and through this analysis in combination with the current understanding of modes of transmission in

[24] *[REDACTED]*
[25] Rwanda DHS 2015

Rwanda, the city of Kigali, which has the greatest numbers of people with unmet need, was prioritized. In addition to having a far higher HIV prevalence in Kigali than the rest of Rwanda, Rwanda is one of the fastest urbanizing countries in the world[26] and has a young and growing population. Allocation of resources to maximally identify and treat PLHIV in Kigali will effectively interrupt transmission at an accelerated pace and is critical to epidemic control in Rwanda and achieving an AIDS-free generation.

The Kigali Focus

In order to identify new positive cases in Kigali, index testing strategies will be put in place to test up to three sexual partners and/or untested children for each positive case identified, as well as PLHIV currently on ART. Additional sex workers and clients in their sexual networks will be tested. HIV-positive sex workers will be provided enhanced support for adherence. MSM specifically who engage in high risk behavior of multiple partners will be targeted for testing, with active case finding for positives and prevention services provided to those testing negative. HIV-negative high risk men, such as MSM, STI patients or clients of sex workers, will be referred for VMMC. Self-testing will be initiated targeting at risk young men and women age 15-25 with high unmet need in Kigali hotspots. Finally, radio advertisements targeting people with STI symptoms will refer listeners to a Kigali STI clinic for HIV testing.

Table 3.1 Current Status of ART saturation

Prioritization Area	*[REDACTED]*	**# Current on ART (FY16)**	**# of SNU COP17 (FY18)**
Attained Scale-up Saturation Scale-up Aggressive Sustained Central Support	*[REDACTED]*	175,398	5

[26] '2014 Revision of World Urbanization Prospects' United Nations, Department of Economic and Social Affairs, Population Division.

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

4.1 Targets for scale-up locations and populations

Table 4.1.1 Entry Streams for Adults and Pediatrics

Newly Initiating ART Patients in Scale-up Provinces

Entry Streams for ART Enrollment	Tested for HIV (APR FY18) HTS TST	Newly Identified Positive (APR FY18) HTS TST POS	Newly Initiated on ART (APR FY18) *TX_NEW*
Adults			
TB Patients	10,891	269	242
Pregnant Women	106,434	802	778
VMMC Clients	88,240	335	302
Index/Family Testing	31,634	5774	5701
Community Outreach/Mobile (KP/PP)	70,158	2,388	2,149
Inpatient	70,158	594	535
VCT	230,899	2,439	2,150
Other PITC	319667	2,603	2,343
Total Adults	**928,081**	**15,663**	**14,097**
Pediatrics (<15)			
HIV Early Infant Diagnosis	3,412	41	37
TB Patients	980	17	15
Inpatient	6,921	96	86
VMMC client	10,047	9	8
VCT	14,036	52	47
Index/Family Testing	2708	297	267
Other PITC	18,059	46	41
Total Pediatrics	**56,163**	**558**	**502**

* Some identified new positives will link to non-PEPFAR supported sites

Table 4.1.2 VMMC Coverage and Targets by Age Bracket in Scale-up Districts

SNU	Target Populations	Population Size Estimate (SNUs)	Current MC Coverage (APR16)	Expected MC coverage (in FY17)	Expected MC Coverage (in FY18)
	[15-29 age band for focus]				
	Total/Average				
Kigali		237,867	131,827 (69%)	161,907	181,126 (95%)
East		391,522	128,142 (41%)	146,486	152,310 (49%)
South		372,365	73,006 (25%)	81,756	116,679 (39%)
North		268,344	58,568 (27%)	72,939	89,714 (41%)
West		373,369	167,172 (56%)	172,861	194,006 (65%)

Table 4.1.3 Target Populations for Prevention Interventions to Facilitate Epidemic Control

Target Populations	Population Size Estimate (scale-up SNUs)	Coverage Goal (in FY17)	FY18 Target
Female Sex Workers	12,278	90%	10,805
Men who have Sex with Men (CSWs)	1670	84%	1,400
Young Women (15 – 24)			9,741
Clients of Female Sex Workers^			8,125
People with STI Symptoms			7,804
Other PP_Prev			-
TOTAL			**37,875**

^Estimated from the DHS 2015 indicator "paid for sex in the past year" and based on 2.2% of the male population aged 15-49

Table 4.1.4 Targets for OVC/DREAMS and Linkages to HIV Services (FY18)

SNU	OVC_SERV/ DREAMS-like (All)	OVC_SERV/ DREAMS-like <18	OVC/DREAMS-like_HIVSTAT <18

Table 4.1.5 COP17 DREAMS-like Targets

Implementing Partner	Province	Outside OVC	From OVC	Total DREAMS
AEE & Global Communities	Kigali	14,074	2,500	**16,574**
Caritas	East	5,926	500	**6,426**
FXB	South	4,494	506	**5,000**
Total		**24,494**	**3,506**	**28,000**
Kigali	39,026	24,911		19,256
East	15,601	13,162		6,738
South	17,834	9,562		7,871
North	21,225	11,763		8,312
West	21,756	12,138		9,990
Total	**115,442**	**71,536**		**52,167**

Total OVC-SERV/DREAMS include 24,494 DREAMS and 90,948 OVC
OVC_SERV/DREAMS <18 includes 15,703 DREAMS and 56,937 OVC <18
OVC/DREAMS_HIV STAT includes 10,992 DREAMS and 41,175 OVC

Table 4.1.6 DREAMS-like Program Targets by Age Band

IP/Mechanism	Province	District(s)	10-14 Yrs	15-19 Yrs	20-24 Yrs	Total targets
AEE/Ubaka Ejo	Kigali	Gasabo	1,937	2,252	1,226	**5,415**
Caritas/Gimbuka	East	Rwamagana	2,182	3,244	1,000	**6,426**
FXB/Turengere Abana	South	Nyanza	1,777	2,551	672	**5,000**
GC/Twiyubake	Kigali	Kicukiro; Nyarugenge	2,504	5,953	2,702	**11,159**
Total			**8,400**	**14,000**	**5,600**	**28,000**

Program Area 4.2: Priority Population Prevention

Intensive targeted testing of key populations (KPs) and priority populations (PPs) with index/family testing, recency testing and linkage to treatment of HIV positives is a primary focus of COP17 to maximally interrupt HIV transmission. PEPFAR will align COP17 activities with both MER 3.0 indicators and Rwanda's NSP 2013-2018 to support GOR's goal of a three times reduction in new infections and PEPFAR goals to achieve epidemic control. During COP 17, PEPFAR aims to reach 12,205 KPs, including 10,805 commercial sex workers (CSWs) and 1,400 MSM, including 896 currently enrolled in follow up or prevention services and 504 newly identified involved in commercial sex work (MSM CSW). In addition, PEPFAR will reach 25,670 PPs with HIV prevention interventions with a focus on at risk AGYW and young men aged 15-25+ with low ART coverage in hotspot areas. To maximize funding efficiencies, PEPFAR will support KP and PP prevention interventions in facility and community based services in 105 hotspot sectors with more than 50 CSWs per hotspot in all five provinces of Rwanda, as well as military locations, with the greatest focus in Kigali. Planned CSW size estimates in COP16 will further inform program strategies.

Results from recent studies have informed KP and PP strategies.[27] Two behavioral surveillance studies (BSS) on FSWs and MSM indicate that FSWs and MSM CSWs represent the primary KPs in Rwanda. The FSW BSS 2015 show FSWs have a 45.8% national HIV prevalence (51% in Kigali) compared to a national adult prevalence of 3%. While more than 90% of FSWs report having been tested for HIV, only 78.4% report being on ART. Only 47% of FSWs reported using condoms consistently with both paying and non-paying sexual partners. A recent BSS of MSM in Rwanda reported MSM having a prevalence of 4%, not statistically significant from that of the general adult male population. However, 42% of MSM reported transactional sex, with those engaged in commercial sex for more than two years having a prevalence three times greater than those engaging in commercial sex for less than two years (4.4% vs. 1.4%, respectively). Multiple factors such as stigma, high mobility and limited sources of stable income provide challenges to effective prevention and treatment interventions.

PPs in Rwanda are defined as groups of individuals who have an HIV prevalence greater than 3% or an age, sex or regional subset of a population with higher prevalence. Females aged 40-44 years and males 45-49 years have the highest HIV prevalence (7.8% and 9.3%, respectively); however, all female age groups, 15- 44, consistently have close to two times higher prevalence than age matched males.[28] An analysis of 2016 unmet need for ART by age and gender indicates that females and males 15-24 and 25+ have the greatest need for ART coverage, especially for females in Kigali. Positivity in younger individuals likely represents most recent infections. Risk factors for HIV positivity in the general population include the following: low or no condom use, multiple sex partners, casual sex, forced sex, sex partner >10 years older, sexually-transmitted infections (STIs), no education, wealth (highest quintile), being divorced separated or widowed and living in Kigali.[29] PP groups in Rwanda include at risk AGYW and young men <30 years old in hot spot sectors, with a focus in Kigali, people with STI symptoms, clients of CSWs and uniformed personnel (due to their high mobility and long absences from home in hotspots as potential clients of CSWs). There is a lack of HIV prevalence data among persons with disabilities (PWD) in Rwanda; however, PWDs may be at higher risk of HIV due to lack of appropriate prevention and support services, sexual violence and barriers to accessing HIV education and prevention services, in part due to stigma and discrimination. There is no evidence that other traditional PP groups including military, MSM, mobile workers, injecting drug users, fisher folk,

[27] FSW BSS 2015, MSM BSS 2015, DHS 2015 and RAIHIS 2014
[28] DHS 2015
[29] DHS 2015 and RAIHIS 2014

or refugees have HIV prevalence rates greater than 3% in Rwanda. In addition, persons receiving Post-Exposure Prophylaxis (PEP) in the past 12 months were 6.5 times more likely to be HIV positive, with women and girls seeking PEP twice as often as men, often in response to sexual gender based violence (SGBV) or sexual assault.[30] In COP17, a cohort analysis of PEP recipients will be undertaken to determine HIV status outcomes, define HIV risk profiles for PEP recipients and inform development of more effective national PEP policy. The PEPFAR team will continue to engage GOR in discussions to encourage investment in Pre-Exposure Prophylaxis to the groups at highest HIV risk, such as CSWs.

Additionally, the 2016-2020 GOR "All In" operational guidelines promote adolescent sexual and reproductive health, including HIV/AIDS prevention. These activities include biomedical HIV prevention, HIV knowledge and skills, condom use, delaying of early sexual debut, VMMC for adolescent males, promoting community-based adolescent HIV and sexual reproductive health (SRH) education for parents and dialogue between parents and adolescents on HIV and SRH.

Targeted testing of KPs in COP17 will include national scale-up of COP16 strategies from 45 to 105 sector hotspots and military sites across all five provinces with a focus in Kigali, though community outreach and mobile testing with linkage to facilities for testing and treatment using peer educators (PEs). Targeted testing of PPs in COP17 will include national scale-up of COP16 strategies in sector hotspots across all five provinces for testing CSWs clients and persons with STI symptoms through PEs, radio campaigns and pharmacy referrals, as well as initiation of STI and risk-based HIV testing in PITC and VCT.

At risk adolescent girls and young women will be reached through partnerships with youth programs, such as the USAID education program targeting vulnerable youth (Huguka Dukore), community youth centers and GOR programs promoting heath among youth (i.e., All In and 12+ Girls) in sector hot spots across all five provinces. Self-testing will be initiated targeting at risk young women and men in sector hotspots who might otherwise not be reached through traditional outreach and facility testing services, using existing youth platforms and possibly university-based Anti-HIV Clubs in sector hotspots in Kigali.

Index/family testing and recency testing will be offered to HIV positive adult KPs and PPs to further identify HIV positive adults and children and inform program strategies through social network mapping. All KP and PP programs will link closely with COP17 DREAMS-like activities and the OVC program to link identified beneficiaries to HIV support services, testing, and treatment.

The package of services for both KPs and PPs includes strengthening linkage to ART, retention, and VL suppression, provision of HIV education and risk reduction counseling, promotion and distribution of condoms and lubricants, VMMC, STI education, screening and treatment, reproductive health and family planning, PMTCT, SGBV sensitization and social support, tuberculosis (TB) screening and treatment and referral for hepatitis screening and vaccination. Health care providers will receive training on provision of KP-friendly services to reduce KP barriers to services.

Interventions targeting KP and PP at the facility and community level will be monitored through quarterly site visits. Each intervention point serving KPs and PPs will maintain a record of outreach services provided and track the approximate size of the population in the area served. Prevention data will be tracked through monthly, joint, prevention/treatment data review meetings with all prevention

[30] RAIHIS 2014

and treatment IMs, MOH and MOD to inform program strategies and facilitate the transfer of effective prevention methodologies to MOH.

Program Area 4.3: Voluntary Medical Male Circumcision (VMMC)

During FY16, PEPFAR supported 50,446 VMMC procedures against the FY16 target of 141,063. During FY16, two cases of VMMC-related tetanus were reported in Rwanda (one in a PEPFAR supported site). As a result, at the end of May 2016, MOH made it compulsory, regardless of method of VMMC procedure (i.e. PrePex or surgical) for men to receive two tetanus-toxoid-containing vaccine (TTCV) doses four weeks apart, with the second dose preferably 14 days, but at least 7 days, before the VMMC procedure for individuals who never received a tetanus vaccine. The break in service delivery due to the development of the new recommendations, as well as the additional required vaccine, which increased lost-to-follow-up rates, contributed to the underachievement of the annual program targets. The national Technical Working Group, of which PEPFAR team members are a part, are reviewing current guidelines to propose that the GOR follow the WHO recommendation of two tetanus vaccinations only with the use of PrePex devices. Also, a significant delay in receipt of VMMC central funds contributed to the under achievement of targets.

The FY17 Q1 program data showed an increased achievement and positive progress towards the achievement of FY16 and FY17 targets[31]; however, a significant gap still remains. As a result, partners have developed a catch-up plan to fast-track progress. This plan includes an intensified vaccination and tracking plan to reduce loss to follow up in the administration of the second vaccine. Increased demand creation for VMMC will be carried out through focused radio campaigns and sensitization targeting school aged boys and men in collaboration with the Ministry of Defense (MOD), military, police and young men aged 15-29. MOH will reach beneficiaries leveraging youth centers, existing community meetings such as, Umuganda, and other community activities. MOD will carry out enhanced VMMC programs through its health outreach program, "Army Week," in collaboration with MOH and through intensified national radio campaigns. All PEPFAR prevention and OVC partners will link HIV negative male beneficiaries with MOH or MOD VMMC services. MOH is currently reviewing its current requirement tetanus vaccination policy to reduce the requirement to one vaccine prior to surgical procedure to reduce barriers to VMMC.

With external funding support to Rwanda declining, and since PEPFAR resources alone are insufficient to meet the need for VMMC, the NSP objective of 66% national coverage of males aged 15-59 is unlikely to be achieved by the end of 2018. However, in COP17, PEPFAR will prioritize investments in VMMC by focusing the 97,886 targets on males aged 15-29 in priority districts based on specific risk factors. The VMMC program will use both PrePex and surgical devices, target military populations and new recruits, and reach men aged 15-29 at highest risk, including those linked from DREAMS-like programming, clients of CSWs, males in discordant relationships with HIV-positive partners, and males attending STI clinics.

Program Area 4.4: Preventing Mother-to-Child Transmission (PMTCT)

Since April 2012, Rwanda has been implementing Option B+, achieving <2% maternal-to-child transmission (MTCT) by 2015. Results from the End Term Review of the Elimination of Mother to

[31] In FY17 Q1, the Implementing Mechanisms administering the PEPFAR VMMC program showed a total quarterly achievement of 18,765 VMMCs out of a targeted 19,787 for the quarter.

Child Transmission (EMTCT) strategy conducted in 2015 ranked achievements in primary prevention and prevention of unintended pregnancy among HIV-positive women at 80%, while results for PMTCT and treatment scored an even higher rate of 95%. These achievements are reaffirmed by a continuous decline in positivity rate among pregnant women and reduction in MTCT rate (at 18 months) from 2.7% and 2.4% in 2010 to 1.0% and 1.8%, respectively. Primary prevention and the prevention of unintended pregnancies among HIV-positive women have been prioritized in both the EMTCT Plan and NSP of 2018–2020 respectively. Following the initiation of the DSDM in COP16, pregnant women and adolescents have been accorded a special consideration and will access both drugs and clinical services every three months to coincide with ANC visits and school breaks, respectively.

The national coverage for PMTCT (Option B+) is 97%, and all PMTCT facilities provide early infant diagnosis (EID) services within existing maternal, child and neonatal health services to ensure efficient HIV integration. In 2016, 98% of pregnant women and 85% of their male partners who attended ANC were tested for HIV; among HIV positive women, 99% were on ARV.[32] These data are confirmed by SIMS assessments indicating high rates of testing for pregnant women, partners and their exposed infants as well as effective linkage to HIV care and treatment for identified HIV-infected infants.

FY16 results identified gaps in retention of pregnant women and adolescents with rates of 86 and 87% percent, respectively, compared to 93% for the general adult population. During COP17, PEPFAR will work with implementing partners to implement retention strategies with specific focus on pregnant women and adolescents, including the use of peer educators, phone and SMS messaging, and home visits to reduce lost to follow up and improve linkage.

APR16 data indicated viral load (VL) suppression among PEPFAR-supported PLHIV was 86% for pregnant women compared to 93% for the general adult population. In COP17, Rwanda will initiate a revised monitoring strategy of VL for pregnant and breastfeeding women. The proposed algorithm will be validated by the national TWG and recommends that each HIV positive pregnant woman initiated on treatment receive a baseline VL at enrollment. In order to assure VL suppression prior to delivery, all HIV positive pregnant women on ART with VL results older than 3 months at ANC enrollment will be retested. Thereafter, VL will be monitored every six months until breastfeeding stops.

Emphasis will also be put on reaching and testing high risk mothers and their infants, especially FSWs, to minimize risk of new MTCT infections. PEPFAR will continue to support comprehensive Option B+ in 163 facilities offering a core package of services, which include counseling and testing for pregnant and breastfeeding women, male partner and family-centered testing, family planning services, linkage to VMMC, mentorship on PMTCT and early infant diagnosis (EID) related services, and mother-infant pair follow-up. Services also include ARV and opportunistic infection (OI) prophylaxis for exposed infants, safer pregnancy, nutrition and infant feeding counseling, education and support groups, PEs to support adherence and involvement of community outreach services for KPs.

PEPFAR will continue to work with implementing partners (IPs) to strengthen community level platforms for PMTCT to enhance retention on treatment and adherence. Community platforms are meant to reinforce adherence for otherwise healthy HIV-positive pregnant women initiated on lifelong ARV treatment, along with their partners and babies, and ensure adherence on treatment throughout and beyond the breastfeeding period.

[32] Rwanda National HIV Report 2015-2016

Program Area 4.5: HIV Testing and Counseling (HTS)

Rwanda has successfully closed the gap to the first 90 of the UNAIDS 90-90-90 goals through a combination of social messaging, service availability, incentives for facilities testing and community outreach. The COP17 HIV testing services (HTS) strategy reflects a transition from an emergency response, with high volumes of general testing, to a targeted program aimed at identifying the remaining HIV positives among those most at risk of infection and/or of infecting others through more efficient high yield targeted testing and active case finding.

In COP17, HTS aim to significantly increase testing efficiency through community outreach to KPs (CSWs), PPs, and the general population through targeted testing in provider-initiated testing and counseling (PITC) and voluntary counseling and testing (VCT). In addition, index/family testing will be rolled out nationally for all newly identified HIV positive individuals and confirmed for all PLHIV on ART. PEPFAR will continue to work with MOH to revise HTS-related performance-based financing (PBF) indicators to focus on increased linkages of identified HIV positives to treatment, as opposed to number of HIV tests administered. In addition, PEPFAR will support the roll-out of a national patient/client unique identification code to minimize repeat HIV testing. In COP17 PEPFAR Rwanda is targeted to identify 14,746 new PLHIV through VCT (17%), PITC (24%), community outreach/mobile (16%), and index testing (44%) across all five provinces with a focus in Kigali.

Targeted community outreach to KPs and PPs in CSW sector hotspots includes a national scale-up of PEs tailored to the specific group being reached and community outreach/mobile focused in Kigali province. Targeted VCT testing strategies will include STI pharmacy referrals and national radio campaigns to encourage individuals who have STI symptoms, have been a victim of SGBV (with referrals to SGBV one stop centers), or have had sex with HIV positive partners or multiple sex partners to seek HIV testing through VCT in clinics. Given the high correlate between HIV prevalence and highest quintile of wealth, as well as being sexually active and high engagement in commercial sex, young women and men on university campuses in Kigali will be offered HIV testing through campus wide drives and Anti-HIV Clubs using targeted testing for STI or risk behaviors. Self-Testing will be piloted in this group to determine if a higher testing coverage can be achieved in this hard to reach group, especially among young males. Targeted PITC testing will be initiated though development of a screening tool for all patients reporting STI symptoms, forced sex, multiple sex partners or sex with an HIV positive partner. In addition, facilities, using FETP resident epidemiologists, will undertake a comprehensive review of all PLHIV on treatment to confirm family and (multiple) partner testing. HIV patients coming for clinical, pharmacy or ANC services will be screened for new sex partner(s) and family testing.

Given the high correlate between HIV prevalence and highest quintile of wealth, as well as being sexually active and high engagement in commercial sex, young women and men on university campuses in Kigali will be offered HIV testing through campus wide drives and anti-HIV clubs using targeted testing for STI or risk behaviors. Self-testing will be piloted in this group to determine if a higher testing coverage can be achieved in this hard to reach group, especially among young males.

In order to identify HIV demographic and behavioral risk factors, newly tested HIV negative and positive individuals will be surveyed using a tool collecting sexual partner data and demographic and behavioral risk data for active case tracing and identification of HIV risk factors. Recency testing of new HIV positives will inform the identification of social networks and demographic and social risk

factors related to recent infections. COP17 will include the implementation of a unique patient identifier (UPI) in PEPFAR sites, allowing HIV testing data to be linked directly to an individual client. In addition, the electronic case-based surveillance system, developed in COP16, will be implemented in 10 facilities in CSW sector hotspots in Kigali to improve the efficiency of active case finding and monitoring of PLHIV testing and linkage to treatment. HTS interventions will be monitored through quarterly site visits, monthly data reporting and monthly joint prevention IM/MOH meetings to inform program strategies.

In COP17, effective implementation and quality improvement in HIV rapid testing will continue to ensure all testing sites provide reliable and accurate results through the implementation of the Rapid HIV Testing Quality Improvement Initiative (RTQII) and reduce commodity costs. PEPFAR will support the National Reference Lab (NRL) to continue producing and distributing rapid HIV proficiency test panels, provide feedback and ensure corrective actions are taken and lab technician capacity is built.

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

[REDACTED]

To ensure adherence support services for patients under DSDM, PEPFAR worked with MOH's national HIV program to develop a national peer educator (PE) led community support program. The package of community services includes sensitization and referral for HIV testing, patients support groups for adherence and linkage, and retention services. These support groups will be held at the discretion of group members and at the village level led by a PE. Furthermore, PEs will conduct home visits targeting patients who drop out of care or need more support. PEs will also compile and submit monthly reports to the social workers at facilities. All community based support services will be complemented by facility based psychosocial support with social workers. Based on the patient categorization, the community support component will focus on stable patients who will be coming to clinic less frequently.

FY17 Q1 data, SIMS data and data from other clinical visits show slow progress in patient categorization as stable or unstable, with delays in VL results turnaround time a primary contributing factor. Based on information from the field, PEPFAR will work closely in COP16 and COP17 with implementing partners to accelerate progress in DSDM implementation and community support services to ensure linkage and adherence services. Emphasis will be put on Kigali and Southern provinces with marked lower ART coverage and higher unmet need for ART treatment.

In COP17, PEPFAR will continue to support a comprehensive package of clinical services, including clinical assessment and monitoring, nutrition assessment and counseling, TB prevention, screening and management, positive health dignity and prevention (PHDP) services, and support groups for children and adolescents. This package of services will be the same in all PEPFAR-supported sites in all provinces. PEPFAR will strengthen the linkage to care of OVC and DREAMS-like beneficiaries, as well as KPs and PPs identified through PEPFAR's prevention program. Rwanda's OVC program plays an important role in identifying beneficiaries, identifying and validating volunteers for caregivers, providing home visits, accompaniment to clinical services, and participation in household economic strengthening (HES) and food security activities. PEPFAR will leverage these community linkages to strengthen enrollment in and adherence to treatment.

PEPFAR and GOR will leverage three existing community service platforms – OVC programs, PEs and community PLHIV associations – to improve testing yields among OVC beneficiaries, treatment adherence, and mitigate stigma and discrimination, while emphasizing knowledge and observation of clients' rights. Support groups and peer education in the communities will be strengthened to provide assistance for treatment adherence. In order to cater to priority populations on treatment, approaches will continue to be strengthened including clinical services reorganization for adolescents with special days/times dedicated to address their needs, family and index testing to identify new HIV-positive children and adults, adolescents and discordant couples and task shifting to improve access and availability of services.

Program Area 4.7: TB/HIV

In Rwanda, TB prevalence is estimated at 95 per 100,000 in the general population, with nearly one in every four TB patients co-infected with HIV.[33] Nationally, HIV testing among TB patients has progressively increased over the years. From July 2015 through June 2016, 5,719 of 5,763 (99.2%) TB patients were tested for HIV. Of these, 1,429 (25%) were co-infected with HIV. For patients with HIV/TB co-infections, 1,199 (84%) were early initiated on ART and 93.9% initiated on ART at the end of TB treatment.[34]

Since 2013, ART has been recommended for all TB-HIV co-infected patients, regardless of CD4 count and clinical staging. Due to multiple drug combinations and risk of interaction between ART and TB drugs, TB/HIV patients are categorized as unstable patients under DSDM; therefore, these patients will continue with monthly pharmacy refill and clinical visits quarterly. Six months after completion of TB treatment, the patient will be assessed and re-categorized as stable or unstable.

The use of the Gene-Xpert technology to increase the accuracy of TB diagnosis among all HIV patients with presumptive TB, patients with suspected multi-drug resistant TB and for people who live in TB hotspots and crowded zones was also recommended within TB national guidelines.

In COP17, PEPFAR will continue to support MOH to implement TB active case finding (ACF) among PLHIV. In health facilities where there is a high prevalence of HIV, ACF strategies include using symptoms and CXR as screening tools and Gene-Xpert for TB diagnosis. Policy currently exists to provide TB Prevention Therapy (TPT) to children with TB contact; however, there is no current policy to provide TPT to adult PLHIV due to the lack of strong evidence, lack of sensitive TB screening tools accessible at all levels and Rwanda being a low TB prevalence country. During COP17, the PEPFAR country team will continue discussions with MOH to strengthen the National Policy for TB Screening to address barriers such as availability of sensitive screening tools.

As part of COP17, PEPFAR will continue to support existing TB prevention, screening, and treatment services among PLHIV as core activities provided at all health centers, district, provincial, and referral hospitals, using the one-stop TB-HIV model. HIV testing and initiation of ARVs for HIV-positive TB patients are provided at all health facilities. Similarly, all HIV patients are screened and treated for TB at HIV clinics as part of the integrated model. In addition, PEPFAR will continue to support intensified or Active TB case finding (ICF), TB infection control (IC) interventions, fine needle aspiration, and digital X-ray machine and in-service trainings on HIV/TB management. The TB/HIV program

[33] First Tuberculosis Prevalence National Survey Report, 2015
[34] Rwanda National TB Report, 2016

anticipates utilizing community volunteers identified as PEs for identification and referral of "coughers" to the nearest health facility and to reinforce adherence to treatment. Further, these PEs will facilitate access to services for hard to reach populations, such as Key Populations and children under five.

During COP17, PEPFAR will work with the MOH to strengthen community services with emphasis on the community linkage for TB/HIV patients to support DSDM implementation. Community support services include TB screening by PEs, adherence support for TB/HIV co-infected people, linkage and referral to care and directly observed treatment (DOT). Based on current targets and anticipated TB/HIV patients, there are no expected stock outs in COP17.

Program Area 4.8: Adult Treatment

Adult ART services remain core to the HIV program in Rwanda. As of FY17 Q1, there were a total of 178,502 PLHIV currently on treatment. 92,882 of these (52%) are supported by PEPFAR in 192 facilities in 28 of 30 districts. In COP17, PEPFAR aims to reach 14,746 new on treatment. *[REDACTED]*[35] [36] When program treatment data is disaggregated by age, a reduction in retention is observed in pregnant women and adolescents 15-19 years (86% and 86%, respectively). Likewise, a reduction in VL suppression is observed in pregnant women due to a 24% reduction in receipt of VL results. *[REDACTED]* After the implementation of Treat All, the rate of new on treatment is a directly rated to the rate of new HIV positives identified, whereas Treat All focused on pre ART.

SIMS data indicates that facilities have completed approximately 40% of the necessary patient categorization and visit synchronization under DSDM. This delay is likely due to delays in VL results being received. It is anticipated that categorization will be completed by July 2017. Facility based services are complemented by community support services led by PEs to ensure adherence and retention. PEPFAR will reinforce community support services through enhanced coordination with Rwanda's network of PLHIV, PEs and OVC/DREAMS platforms to ensure treatment linkage, adherence and retention. PEPFAR will address healthcare stigma and discrimination through provision of in-service trainings to health care providers. Prevention partners and community volunteers will be utilized to improve linkage with clinical services and their relationships within the community to facilitate and improve access to services for hard-to-reach populations.

[REDACTED]

In COP17, PEPFAR will continue to support 192 facilities. Yield and volume analysis showed that 56% of sites contribute to 80% of the ART volume. Services offered at these sites include clinical assessment and monitoring, ARV treatment, ARV toxicity and resistance monitoring, TB and opportunistic infection (OI) screening and management and adherence counselling with community outreach services for KPs to improve retention. Other areas of focus for COP17 are improved retention of pregnant women and adolescents, as well as viral suppression for children <15 years of age, as indicated by APR16.

[35] *[REDACTED]*
[36] *[REDACTED]*

VL turn-around time will be improved through the implementation of a decentralized sample referral and transportation system linking HF to the nine VL/EID testing hubs and the use of a web based Laboratory Information System. Additionally, PEPFAR will support training of health care providers at all health facilities on follow up, documentation and timely monitoring of VL results and clinical/lab mentorship to reinforce appropriate utilization of VL results to improve patient management.

PEPFAR will continue to support initiatives to strengthen systems critical to the treatment program, which include technical assistance (TA) for forecasting and procurement of ARVs and lab commodities, HIV testing QA, in-service training for improved clinical management, support of a more sustainable, centrally managed Rwanda Biomedical Centre (RBC) e-Learning Center to support RBC HIV HR clinical, lab and SI training needs as well as strengthened data systems to monitor and evaluate the new model of service delivery and program performance. PEPFAR will work closely with its implementing partners to monitor implementation through regular SIMs visits, monthly data review and monthly joint Prevention/C&T partner meetings to inform programs.

Program Area 4.9: Pediatric Treatment

Over the past years Rwanda has made remarkable progress in PMTCT and ART coverage among the general population. With the implementation of the Option B+ strategy, HIV mother-to-child transmission has dropped significantly and remained below 2% for the last three years. The Rwanda 2015 DHS provided the first national measure of pediatric prevalence, estimated to be 0.2%. There is currently no program data measuring the percent of pediatric PLHIV who know their HIV status. The UNAIDS EPP/Spectrum 2015, using a prevalence of 0.2%, estimated pediatric ART coverage in Rwanda to be 85%. *[REDACTED]* Intensive case finding of HIV-infected children through key services, including family testing, will continue to be the focus to increase pediatric coverage of care and treatment.

Rwanda's COP17 strategy will take into account program data, 2015 DHS prevalence data and RAIHIS 2014 adult incidence data to revise pediatric targets and strategies with a strong focus in Kigali. Although pediatric PITC is implemented across all sites, PEPFAR will focus on improving the efficiency of HIV case finding among children through targeted pediatric PITC at all relevant entry points, testing all children presenting with symptoms of HIV, TB, or malnourishment and screening all children receiving OVC/DREAMS-like services through the development of an HIV risk assessment tool. In addition, targeted pediatric testing will be implemented through a comprehensive index/family testing strategy.

Routine family testing for all adults testing HIV positive is part of screening in health clinics nationally but not in ANC. In COP17, PEPFAR will work with MOH to expand family testing in all ANC services nationally. In addition, medical records of all PLHIV in treatment, including CSWs, will be reviewed to identify HIV positive adults whose children have not been tested. At all sites, the program will strengthen EID for HIV-exposed infants by strengthening DNA PCR capacity and sample referral systems for laboratory services.

While children living with HIV under age 5 were all previously eligible for ART, under Treat All children aged 5 to 14 living with HIV were enrolled in care and initiated on ART regardless of CD4 count or clinical staging. This has contributed to an increased proportion of children with HIV who are on ART. Under DSDM, all children under 15 years are categorized as unstable and will continue

with monthly pharmacy refill and quarterly clinical visits. However, Rwanda will strengthen the community HIV services platforms to improve linkage and retention in treatment and adherence for all PLHIV including children born to KPs.

Data from SIMS in FY16 and FY17 Q1 highlights gaps in the documentation of pediatric growth monitoring, adherence to treatment and facility-community linkages. These gaps will be addressed in COP17 through the training of health care providers, clinical mentorship and Continuous Quality Improvement initiatives. In FY18, sites with identified gaps in FY16 and FY17 will be prioritized for SIMS visits to strengthen the quality of services and increase partner performance.

At the community level, PEs and OVC community volunteers will mobilize and refer children to health facilities for HIV services. Facilities will also work with community structures including support groups and PEs for adherence support promotion and retention in care. Outreach interventions including mobilized children testing will be organized to promote access to services for children of CSWs and OVC.

APR16 program data shows viral suppression of under 15 year olds to be significantly lower than that of adults (76% vs. 91%, respectively). Pediatric ART adherence will be strengthened through pediatric clinical mentorship and supervision, development of youth corners at all PEPFAR supported sites and strengthened community based support services targeting children and adolescents. The pediatric package of core services includes improving TB diagnosis, adherence assessment and support, HIV disclosure, growth and VL monitoring and provision of adolescent friendly health services covering issues related to school, adherence, SRH and stigma. Routine VL monitoring is recommended for all children and adolescent receiving ART every 12 months. Given the higher risk of treatment failure and lack of data on HIV drug resistance among children under 15, strategies to improve adherence and retention will include HIV status disclosure for children and adolescents, enhanced quality counselling and strengthened community services, particularly for children of CSWs.

PEPFAR supports MOH in improving national pediatric ARV forecasting and procurement. In FY18, PEPFAR, jointly with MOH through the GF grant, will continue to procure pediatric ARVs as laid out in the national supply plan.

Program Area 4.10: Orphans and Vulnerable Children (OVC) and DREAMS-like Programming

OVC Program

In Rwanda, the policies and objectives related to the wellbeing of orphans and vulnerable children (OVC) are captured in two national documents: the Integrated Child Rights Policy (ICRP, 2011) and NSP of 2013-18. The ICRP serves as the comprehensive child policy framework that addresses the rights and needs of children in the country.[37] This document also ensures coordination and consistency in interventions across various thematic areas and ministerial mandates. Rwanda's NSP outlines social mitigation objectives that are important to OVC and their families: (1) ensure economic opportunity and security of PLHIV, (2) protect OVC targeting school attendance >85% in the 10–14 age group and (3) reduce stigma and discrimination.

The OVC program reflects collaboration between USG, Ministry of Gender and Family Promotion (MIGEPROF) through the National Commission for Children (NCC), MOH officials and OVC partners, including INGOs and local CSOs. For example, prior SIMS assessments have identified the need to strengthen the link between facility and community services. Through the collaboration described above, these organizations developed an identification protocol to guide the enrollment process for new beneficiaries, with special emphasis on covering the gap between community and health facility-based linkages and referrals. RBC, which operates under MOH, led the development of other tools to better systematize the linkages between community and facility services. The tools are designed to ensure cross communication and coordination between the two levels of service. Additionally, OVC partners have begun entering formal, non-binding collaborations with local health facilities to establish integration of processes, including periodic communication, that link community and facility services in their daily operations.

The OVC program in Rwanda is implemented by four partners: one international NGO (Global Communities implementing Twiyubake) and three local CSOs (AEE implementing Ubaka Ejo, FXB implementing Turengere Abana and Caritas Rwanda implementing Gimbuka). In FY16, the IPs met their targets, serving a total of 139,858 OVC against the target of 129,542 (108%). However, at the district level, there were discrepancies in achievement levels. There was overachievement in FY16 in low HIV prevalence districts for local CSOs, due to the fact that IPs were not able to graduate beneficiaries as planned, mainly due to a prolonged drought and to avoid doing harm. However, graduating beneficiaries from PEPFAR support within CSOs in those districts with low HIV prevalence is expected to be completed by September 2017. Global Communities was not able to meet their targets in Kigali city and neighboring districts due to high mobility of urban households. The list of most vulnerable children (MVC) from GOR that was used to enroll beneficiaries needs to be updated to match urban mobility. Another key challenge was related to the sampling for the Twiyubake Impact Evaluation – the program could only enroll beneficiaries in the treatment sectors.

During COP 16 implementation, key challenges related to policy or guidelines changes that have impacted the OVC program include the following: (1) the school feeding policy introduced to improve school attendance is considered an additional cost by OVC implementing partners and care givers that

[37] The policy aims to strengthen families, provide a family environment for all children, and ensure universal access to education and health services. It emphasizes children's participation; protection from abuse, violence and exploitation; priority for children without discrimination; and accountability of GOR and non-State actors to ensure the respect and human rights of children.

was not foreseen; (2) the community health insurance scheme (*Mutuelle*) previously had flexibility for each supported OVC student to pay 3,000 Rwandan Francs at school. With the new policy, premiums have to be paid in the community for the entire family, making it too costly for OVC partners and caregivers to support.

In COP 17, the OVC program in Rwanda will be implemented in all five provinces in thirteen districts that were identified as having the highest HIV prevalence in the country and highest burden in terms of MVC. However, with the implementation of DREAMS-like activities using the OVC platform, another district in the Southern Province (Nyanza) will be added due to the fact that it has the second highest HIV prevalence (4.4%) among young women. This means that the OVC implementing partner, FXB, instead of exiting this formerly maintenance district will continue operating there using its OVC structures to reach AGYW with a core package of services. The OVC program will continue implementing a case management approach and the services provided will continue to include access to health services, child protection, violence prevention and response, household economic strengthening, food security and nutrition, WASH, education support, parenting and psychosocial support.

To achieve results towards epidemic control and HIV impact mitigation, the strategic approach in COP17 will be (1) conducting HIV risk assessment among children and adolescents under 18 (2) targeted testing referral for specific OVC subpopulations considered to be at risk of HIV infection (e.g., children who are malnourished, offspring of HIV-positive parents, in child-headed households, and adolescents), (3) continued integration of prevention programs, with emphasis on the unique needs of adolescent girls and young women, (4) continued use of community volunteers to better link with clinical services, support adherence and facilitate access to services for hard to reach populations; and (5) community mobilization/norms change; and (6) enrollment of approximately 5,500 new beneficiaries, focusing on Kigali.

In COP16, the OVC program is reaching 121,229 OVC beneficiaries in all five provinces, 25 districts and 220 sectors. In COP17, the program will be implemented in only 13 districts targeting 90,948 OVC beneficiaries. This number includes 85,811 existing and 5,137 new beneficiaries. In addition to OVC_SERV, the OVC program has also targeted 52,167 for the new OVC_HIVSTAT indicator (including 41,175 OVC and 10,992 AGYW under DREAMS-like) for beneficiaries under age 18.

DREAMS-Like Programming

In COP17 Rwanda will receive $5 million to implement the DREAMS-like program, whose overall aim is to prevent HIV transmission among Adolescent Girls and Young Women (AGYW) by empowering them to make informed decisions about their sexual health and wellbeing. The DREAMS-like program will be implemented using the OVC platform and will target 28,000 AGYW in 5 districts, including the three districts of Kigali City (Gasabo, Kicukiro, and Nyarugenge), Nyanza in the Southern Province, and Rwamagana in the Eastern Province. Geographic prioritization is based upon districts with the highest HIV prevalence among young women, highest teen pregnancy and sexual violence rates, and the highest number of Most Vulnerable Children (MVC). An estimated 1,000 male sexual partners of AGYW will be identified through different community platforms and referred for HTS services and VMMC. The number of male sexual partners is derived from an estimated 10% of 10,000 AGYW, which includes 10% of the 15-17 year olds and all the 18-24 year olds.

DREAMS-like program beneficiaries will include 3,506 eligible adolescents that will be drawn from the OVC program in the 5 DREAMS-like districts. These, plus 24,494 AGYW from outside the OVC program will receive an enhanced need based and age appropriate package of services consistent with the standard PEPFAR DREAMS program. The package of services includes violence prevention and post-violence care, HIV and STI prevention, youth-friendly sexual and reproductive health care, household economic strengthening, social asset building, community mobilization/norms change, and keeping girls in school, and will be tailored to three AGYW age bands (10-14, 15-19, and 20-24). The majority of the DREAMS-like target beneficiaries (80%) will be adolescents aged 10-19 (see table 4.1.6). In Rwanda, sexual violence and HIV prevalence are highest among young women aged 20-24. Targeting adolescent girls under 20 years old, therefore, is intended to provide them with the necessary support and equip them with knowledge and skills before they reach the most vulnerable stage of their life. The program will also support AGYW that have survived sexual and gender-based violence.

The DREAMS-like program in Rwanda will address AGYW's HIV risk by layering evidence-based interventions implemented by one international NGO (Global Communities) and three local Rwandan CSOs (AEE, Caritas, and FXB) in the 5 target districts. The four implementing partners (IPs) will carry out the same set of interventions except condom distribution, which will be done by only FXB. The other three IPs will educate the AGYW on condom use and refer those in need to the nearest distribution points. Rwanda will adopt and/or adapt DREAMS best practices and evidence-based tools and curricula. For example, the Girl Roster, an individual census tool developed by the Population Council and used to identify those that are "off- track," including the most at-risk and hardest to find, will be used to enroll AGYW in the 5 target districts. Rwanda's DREAMS-like program will also use CDC's Families Matter Program (FMP) curriculum to promote positive parenting practices and effective parent-child communication about sex-related issues and sexual risk reduction.
During the first year of DREAMS-like implementation in Rwanda, targets will be reported under OVC_SERV and will not include reporting under PP-PREV. Like OVC, the AGYW population to be reached in Rwanda remains the most vulnerable population. As the OVC_SERV indicator has a broader definition than PP_PREV it will more accurately capture the package of services provided in this context.

Finally, both the OVC and DREAMS-like programs will be implemented in 14 districts (overlapping in 4) and will reach 115,442 beneficiaries, including 90,948 who will receive traditional OVC services and 24,494 DREAMS-like services. At the intersection of the two programs will be 3,506 eligible OVC who will receive the DREAMS-like package, bringing the total targeted AGYW to 28,000.

Program Area 4.11: Addressing COP17 Technical Considerations

During the COP17 planning process, the PEPFAR Rwanda team conducted a systematic review of PEPFAR program data as well as existing national epidemiological data from different sources such as the FSW BSS 2015, MSM BSS 2015, 2015 DHS, and RAIHIS 2014 to identify the geographic areas and populations with greatest unmet need. The COP17 planning process also involved the review of site level yield and volume data. FY16 results showed a relatively low retention rate among pregnant women compared to other adult populations in care and treatment. In addition, adolescents showed low VL suppression. Results from the FSW BSS 2015 show a 45.8% national HIV prevalence (51% in Kigali) among FSW compared to the national adult prevalence of 3%. Although more than 90% of FSWs report having been tested for HIV, only 78.4% report being on ART.

In COP17, PEPFAR will support implementation of evidence based combination prevention interventions in all five provinces of Rwanda with a focus on the province of Kigali. The purpose of these interventions will be to prevent infection and interrupt HIV transmissions among FSWs and their clients, MSM CSWs, adolescent girls, young women under 25, and young men under 30. PEPFAR will continue to support KP and PP prevention interventions in health facilities and in hotspot sectors with more than 50 CSWs in all five provinces of Rwanda. Key interventions include provision of HIV education and risk reduction counseling, promotion and distribution of condoms and lubricants, VMMC, STI education, screening and treatment, reproductive health and family planning, PMTCT, SGBV prevention and response and social impact mitigation, including OVC.

Moreover, PEPFAR will support the provision of adolescent friendly health services covering issues related to adherence, sexual reproductive health and HIV risk avoidance through DREAMS-like interventions. In addition, PEPFAR will continue supporting implementation of strategies to optimize case-finding, improve testing yield and linkage to treatment. The COP17 testing strategies include national index/family case testing of new and enrolled PLHIV, optimized PITC, community outreach/mobile testing for KPs and PPs and VCT. PEPFAR will continue working with implementing partners to retain patients on ART and achieve viral suppression. Retention strategies will focus on pregnant women and adolescents, children and KPs as well as include the use of community support services led by PEs, group support, phone and SMS messaging and home visits to reduce lost to follow up. In addition, Rwanda will implement a self-testing pilot with university students in Kigali.

Program Area 4.12: Commodities

In COP17, PEPFAR will contribute to commodity purchases outlined in Rwanda's national HIV supply plan as well as ensure commodity availability for PEPFAR treatment targets in order to support the intensive targeting of new PLHIV on treatment. GOR's Medical Procurement and Production Division (MPPD) is expected to procure the remaining HIV program commodities using Global Fund funding. In COP17, PEPFAR will procure anti-retroviral drugs (ARVs), rapid test kits, voluntary medical male circumcision kits, hematology, biochemistry, CD4, HIV rapid test kits, VL, and other lab commodities. In an effort to adjust to a declining funding envelope, PEPFAR has phased out support for opportunistic infection drugs (OIs) and hepatitis diagnostics and treatment this year, and reduced levels of support for hematology and biochemistry. Under Rwanda's Treat All policies, the need for CD4 testing is reduced, and PEPFAR will support CD4 for patients who are new on treatment and also those failing treatment in PEPFAR-supported sites.

As outlined in the Rwanda Biomedical Center and MPPD distribution plan for multi-month prescribing (MMP), existing ARV stock at district pharmacies and service delivery points was distributed for the initiation of stable patients. The additional $3.6 million in COP funding for MMP-specific ARVs (centrally funded "bolus funds") was utilized to replenish ARV stock levels to their normal minimum/maximum - as was planned and approved in COP16. As of April 2017, $3.2 million of the additional MMP-specific ARV funds has been expended to procure the replenishment of ARV stock. The remaining $400,000 has been applied as pipeline for COP17.

The Rwanda Coordinated Procurement and Distribution System (CPDS) conducts quarterly supply plan reviews by disease program to monitor stock levels and avoid stock-outs and expiries. In FY18, CPDS's process will help to alert the GOR/USG team to any possibility of stock out and to then explore

funding options. PEPFAR will work with GOR to explore other funding options – moving up shipment dates, swapping shipments with those planned for the following year, or trading shipments across countries – to obtain any needed ARVs. No service-delivery point stock-outs of ARVs or other commodities are expected in FY18. When there are items that have stock below minimum levels at Central Medical Store, District Pharmacy or service delivery point levels, PEPFAR works with its procurement implementing partner and MPPD to speed up orders and redistribute existing stock within the system.

Program Area 4.13: Collaboration, Integration, and Monitoring

COP17 is building on the vision of Rwanda's Extended NSP of 2013-2020. PEPFAR's COP17 priority is to continue to strengthen the HIV cascade of care in Rwanda with a focus on the first 90 of the UNAIDS 90-90-90. Program priorities for HIV testing include national policy transformation from blanket HIV testing to targeted testing and active case finding and self-testing. Treatment priorities include improving linkages to services, support to Treat All and DSDM, MMP, adherence support and improved VL monitoring. Other funders, such as the Bloomberg Health Initiative, are supporting human resources for health and health data initiatives, which are being integrated into the Rwanda NSP.

During the past two years, PEPFAR has undertaken increased monitoring of on-going and innovative strategies. Through close scrutiny of program testing data and collaboration with Emory University's Project San Francisco, the strategy of KP outreach to CSW clients has been modified to increase testing yield (2.5%) in FY17 Q1. Changes in clinical and pharmacy visits triggered by the implementation of DSDM and MMP are being closely monitored on a monthly basis, through routinely-collected and enhanced indicators, for impact on efficiencies on health care provision and effectiveness on treatment adherence and viral suppression. In FY16 Q4, TX_NEW demonstrated a dramatic increase (332%) of new PLHIV on treatment. These data indicate PEPFAR's partners are keen to adapt and adopt new initiatives such as Treat All, DSDM, and MMP.

Using guidance from the Rwanda NSP, COP17 will focus on improving the HIV cascade of care in Rwanda. COP17 will launch joint monthly meetings with MOH and all prevention and treatment partners to review data and modify methods to maximize results across the program. CDC, DOD and USAID are collaborating closely to ensure maximal linkage to testing and treatment of all OVC/DREAMS-like beneficiaries. In addition, the CDC prevention partner will collaborate closely with the USAID Education Program, Huguka Dukore, as well as GOR youth platforms to reach vulnerable AGYW and their young male partners in sector hotspots through targeted testing and linkage to treatment.

Leveraging previous PEPFAR investments in information technology, the case-based surveillance system is integrating previously deployed e-health record systems (EMR), health information exchange systems (RHEA) and routine data collection systems (RHMIS) to develop an effective HIV active case finding and longitudinal case surveillance system. HRH initiatives have launched on-site mentorship programs that have been utilized to efficiently and effectively implement Treat All, DSDM, and MMP. In addition, PEPFAR plans to support GOR in the development of an integrated eLearning platform to more efficiently meet staff training needs. COP17 supports continued improvements in lab quality and turn-around-time in the national and provincial reference laboratories.

USG staff will liaise regularly with the GF regional supply chain backstops to ensure a coordinated approach to commodities procurement and technical assistance. During the GF's February 2017 visit to Rwanda, USG and GF agreed to increase communication and coordination, particularly as Rwanda adapts to new GF procurement parameters under the new round of grants expected to be negotiated by the end of 2017.

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

In COP17, PEPFAR will focus its program activities in the five provinces of Rwanda (Kigali, North, South, East, and West) with each of these designated for scale-up saturation, implementing scale-up activities, as described in Section 4 of the SDS, *above*. The expectation is that by focusing at the provincial level in scale-up activities, Rwanda can work to achieve attained status in all but one of the provinces' adult sex and age subgroups by the end of COP17 implementation, and in the final adult subpopulation of males age 25+ in the North in COP18. Determination of pediatric saturation requires improved estimations for pediatric PLHIV.

6.0 Program Support Necessary to Achieve Sustained Epidemic Control

6.1 Critical Systems Investments for Achieving Key Programmatic Gaps

Although Rwanda has made considerable progress in diagnosing, treating and achieving viral suppression in PLHIV and COP16's year one activities have advanced the goal of achieving epidemic control, challenges persist in identifying and bringing into the cascade the remaining undiagnosed PLHIV. A targeted focus on KPs and PPs continues in order to reduce the incidence of new infections.

In COP16, PEPFAR Rwanda identified the following programmatic gaps that present barriers to achieve sustained epidemic control:

1. Inadequate supply chain management capacity to ensure commodity security; and
2. Need for improved targeting strategies to understand source of new HIV infections, reaching new positives, linking them to treatment, and increase number of PLHIV with VL suppression

Inadequate Supply Chain Management Capacity to Ensure Commodity Security

In COP17, inadequate supply chain management capacity to ensure commodity security remains a key programmatic gap. Finding new PLHIV and linking them to treatment can only be successful with the right diagnostics, treatment and lab commodities in the right place at the right time and at the right price to the system. Despite progress toward reaching year one benchmarks that were established in COP16 and updated with additional clarity at the outset of COP16 implementation, significant work remains to be done. Rwanda's in-country distribution system and supply chain design enables a high level of commodity availability in health facilities, but national institutions and processes must

continue to be strengthened to ensure sufficient and reliable supply of products in the right place at the right price. In COP17, PEPFAR will increase procurement capacity at the MPPD, improve logistics data for decision-making by institutionalizing the electronic logistics management information system (eLMIS), improve warehousing efficiencies with global best practices, increase capacity for MOH supply chain oversight and strengthen laboratory network capacity to manage laboratory stock and maintain equipment.

Need to Improve Understanding and Targeting of Major Sources of New HIV Positives—Identify, Reach, Link and Increase Suppression

During FY16, PEPFAR began implementing innovative targeted testing strategies, including HIV-positive partner and social network mapping and active case surveillance as well as integrated HIV testing in STI clinics, to find the populations that are key to reducing HIV transmission and infection. A revision of the national PBF policy resulted in an incremental decrease of tests given since April 2016, while targeted testing strategies increased the positivity rate (from 0.7% to 1.1%). The launch of Treat All resulted in an increase of new on treatment from 1,969 to 6,565 in one quarter (FY16 Q4). Although PEPFAR is on track to meet COP17 testing benchmarks, the need remains to identify, reach, link and keep PLHIV virally suppressed. COP17 will be an opportunity to leverage these systems approaches and investments to address gaps in the clinical cascade.

In COP17, PEPFAR plans to strengthen COP16 strategies and extend them to new populations. Targeted testing strategies will continue to reach KPs and PPs, as well as other possible high risk populations. Identifying these new populations will use multiple testing strategies such as active HIV positive case testing through a case-based surveillance system, index/family case testing for partners of newly identified PLHIV and PLHIV already in care, targeted testing of young males and females in known hotspot areas and outreach activities within existing platforms, such as Out of School Work Youth and All In, a piloted self-testing initiative to determine the feasibility of self-testing among university students, and targeted VCT and PITC testing. HIV recency testing, rapid test technology that provides information on the length of time since infection was acquired, will be utilized with new HIV positives to enable identification of current demographic, social, and behavioral trends associated with HIV infection and understand where to focus resources to interrupt HIV transmission. In COP17, further improvements in linkage to treatment and increases in VL suppression will be supported by the continued implementation of Treat All and the monitoring of DSDM systems.

6.2 Critical Systems Investments for Achieving Priority Initiative Implementations and Efficiently Measuring Their Impact

As Rwanda further implements targeted testing, Treat All and DSDM, the country must continue its efforts to build a system to cost effectively manage HIV over time, while more effectively reducing infections and treating existing PLHIV through chronic disease management. These systems remain critically important for maintaining the reduction in new HIV infections, a high rate of linkage to treatment and the improvement in VL suppression.

During COP16, human resources, laboratory, and monitoring systems were strengthened to effectively support the programmatic goals of Treat All and DSDM and the updated COP16 annual benchmarks will be mostly met. Through a careful analysis of the COP16 annual benchmarks, the PEPFAR team determined that, as stated, many of the annual benchmarks were inadequate and the team revised the benchmarks to be more measurable for COP16 and COP17. However, the key barriers remain. Minor

enhancements to the descriptions of some key barriers were undertaken to provide more clarity and provide greater precision.

Given the increased focus on finding and accurately counting new HIV infections and PLHIV on treatment, existing systems must continue to be improved to more accurately assist with targeted testing through expanding active case finding data collection and analysis, support the individual monitoring of PLHIV through the use of an effective national unique patient identifier and leverage previous information system investments and current activities to provide a more precise view of the outcomes.

Need to Improve Systems Critical to Achieve and Sustain Treat All implementation

Treat All has been launched with positive acclaim, adoption and results. COP16 was the beginning of the development of the systems to monitor the quality of program performance with regard to efficiency of testing, retention in care, drug adherence and drug resistance. Activities supported are underway and some activities are being integrated within ongoing prevention and treatment activities. For COP17, the goal is to support human resources, laboratory and monitoring systems to achieve a level from which MOH will be able to sustain and maintain the momentum achieved through this support.

Need to Improve Systems Critical to Implement and Sustain Rwanda's Differentiated Service Deliver Model (DSDM)

The focus for COP16 on DSDM was to develop policy, build human capacity and competence, produce a monitoring and evaluation system, and improve laboratory systems to have a successful impact on PLHIV. The foundations for each of these activities have been laid. Depending on the maturity stage of the activity, some of the activities are being assimilated in continuing prevention and treatment activities. The COP17 goal is to further integrate the model into additional sites, broaden the community-facility linkage, and make services more efficient and effective.

Lack of effective mechanisms to efficiently measure impact of PEPFAR investments on Treat All and new service delivery models, to focus on identification of key populations and to support data-driven decision for achieving epidemic control

As funding for HIV activities declines, having an evidence-based understanding of impact of prevention and service delivery models is essential to ensure resources are focusing on the activities that are attaining epidemic control. Through FY16 the emphasis was on the development of an integrated electronic health information system that builds on established and newly implemented systems to provide data for monitoring of activities, more precisely identify individuals and quality data in a timely manner, undertaking studies to measure impact on key populations and reduce laboratory turn-around-time. The planning, review, development and pilot-test activities are progressing. The key population studies will be completed. Data quality assessment and continuous data quality improvement activities have been transitioned to MOH.

For COP17, the goal is to build on the FY16 achievements to expand into additional sites and further develop the systems and studies to be able to provide timely, complete and accurate data, especially for KPs, PPs and other high-risk populations.

6.3 Other proposed systems investments

The intent of these systems is to address the needs associated with achievement of 90/90/90. In COP16 two systems, laboratory and commodities were identified as critical to reaching the third 90 and second 90, respectively. The laboratory activities will continue to support the attainment of internationally recognized laboratory standards in intermediate laboratories in COP17. System barriers in supply chain remain, and activities for COP17 reflect a progression of activities from those that will be completed by the end of COP16.

7.0 Staffing Plan

The PEPFAR Rwanda team is comprised of staff from the PEPFAR Coordination Office through the State Department, the Centers for Disease Control and Prevention (CDC), the U.S. Agency for International Development (USAID), and the Department of Defense (DOD). The PEPFAR team reviewed and assessed staff-to-program alignment within the context of sustained epidemic control. Overall, PEPFAR staff percent of time and number of FTEs are aligned to the core and near-core activities in the COP17 SDS. There is an emphasis on PEPFAR FTE-funded staff in technical areas that are key to the Rwanda COP17 approach, including clinical care and treatment, PMTCT, HTS, SI, OVC, and Laboratory.

PEPFAR agencies that are managing site-level data have staff skills to conduct necessary data analysis and interpretation as well as data application for program improvement. Overall, the estimated cost of doing business (CODB; agency management and operations) considers a variety of factors. Agencies have anticipated increased ICASS and Capital Sharing-Cost Sharing (CSCS) rates as well as staff salary increases. Agencies have found efficiencies to keep the overall CODB down to accommodate lower future PEPFAR planning levels.

CDC Rwanda currently has four vacant positions that are expected to be filled by COP17 implementation. Three of the four positions were vacated after November 2015. Filling these vacancies is critical to carrying out CDC's expanded portfolio, and all four positions are under recruitment and expected to be filled before the start of COP17. CDC will continue to reduce its staffing profile by eliminating positions and repurposing current staff to align with PEPFAR program priorities and maximize efficiencies. In COP17, CDC will abolish three existing positions and two fellowship positions. CDC will not request any new positions in the next fiscal year. In order to ensure adequate staffing and proper alignment of the staff needed for PEPFAR programming, USAID conducted a review of all staff members' position descriptions and reassessed how much level-of-effort each PEPFAR-funded position spends on each line item. As a result of these analyses and in keeping with agency and PEPFAR priorities, USAID moved four staff members from PEPFAR funding to other streams of funding. USAID has now right-sized its staffing footprint to its PEPFAR workload. With the remaining team members, USAID will be able to carry out the necessary SIMS visits. USAID does not have any long-term vacancies, any new positions, or major changes. USAID's Supply Chain Advisor resigned during COP16 implementation, and the position was reclassified and advertised. The selectee is expected to begin working with USAID as Supply Chain Advisor before COP17 implementation. DOD filled the vacant DOD Clinical Services Specialist position during COP16, which was fully funded in COP16. Beginning in COP17, Peace Corps will no longer receive any PEPFAR funds, including staff funding. No new positions are proposed for COP17 for any PEPFAR agency.

Overall, the total CODB for PEPFAR Rwanda Implementing Agencies has been reduced by 10.5% from COP16 to COP17.

APPENDIX A

Table A.1 ***[REDACTED]***

Table A.2 ART Targets by Prioritization for Epidemic Control

Prioritization Area	***[REDACTED]***	**Expected current PLHIV on ART (APR FY 17)**	***[REDACTED]***	**Target current on ART (APR FY18)** ***TX_CURR***	**Newly initiated (APR FY 18)** ***TX_NEW****	***[REDACTED]***
Scale-Up Saturation	***[REDACTED]***	**97,291**	**[REDACTED]**	**114,143***	**14,746**	***[REDACTED]***

* PEPFAR provides support to approximately 52% of all PLHIV on ART in Rwanda. TX_New includes newly initiating on ART who were identified through PEPFAR-supported testing but will receive clinical services from a non-PEPFAR-supported facility.

APPENDIX B

B.1 Planned Spending in COP17

Table B.1.1 Total Funding Level

Applied Pipeline	New Funding	Total Spend
$20,349,741	**$60,562,469**	**$80,912,210**

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	$392,470
HVAB	Abstinence/Be Faithful Prevention	$444,792
HVOP	Other Sexual Prevention	$1,904,010
IDUP	Injecting and Non-Injecting Drug Use	$0
HMBL	Blood Safety	$0
HMIN	Injection Safety	$0
CIRC	Male Circumcision	$3,319,780
HVCT	Counseling and Testing	$2,848,686
HBHC	Adult Care and Support	$841,962
PDCS	Pediatric Care and Support	$921,004
HKID	Orphans and Vulnerable Children	$5,399,860
HTXS	Adult Treatment	$13,641,709
HTXD	ARV Drugs	$17,164,897
PDTX	Pediatric Treatment	$1,454,194
HVTB	TB/HIV Care	$608,177
HLAB	Lab	$716,608
HVSI	Strategic Information	$2,385,349
OHSS	Health Systems Strengthening	$4,211,391
HVMS	Management and Operations	$4,307,580
TOTAL		**$60,562,469**

*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

COP17 planning primarily focused on PEPFAR Expenditure Analysis 2016 data to determine the required resources to sustain program activities. PEPFAR Implementing Agencies provided information on specific programmatic changes or new implementing partners to adjust unit expenditures; for example, to distinguish between differences in testing modalities (community outreach/mobile, index/family and recency) or to budget for the new DREAMS-like package of services.

Some unit expenditure calculations were adjusted to reflect how partners reported results in COP15 versus how they will be targeting in COP17. For example, there was seemingly duplication from the COP15 results for the KP program areas, given that partners report twice during the year, but often for the same people, whereas the targeting for these KP programs is only the final number at the end of the COP year. As such, we adjusted the results to re-calculate the unit expenditures for FSW and MSM, using half of the program results from COP15, which effectively increased both unit budgets. We then re-calculated MSM unit expenditure and added back in the CBTC expenditures as a weighted average to calculate the unit budget for MSM.

Section 6.0 Tables: Program Support Necessary to Achieve Sustained Epidemic Control

Table 6.1.1 Key Programmatic Gap #1: Inadequate Supply Chain Management Capacity to Ensure Commodity Security								
Key Systems Barrier	**Outcomes expected after 3 years of investment**	**Year One (COP16) Annual Benchmark**	**Year Two (COP17) Annual Benchmark**	**Relevant Indicator or Measurement Tool**	**Proposed COP 2017 Activities**	**Budget Code**	**Activity Budget Amount**	**IM**
Procurement Capacity for HIV Commodities	(1) Reduced system disruptions resulting in improved commodity availability Annually measured improvements 2016-2019	ACTIVITY WILL BE COMPLETED ~~(1.1) Improved capacity and capability of MPPD procurement function for strategic purchasing and procurement to: (i) Reduce lead-time from 9 to 6 months; and (ii) 50% of purchases made either through framework contracts or from prequalified suppliers~~	(1) Improved MPPD capacity and capability through: (i) established operational systems to perform supplier relationship management, contract management, supplier performance management, spend analysis and MPPD procurement performance management; and (ii) 80% of purchases made either through framework contracts or from prequalified suppliers	* Percentage of initially Rwanda activity-supported supply chain functions carried out by national authorities that are done without external technical assistance * Overall customer satisfaction rating for Rwanda activity services (disaggregated by customer category) * Procurement cycle time * Percentage of MPPD procurements done using framework contracts	1) Implement Procurement health check recommendations to include: (i) Establish a quality management system to reinforce control, consistency, and accountability in all processes at MPPD and to improve efficiency and effectiveness of its operations; (ii) Establish, under MPPD's procurement function, a self and supplier performance monitoring system; and (iii) Enhance the MPPD portion of the GoR eProcument system to perform efficient contract management;	OHSS	$215,361	GHSC-PSM

		ACTIVITY WILL BE COMPLETED ~~(1.2) Combined pharmaceutical and supply chain strategic plan finalized and implementation plan in place to monitor supply chain performance~~	(1.2) Year-one of implementation plan for the national pharmaceutical and supply chain management strategic plan completed		(2) Perform a quality audit for MPPD's adequacy and utilization in fire-fighting and temperature control (3) Continue with targeted local procurement of key health commodities			
	(2) MPPD able to procure efficiently essential medicines and lab commodities efficiently. Implementation of a functional Rwanda food and medicine authority	ACTIVITY WILL BE COMPLETED ~~(2) MPPD purchasing ALL opportunistic infection commodities and 50% of lab commodities~~	(2) MPPD purchasing all OI commodities and 75% of lab commodities					
Availability of reliable logistics data for decision making	(1) Integration of HMIS with eLMIS	ACTIVITY WILL BE COMPLETED ~~(1) Patient and logistics data from e-LMIS triangulated to inform quantification~~	(1) Patient and logistics data triangulated to inform quantification and supply planning	* Stockout rate at service delivery points * Percentage of stock status observations in storage sites,	1) Support MoH's design of a data control tower to integrate eLMIS with other health information system to enhance data driven interventions in supply chain management	OHSS	$320,123	GHSC-PSM

	(2.1) Improved forecast accuracy, above 85% (2.2) Reduced forecast error to less than 15%	ACTIVITY WILL BE COMPLETED ~~(2.1) 50% of service delivery points and 100% of district pharmacies utilizing the automatic order refill system (replenishment engine) to determine quantity to order~~ ~~(2.2) eLMIS data used as sole source for consumption data for quantification and supply planning~~	(2.1) All service delivery points and district pharmacies utilizing the automatic order refill system (replenishment engine) to determine quantity to order (2.2) eLMIS used as a source patient data for quantification of commodities	where commodities are stocked according to plan, by level in supply system * Absolute percent consumption forecast error, with *MAPE* and bias variants or reduce forecast error to less than 15% * Service delivery point reporting rate to the eLMIS * Absolute percent consumption forecast error, with *MAPE* and bias variants * Percentage of eLMIS functionalities utilized	(2) Support MPPD's upgrade to SAGEline1000 and migration of key functionalities from SAGE to ONE network system to further enhance eLMIS use (3) Conduct end-to-end routine data quality assessment for the commodity supply chain (4) Enable MoH to introduce a forecasting and supply planning module in the eLMIS for the efficient forecasting of commodity needs (5) Develop MoH to independently and sustainably conduct the National Quantification and Supply Planning exercise of HIV/AIDS & Lab commodities (6) Evolve the MoH to independently and sustainably review and implement of the Supply plan for HIV/AIDS & Lab commodities			
	(3) 80% of eLMIS functionalities utilized	ACTIVITY WILL BE COMPLETED ~~(3) 50% of eLMIS functionalities utilized at all levels of the commodity supply chain~~	(3) 80% of eLMIS functionalities utilized at all levels of the commodity supply chain.					
	(4) End to end real time data visibility achieved leading to minimized stock out and expiries to less than 2%	ACTIVITY WILL BE COMPLETED ~~(4) 90% of service delivery points utilizing the eLMIS for order processing, consumption data recording~~	(4.1) Advanced data analytics, visualizations, dashboards utilized for quantification and supply planning (4.2) Upgraded current MPPD's WMS to enhance interoperability with eLMIS and efficient end-to-end supply chain operations (4.3) 100% of service delivery					

			points utilizing the eLMIS for order processing, consumption data recording					
Warehouse space and operational efficiency to ensure product quality and timeliness and optimal resource utilization	(1) Optimized MPPD business processes according to warehousing management best practices	ACTIVITY WILL BE COMPLETED ~~(1.1) Assessing readiness for barcoding and determine priorities and next steps (1.2) Procurement health check (audit) for people, processes and technology at MPPD performed to establish improvement needs to achieve LEAN operations (1.3) Installation of fire suppression system~~	(1.1) Review of fire suppression system utilization to assess extent of exposure to fire (1.2) 50% reduction in stock turnover time, order cycle time and rate of expiries rate (1.3) Implementation of barcoding strategy to reduce error and time during data capturing for receipt and issues at central, district and SDP to less than 5%	* Percentage of stock status observations in storage sites, where commodities are stocked according to plan, by level in supply system * Percentage of initially Rwanda activity-supported supply chain functions carried out by national authorities that are done without external technical assistance * Overall customer satisfaction rating for Rwanda activity services (disaggregated by customer category) * Percentage of product lost due to theft, damage, or expiry, while under Rwanda activity control (product loss percentage)	(1) Empower MPPD to assess the viability of gravity flow racking equipment (2) Enable MoH to introduce barcoding system for the entire commodity supply chain to enhance real time data entry (3) Enable MoH to conduct a LEAN value chain cost analysis and cost of each supply chain function (4) Conduct an end to end Logistical Maturity Assessment (LMA) at MPPD to gauge the level of implementation of Business Process Review (BPR) recommendations in maturity of processes in comparison with international standards and their useful in planning and information flows (5) Formulate a Depot Master Plan based on LMA and BPR to achieve a LEAN operations at MPPD (6) Enable MPPD to start implementation of the Depot Master Plan to	OHSS	$206,889	GHSC-PSM
	(2) Sufficient storage space for increased volume of products	New initiative	(2) 50% storage capacity at DPs and SDPs optimized to handle MMP commodities					
	(3) Improved efficiencies in MPPD resource management	ACTIVITY WILL BE COMPLETED ~~(3) 5% reduction in MPPD's commodity expiry costs~~	(3) 20% reduction in MPPD's commodity expiry costs					
	(4) Established a LEAN cost of performing supply chain activities in the health commodity	ACTIVITY WILL BE COMPLETED ~~(4) Plan developed to conduct a LEAN value chain cost analysis ensuring costing of each~~	(4) LEAN value chain cost analysis conducted and cost of each supply chain function established					

	value chain	~~supply chain function~~			ensure LEAN in operations (7) Evolve District Pharmacies (DPs) to sustainably manage and monitor Multi Month Prescription (MMP) commodities (8) Evolve the Logistic Management Office (LMO) of the Ministry of Health (MoH) to institutionalize the Quality Management Improvement Approach (QMIA) for Supply Chain operations at District Pharmacy and Health facilities			
	(5) service delivery points and district pharmacies efficiently managing multi month prescription (MMP) for ARVs commodities	ACTIVITY WILL BE COMPLETED ~~(5.1) District pharmacies monitoring and evaluating MMP for supplying of drugs and commodities~~ ~~(5.2) Implementation of the Quality Management Improvement Approach (QMIA) for supply chain operations at district pharmacies and health facilities~~	(5) Enabled district pharmacies to efficiently order MMP commodities and monitor SDPs in MMP commodity supply chain management					
National supply chain monitoring and policy making	(1) Supply chain management governance framework established	ACTIVITY WILL BE COMPLETED ~~(1) NSCA conducted, recommendations made and specific action points for PSM defined~~	(1.1) Policy developments expected to be an integrated component of every-day business processes based on routine monitoring of supply chain KPIs (2) Institutionalized workforce development approach within the supply chain system in Rwanda through capacity building of central and DP logistics staff in advanced SP management	1) Average rating of in-country data confidence at the central, District Pharmacy, and SDP levels (data availability, accuracy and timeliness) 2) Percentage of initially Rwanda activity-supported supply chain functions carried out by national authorities that are done without external technical assistance 3) Existence of a functional logistics coordination	Support to LMO on institutionalization and supervision 1) Enable MoH to collect and analyze KPIs in SCM through a web based tool to enhance data driven interventions in supply chain 2) Conduct an advance supply chain and performance monitoring workforce development training course for key MoH and MPPD staff to create, sustain and retain a viable workforce that can support current and future efficient health commodity supply chain	OHSS	$240,314	GHSC-PSM

	(2) Key performance indicators leveraged and performance monitoring improved	ACTIVITY WILL BE COMPLETED ~~(2) National Supply Chain Strategic Plan mid-term review conducted, recommendations made and specific action points for PSM defined~~	(3) Web based tool for routine collection SC KPIs developed	mechanism (yes/no) 4) Overall customer satisfaction rating for Rwanda activity services (disaggregated by customer category) 5) Percentage of product lost due to theft, damage, or expiry, while under Rwanda activity control (product loss percentage)				
Laboratory network capacity to ensure sufficient supply chain management of laboratory commodities	(1) Adoption of laboratory harmonization policy and equipment management strategy	ACTIVITY WILL BE COMPLETED (1) ~~Dissemination of policy and training conducted~~	(1) Implementation plan for the harmonization and equipment maintenance strategies developed	* Average rating of in-country data confidence at the central, District Pharmacy, and SDP levels (data availability, accuracy and timeliness) * Percentage of initially Rwanda activity-supported supply chain functions carried out by national authorities that are done without external technical assistance * Overall customer satisfaction rating for Rwanda activity services (disaggregated by customer category) * Percentage of product lost due to theft, damage, or	(1) Enable MoH to integrate Lab logistics network with eLMIS (2) Enable MOH to monitor viral load testing supply chain (3) Enable MoH to roll out the harmonization and equioment management strategies in procurement of lab commodities	OHSS	$199,254	GHSC-PSM
	(2) Implementation of laboratory logistics network optimization plan	ACTIVITY WILL BE COMPLETED (2.1) ~~Laboratory Efficiency and quality improvement plan (LabEQIP) tool results show high utilization of all lab instruments for viral load and EID (2.2) Lab logistics network optimization plan that engages all procuring donors in progress.~~	(2) Lab logistics network optimization plan developed and in process of implementation					
	(3) POC for viral load introduced to improve HIV monitoring	ACTIVITY HAS BEEN CHANGED (3) VL testing in 9 regional hubs						

				expiry, while under Rwanda activity control (product loss percentage) * Percentage of GHSC-PSM-procured molecular instruments remained functional during the reporting period				
Inadequate access to quality condoms outside of health facilities	A financially sustainable socially-marketed condom program in Rwanda in which revenues from socially-marketed condoms covers 100% of program costs.	New initiative	Revenue from socially-marketed condom sales covers 45% of program costs	1) Partner financial reports and quarterly reports 2) Number of PEPFAR-supported socially-marketed condoms sold annually	Packaging, marketing and distribution of 16 million socially marketed condoms targeted at priority and key populations via 11,000 distribution points nationwide.	HVOP	$271,338	SFH
					TABLE TOTAL		**$1,453,279**	

Table 6.1.2 Key Programmatic Gap #2: Improved targeting strategies to understand source of new HIV infections, reaching new positives, linking to treatment, and increase PLHIV with viral load suppression								
Key Systems Barrier	**Outcomes expected after 3 years of investment**	**Year One (COP16) Annual Benchmark**	**Year Two (COP17) Annual Benchmark**	**Relevant Indicator or Measurement Tool**	**Proposed COP17 Activities**	**Budget Code(s)**	**Activity Budget Amount**	**IM**
How to identify/reach /link (KPs and PPs) as a major source of new HIV-positives	1) 95% of PLHIV know their status by 2019 2) Health facilities in newly identified hotspots are implementing HIV testing strategies specific to KPs/PPs	ONGOING ACTIVITY Provide TA support to improve existing military data systems; update data reporting tools to monitor HIV care and connected to the central data base	80% of RDF health providers trained on improving data quality	quarterly data audits on collected data number of RDF health care providers trained through in-service trainings	1) Data audits 2) Continuous data quality improvement training	HVSI	$12,750	Charles Drew University
		ONGOING ACTIVITY Provide TA and quality assurance to 7 RDF laboratories; work in collaboration with RDF medical services to maintain referral laboratory status at the Rwanda Military Hospital	60% of RDF laboratories will have reached accreditation standards for quality assurance	standard quality assurance tools as used by international accreditation organization	1) Develop SOPs on how to meet and maintain international accreditation standards 2) Conduct periodic quality assurance assessments	HLAB	$39,500	Charles Drew University

1) 100% of HIV RT use standard logbook and 95% of sites achieve 100% PT Score rate, 2) 100% certification of HIV testers and sites	ONGOING ACTIVITY 1) Tester centered HIV/RT 2) QA programs initiated at all PEPFAR supported DHs; 3) Produce and distribute PT panels to all HIV testers; 4) Distribute and monitor the use of standardized logbooks	1) Maintain PT/EQA program and use of standard logbooks to ensure 100% of HIV rapid testers use standard logbook and 95% of sites achieve 100% PT score rate 2) Scale up of the implementation of National HIV Rapid testing certification program to achieve 100% certification of testers and sites	1) Production and distribution of 2412 HIV/PT panels to 603 testers 2) Production, distribution monitoring use of standardized logbooks 3) Collect feedback from logbooks to inform collective action 4) Evaluation and certification of successful testers and sites	Support to National Reference Laboratory (NRL) to: 1) Establish national HIV testing certification program 2) Assessment and certification of 361 testers (60%) in at least 150 (60%) PEPFAR supported sites 3) Quality assurance of RT at 12 DHs 4) Produce and distribute 2412 HIV/PT panels to 603 testers 5) Provide one (1) annual onsite mentorship visits to each of the 250 PEPFAR supported facilities	HLAB	$146,000	TSSS
Reliable access and supply system for self-testing HIV kits at designated universities in the city of Kigali	New initiative	Self-testing HIV kits are available for university students in the districts of Kigali	List of HIV self-testing kits validated and approved for use on the market	1) Conduct sample collection to perform laboratory validation (lot-to-lot) of HIV self-testing kits	HLAB	$19,800	TSSS
Tools available for self-testing among university students in Kigali	New initiative	Self-testing HIV kits are available at designated universities in Kigali city	Guidelines/policy changes and communication spots on HIV self-testing approved and disseminated for use	1) Develop tools for implementation of HIV self-testing 2) Dissemination of guidelines and policy changes for implementation of HIV self-testing (i.e. publications and radio/TV spots)	HVCT	$19,000	Emory

Demand and sustained uptake of HIV self-testing among university students	New initiative	Mobilize demand and use of the HIV self-testing services at designated universities	Number of university students mobilized at different distribution points	1) Conduct mobilization of university students on HIV self-testing	HVCT	$19,000	Emory
Hotline is readily available and accessible for HIV self-testing counseling and linked to Health facilities	New initiative	Self-testing HIV kits are available for university students,	Hotline developed and readily available for use	1) Develop hotline for implementation of HIV self-testing	HVSI	$19,000	Emory
Health care workers are able to conduct index and recency testing to identify other potential positives	New initiative	Tools established for systematically conducting index and recency testing for all identified positive clients	Methodology and data collection and analysis tools are developed, disseminated and used by Health care workers and RBC for index and recency testing	1. Support to RBC to develop methodology to inform guidelines for index and recency testing. 2. Support data collect and analysis for Index and Recency testing results	HVCT	$73,000	TBD
	New initiative	Health care workers trained to systematically conduct Index and recency testing for all identified positive clients	Number of Health care workers trained to conduct Index and recency testing for all identified HIV+ and those at risk from	1) Disseminate tools and train health care workers on guidelines, SOPs, data collection and analysis tools for Index and recency testing	HVCT	$219,000	TSSS
Health care workers are able to conduct recency testing on newly identified positives at all PEPFAR sites	New initiative	Health care workers are trained and skilled to conduct recency testing in all PEPFAR supported sites for all identified positive clients	Number of Health care workers trained and recency tests performed on all new HIV positives identified	1) Develop and disseminate SOPs, data collection tools and training modules on recency testing of HIV 2) Conduct training of lab technicians on specimen management and testing for recency testing 3) Support to QA/QC, data collection and analysis for	HLAB	$292,000	TSSS

					recency testing			
	Data collection and analysis tools for M&E system to inform HIV program on risk behaviors and social network mapping for HIV+ and those at risk	New initiative	Health care workers are trained and skilled to reachout, collect and inform program on risky behavior and social network mapping of HIV+	Number of Health care workers trained and data management systems and tools established for use	1) Disseminate guidelines, SOPs, data collections and analysis tools 2) Conduct training of Health care workers at facility level for HIV+ data collection and HCT screening tools 3) Plan and implement an M&E indicators and system for reporting and analyzing collected data 4) Conduct quarterly data review meetings of health care workers and program on findings to inform program	HVCT	$475,000	TSSS
Total							**$1,334,050**	

Table 6.2.1: Critical Systems Investments to Achieve and Sustain Test and START Implementation

Key Systems Barrier	Outcomes expected after 3 years of investment	Year One (COP16) Annual Benchmark	Year Two (COP17) Annual Benchmark	Relevant Indicator or Measurement Tool	Proposed COP17 Activities	Budget Code(s)	Activity Budget Amount	IM
Inadequate implementation of continuous quality improvement (CQI) activities for HIV core tests to support epidemic control	Policy and mechanisms in place for MOH to plan and cost the national HIV program, using evidence-based interventions designed to target populations at greatest risk of	ACTIVITY WILL BE COMPLETED ~~15 FETP trainees with positions at MOH contributing to improved HIV surveillance monitoring, reporting and data use for the national program will be enrolled~~	100% of FETP trainees with positions at MOH contributing to improved HIV surveillance monitoring, reporting and data use for the national program will have completed an HIV-related project and	1) Number of FETP graduates 2) Number of FETP graduates employed by MOH	Support 8 FETP trainees in applied epidemiology and surveillance competencies to support Rwanda's HIV national program	OHSS	$116,800	TSSS

initiative	HIV infection.	~~and complete the first year of training.~~	their second year of training					
	(FROM COP16 PBACK) Regular maintenance of laboratory equipment for HIV core tests and specialized testing services will be integrated	IN PROGRESS - WILL NOT REACH FULL BENCHMARK 100% of laboratory equipment in PEPFAR supported sites performing HIV core test and specialized tests maintained in accordance to maintenance plan	100% of laboratory equipment in PEPFAR supported sites performing HIV core test and specialized tests maintained in accordance to maintenance plan	1) Preventive maintenance plan for HIV laboratory equipment developed and implemented at facilities 2) Number of annual maintenance equipment contracts signed by National Reference Lab (NRL) and district laboratories 3) SIMS CEE Test SOPs Scores 4) SIMS CEE Quality Testing Monitoring Scores	Support regular maintenance of laboratory equipment for HIV core tests and specialized testing services at PEPFAR supported sites	HLAB	$43,800	TSSS
Shortage of skilled laboratory workforce to perform HIV core tests and specialized testing (VL and EID) at decentralized level laboratories	HIV core tests and specialized tests performed by skilled staff at decentralized level laboratories	ONGOING ACTIVITY 100% of testers achieve a 100% proficiency score for VL and EID testing	100% of testers achieve a 100% proficiency score for VL and EID, Hematology, Chemistry, CD4 and OI tests.	1) Number of HCWs trained and mentored in VL/EID testing at 8 sites 2) Numbers and scores of EQA/PTs distributed to VL/EID testing sites	1) Support to NRL for mentorship and training to all lab and other HCWs involved in VL / EID sample collection. 2) Support to NRL to distribute and provide feedback on EQA/PTs participation for all VL/ EID testers	HLAB	$28,077	TSSS

	(FROM COP16 PBACK) Support the operational development of cost-effective training systems	ACTIVITY WILL BE COMPLETED ~~New HIV training system will be developed~~	New HIV training system rolled out in PEPFAR supported sites	1) Number of HCWs trained in HIV disease management using new training platform. 2) Number of HIV trainings offered for HCWs in the areas of clinical services, laboratory, and strategic information	Support Rwanda Biomedical Center (RBC) to implement electronic learning platform for HIV disease management in Rwanda.	HBHC HTXS HVCT HVTB MTCT OHSS PDCS PDTX	$146,000	TSSS
Shortage of health providers to provide prevention, clinical management, diagnosis and treatment of HIV/AIDS due to high turnover of staff at RDF sites	Increased treatment adherence and reinforce referral mechanisms between military VCT sites and prevention, care and treatment services.	ACTIVITY WILL BE COMPLETED ~~60% of staff salaries transitioned to RDF~~	80% of staff salaries transitioned to Rwanda Defense Forces (RDF)	Number of health providers who provide prevention, clinical management, diagnosis and treatment of HIV/AIDS at RDF sites	Through HSS support RDF health facilities staff including: 1 Clinical Director (Kigali), 1 Deputy Clinical Director (Kigali), 1 HIV Prevention Coordinator (Kigali), 3 staff at fixed clinic and 3 Lab Techs for fixed clinics to support RDF health providers to improve treatment of OIs, STI and TB among HIV infected military personnel and civilians receiving care at military facilities	OHSS	$125,700	DOD TBD
	Strengthen RDF capacity to manage and improve clinical activities in PMTCT, TB/HIV, Basic care and Support, TS, and ART	ACTIVITY WILL BE COMPLETED ~~Technical staff identified for training on clinical management, diagnosis and treatment of HIV/AIDS~~	All identified RDF health care providers will be trained on prevention clinical management, diagnosis and treatment of HIV at RDF health facilities	Number of RDF trained staff with capacity to manage and improve clinical activities in PMTCT, TB/HIV, Basic care and Support, TS, and ART	In-service Training to support RDF health providers	OHSS	$12,164	DOD TBD
TOTAL							**$472,541**	

Table 6.2.2: Improve Systems Critical to Implement and Sustain Rwanda's Differentiated Service Delivery Model (DSDM)								
Key Systems Barrier	**Outcomes expected after 3 years of investment**	**Year One (COP16) Annual Benchmark**	**Year Two (COP17) Annual Benchmark**	**Relevant Indicator or Measurement Tool**	**Proposed COP/ROP 2017 Activities**	**Budget Code(s)**	**Activity Budget Amount**	**IM**
Institutionalize systems within MOH to better improve planning, efficiencies, and increased ownership of the HIV program in light of funding decreases	Support the capacity building of health care providers to implement the new HIV Service Delivery Model through training of trainers, supervision, mentorship from the central-level to district hospitals	ACTIVITY WILL BE COMPLETED ~~75% of facilities achieve scores of green on SIMS Care and Treatment CEEs~~	100% of facilities achieve scores of green on SIMS Care and Treatment CEEs	Revised policies in place Revised guidelines in place HIV DSDM tools updated	Support Rwanda Biomedical Center (RBC) to conduct HIV treatment policy review, guideline and tool revisions and updates, as they apply to revising Rwanda's DSDM	HBHC HTXS HVCT HVTB OHSS PDCS PDTX	64,973	TSSS
	Policy and mechanisms in place for MOH to plan and cost the national HIV program, using evidence-based interventions designed to target populations at greatest risk of HIV infection.	ACTIVITY COMPLETED ~~Rwanda's DSDM launched~~	Rwanda's DSDM policies revised according to outcomes of initial roll out	Revisions to Rwanda's HIV DSDM policy after first year of implementation	Provide technical expertise RBC to revise to DSDM national policy based on DSDM enhanced monitoring as they apply to Rwanda's service delivery model including the HIV community service program model	OHSS	112,200	TBD
		ACTIVITY WILL BE COMPLETED ~~Rwanda's HCW learning platform developed~~	Central learning platform for HCWs in place	Rwanda's electronic learning platform policy developed	Support technical expertise to RBC to implement central learning platform policy to address efficiencies in site-level training costs for HCWs in HIV service delivery	OHSS	79,200	TBD

		ACTIVITY WILL BE COMPLETED ~~At least 50% of HCWs in PEPFAR support facilities receive C&M support in accordance to the new national clinical mentorship program~~	At least 100% of HCWs in PEPFAR support facilities receive Clinical Mentorship support in accordance to the new national clinical mentorship program	1) National HIV Clinical Mentorship Program established 2) SIMS Above Site Supervision Scores 3) SIMS Site Level HIV Quality Management/ Quality Improvement System Scores	Support technical expertise to MOH's Policy Center to develop national HIV clinical mentorship system for HCWs to improve the viral load testing	OHSS	112,200	TBD
		ACTIVITY COMPLETED ~~DSDM protocol approved by CDC~~	All data needed to monitor and evaluation the impact of the DSDM on delivery of HIV treatment will be available to inform the program	1) DSDM M&E system developed 2) DSDM M&E system implemented in all PEPFAR sites	Support technical assistance to RBC to implement monitoring and evaluation system for Rwanda's HIV DSDM	OHSS	105,600	TBD
Inadequate community strategies for linkage to care, retention and adherence general population (including children as well as for key and priority populations including children of FSWs and MSMs)	Improved strategies for linkage to care, retention and adherence general population as well as for key and priority populations including FSW, MSMs, children, adolescents and pregnant women	ACTIVITY WILL BE COMPLETED ~~Development of community program to support C&T and related tools/module~~	50% of all PEPFAR-supported sites implementing community-facility linkage and communication system to support the stable patient 50% increase in adherence and patient retention on ART as evidenced by community-facility linkage system	1) Community-facility linkage module SIMS CEE Scores for facility linkage to community care & support services for adult/child PLHIV 2) Number of PEPFAR supported sites implementing community program	Support to RBC to implement strategy to strengthen the community-facility linkage system to ensure adherence and patient retention on ART	OHSS	146,000	TSSS
(From COP16 PBACK) Strengthen sample transportation system to support HIV	Sustainable sample transportation in place	ACTIVITY WILL BE COMPLETED ~~1) Alternative VL/EID sample transport system developed~~	1) Pilot implementation of "alternative" sample transport system	Alternate VL/EID sample transport system is more cost effective, efficient and reliable	1) Support VL/EID sample transport system between NRL and VL testing 2) Implement and monitor alternate VL/EID sample transport system	HLAB	21,900	TSSS

testing with a focus on VL/EID								
Shortage of skilled laboratory workforce to perform HIV core tests and specialized testing	HIV core tests and specialized tests performed by skilled staff	ACTIVITY WILL BE ONGOING 1) 50% of laboratorians able to provide specialized lab testing at all HIV, EID, VL, CD4, HIV-DR, OI testing sites 2) 100% HIV/RT, EID, VL, CD4, hematology and chemistry, OI testers engaged in Quality Assurance and Quality Control program	100% of staff at decentralized laboratories able to provide specialized testing in accordance to QA/QC program	QA/QC program established for HIV/RT testers and for HIV, EID, VL, CD4, HIV-DR, OI testing sites SIMS CEE scores in laboratory services	1) Support to NRL for laboratorians to provide accurate reliable HIV and core HIV testing services at decentralized laboratories; 2) Support to NRL to implement Quality Assurance/Quality Control program for all HIV Rapid and HIV, EID, VL, CD4, HIV-DR, OI testing	HLAB	275,940	TSSS
TOTAL							**$ 918,013**	

Table 6.2.3: Lack of effective mechanisms to efficiently measure impact of PEPFAR investments on Test and START and new service delivery models, focus on identification of key populations and support data-driven decisions for achieving epidemic control

Key Systems Barrier	Outcomes expected after 3 years of investment	Year One (COP16) Annual Benchmark	Year Two (COP17) Annual Benchmark	Relevant Indicator or Measurement Tool	Proposed COP17 Activities	Budget Code(s)	Activity Budget Amount	IM
Limited data tracking and reporting systems to measure impact of PEPFAR investments on achieving epidemic control	Improved impact measures through the provision of electronic linkages and systems that support routine monitoring and specialized surveillance to provide quality data for decision-	ACTIVITY WILL BE COMPLETED ~~Planning, mapping and developing technological linkage for appropriate current version MER indicators to be automatically exchanged between the Rwandan EMR and~~	Implementation of automated data exchange between Rwandan EMR and RHMIS in all PEPFAR sites that are technologically equipped, and update MER indicators within system, as necessary	Internal monitoring and evaluation of EMR to RHMIS Indicator Exchange program and the review of quality of PEPFAR indicator data within DATIM	1)Assess PEPFAR sites for ability to automatically exchange data using a developed eligibility criteria developed in COP16 2) Review and update appropriate MER indicators within electronic indicator exchange program 3) Expand the updated electronic indicator exchange program to all PEPFAR sites that meet	HVSI	$73,000	TSSS

	making	~~RHMIS in selected test PEPFAR sites~~			eligibility criteria			
		ACTIVITY WILL BE COMPLETED ~~Planning, developing tools, processes, and systems, gaining CDC/CGH/DGHT protocol approval and implementing CBS active case finding for the purposes of identification and targeted testing for new HIV positives in 2-5 PEPFAR sites within pre-determined "hotspot" areas for KP and PPs~~	Building on case-based surveillance (CBS) activities in COP16, support GoR in the implementation of CBS for 1) active case finding in a minimum of 5 of 71 PEPFAR sites in pre-determined hotspot areas; 2) monitoring the status of individual patients and population-level HIV treatment in 2-5 PEPFAR hotspots; and 3) monitor sentinel events within their treatment regimen in 2-5 PEPFAR hotspots	Internal monitoring and evaluation of CBS program plan data as outlined in the CDC/CGH/DGHT protocol	1) Implement CBS active case finding in a minimum of 5 out of 71 PEPFAR sites in sector hotspots 2) Implement platform for CBS in a minimum of 5 out of 71 PEPFAR sites in PEPFAR hotspots 3) Based on plans developed in COP16, expand the CBS to include the ability to monitor individual patients and population-level HIV treatment at 5 PEPFAR hotspots 4) Expand CBS to include the ability to track and report sentinel events within individual patients' treatment regimens at 5 PEPFAR hotspots	HVSI	$299,318	TSSS
	GoR implementation of a national patient information confidentiality and security policy for electronic data and the use of unique patient identifiers in <3yrs	ACTIVITY WILL BE COMPLETE ~~Review of current GoR unique health identifier policies, establish and publish patient information confidentiality and security policy for the use of UPIDs, plan and implement a UPID algorithm and technology platform that links individual patient~~	Building on the planning and pilot implementation of the UPID in all PEPFAR sites that meet eligibility criteria, continue implementation to, and integration within, other systems such as LIS, to promote a shared medical record	Internal monitoring and evaluation of UPID program plan data	1) Evaluate current UPID implementations and adjust policies and processes, as needed 2) Expand implementation of UPIDs to all eligible PEPFAR sites, which meet the eligibility criteria determined by assessment 3) Expand implementation of UPIDs to other health information systems (e.g. LIS, RHMIS) to support a shared medical record	HVSI	$127,750	TSSS

		~~records between 2-5 PEPFAR sites within pre-determined "hotspot" areas for KP and PPs~~						
	Improve MOH's data quality management system in order to have accurate, timely and complete HIV program data, as measured by quarterly, DQA reports to > 90% green in <3yrs	ACTIVITY WILL BE COMPLETED ~~Approval by MoH of documented DQI and DQA procedures, development of a data quality site mentorship program and 2 DQAs led by the MoH at a minimum of 16 PEPFAR supported sites~~	Dissemination of approved DQI policy and procedures to all PEPFAR sites with the implementation of a data quality site mentorship program and DQAs led by the MoH at a minimum of 12 PEPFAR supported sites	Internal monitoring and evaluation of DQA/CQI program plan data and monitoring of PEPFAR quarterly data submissions	1) DQA and CQI for data in 12 PEPFAR supported sites 2) Conduct routine onsite mentorship on data quality 3) Develop data quality procedures and manuals for sites 4) Disseminate manuals and support updates and upgrades, as necessary	HVSI	$40,150	TSSS
		ONGOING ACTIVITY Rwanda EMR at appropriate PEPFAR sites to contain an electronic medical record on enrolled HIV+ patients	Adaption of Rwanda EMR to support the Treat All and DSDM data needs and through the use of integrated alerts to improve health outcomes in PEPFAR supported sites	Internal monitoring and evaluation of EMR program plan data	1) Review of data needs of Treat All and DSDM based on prevention, testing and treatment and monitoring and evaluation activities conducted in COP16, update as needed	HVSI	$65,700	TSSS
					2) Map to current data collection in EMR for Treat All and DSDM collected through paper tools 3) Make changes to EMR to collect the needed data to gather data needed to support PEPFAR monitoring activities, prevention, treatment and testing activities 4) Distribute the updated EMR to PEPFAR sites	HVSI	$146,000	TSSS

Insufficient reliable, subnational and local HIV epidemiologic data to identify key and focus populations	Improved ability to measure impact of PEPFAR investments on key populations	ACTIVITY WILL BE COMPLETED ~~Completed population size estimation for FSW by province and district~~	N/A	N/A	N/A	N/A	$0	N/A
		ACTIVITY WILL BE COMPLETED ~~Develop protocol and identify strategies to estimate unmet need~~	N/A	N/A	N/A	N/A	$0	N/A
		ONGOING ACTIVITY Approved protocol, tools and surveillance processes and conduct baseline surveillance for Test and START	Completed analysis of drug resistance after introduction of Test and START and DSDM	Completion of study report	1) Write and gain approval for study protocol 2) Conduct survey 3) Collect specimens and perform drug resistance testing 4) Analyze data (comparing drug resistance at baseline and post-DSDM) 5) Complete study report and provide recommendations to national program based on findings	HVSI	$223,000	TSSS
		ONGOING ACTIVITY Support quarterly, semi-annual, and annual HIV data review and analysis to track programmatic goals and measure progress	Support quarterly, semi-annual, and annual HIV data review and analysis to track programmatic goals and measure progress	Multiple indicators required by PEPFAR reporting	1) routine data collection 2) routine data analysis 3) routine data reporting	HVSI	$29,200	TSSS

Need for monitoring clinical outcomes when implementing more patient-centered, effective and efficient service delivery model	Demonstration that new service delivery model is yielding good clinical outcomes and system efficiencies	ONGOING ACTIVITY Approved protocol and initial implementation of study	Results from enhanced M&E of new model and modifications to service delivery model and indicators/ tools if needed	Multiple indicators as detailed in protocol	1) Implement monitoring activities 2) data collection and analysis 3) report and recommendation	HVSI	$37,182	TSSS
Delayed turnaround times (TAT) of EID and VL results to ensure that infants receive their HIV test results promptly for timely link to care and ensure that patients on ARV are timely	Reduce TAT for EID and VL test results to 2 weeks	ACTIVITY WILL BE COMPLETE ~~1) NRL LIS upgraded and maintained to host a web-LIMS~~ ~~2) BLIS implementation plan developed;~~ ~~3) 5 VL testing sites assessed for infrastructure and HR requirement~~	1) NRL LIS is upgraded and web-LIMS interface to health facilities 2) Implement Viral Load Specimen Management System (VLSMS) at VL/EID testing sites 3) BLIS is expanded to additional 21 DHs to facilitate specimen accessioning and result transmission reducing TAT. 4) Plans and systems to support interoperability between LIS/BLIS and other health info systems (EMR/ HMIS)	1) TAT of results of referred sample particularly VL reported within 7-14 days 2) VLSMS established and operational (VL Dashboard) for VL cascade monitoring 3) Interoperability LIS/BLIS and other health info systems (EMR/ HMIS) are in place	1) Support LIS maintenance at NRL 2) Support to implementation of VLSMS at 5 PEPFAR supported VL/EID testing sites for VL results delivery and cascade monitoring 3) Support for infrastructure and HR development at 21 additional DHs 4) Support extension of interoperability between EMR/HMIS and BLIS rollout to 26 DHs	HLAB	$189,800	TSSS
Limited data tracking and reporting systems to measure impact of PEPFAR investments	Improved understanding of the characteristics of Adolescent Girls and Young Women (AGYM) who become HIV	New initiative	Data collection of routinely collected data to determine characteristics of AGYM) who become HIV infected	Completion of study report	1) Write and gain approval for study protocol 2) Analyze data 3) Write study report	HVSI	$62,050	Emory

on achieving epidemic control	infected							
	Improved impact measures through the provision of electronic linkages and systems that support routine monitoring and specialized surveillance to provide quality data for decision-making	New initiative	Implement CBS active case finding activities in a minimum of 10 additional sites within identified hotspots and create tailored partner notification protocols for men <30 and young women <25	internal monitoring and evaluation of CBS program plan data as outlined in the CDC/CGH/DGHT approved protocol	1) expand geographic coverage of CBS through implementation within additional hotspots 2) develop tailored social network and partner messages to reflect sensitivities and needs of target population 3) increase case finding in target population	HVSI	$146,000	TSSS
Limited data on possible new sources of infection	Improved understanding of the attributes of individuals who are accessing PEP	New initiative	Conduct PEP cohort study	Completion of study report	Conduct PEP cohort study: 1) Write and gain approval for study protocol 2)Conduct survey 3) Analyze data 4) Compare results of DHS2015 for PEP 5) Write study report	HVSI	$73,000	TSSS
	Improved understanding of Drug Resistance before and after implementation of Treat ALL and DSDM	New initiative	~~Conduct HIV DR surveillance testing to assess impact of DSDM for Care and Treatment – additional testing beyond national practice for DR detection in first-line ART patients before and after new model implementation~~	~~Completion of study report~~	~~1) Write and gain approval for study protocol 2)Conduct survey including sample collection and DR testing beyond national practice 3) Analyze data 4) Write study report and recommendations to national program based on findings~~	~~HTXS~~	~~$150,000~~	~~TSSS~~
TOTAL							**$1,512,150**	

Table 6.3: Other Proposed Systems Investments								
Key Systems Barrier	**Outcomes expected after 3 years of investment**	**Year One (COP16) Annual Benchmark**	**Year Two (COP17) Annual Benchmark**	**Relevant Indicator or Measurement Tool**	**Proposed COP17 Activities**	**Budget Code(s)**	**Activity Budget Amount**	**IM**
Laboratory								
Inadequate continuous quality improvement of HIV core tests and specialized tests for epidemic control	NRL is internationally accredited and supporting Intermediate level engaged in activities to achieve local accreditation. Ensuring accurate and reliable identification of the 1st 90 (those infected) and accurate determination of the 3rd 90.	ACTIVITY WILL BE COMPLETED ~~1) NRL has applied for and acquired international accreditation -- all 48 intermediate labs trained at least 2 lab staff on QMS (SLMTA) 2) All intermediate lab level (hospital based labs) established QMS~~	1) All 48 intermediate laboratories have established QMS to guide implementation of CQI activities; 2) All 48 intermediate laboratories have attained at least one star score in SLMTA	1) QMS establishment at all intermediate laboratories 2) NRL has acquired international accreditation	1) Support NRL to acquire international accreditation; 2) Support implementation of improvement projects at 48 Laboratories to achieve accreditation	HLAB	$43,800	TSSS
HRH Evaluation Central Funding								
Lack of understanding of the impact of PEPFAR funding on HRH capacity on National HIV program	Comprehensive evaluation of HRH needs and impact of PEPFAR funding in addressing HRH need	New Initiative		Completed final report	Assessment of MOH HIV HRH for improved efficiencies: 1) development of study protocol 2) conduct data collection activities 3) conduct data analysis 4) completed report	OHSS	$3,000,000	TBD
TOTAL							**$3,043,800**	

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 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	Vehicles, equipment and furniture, construction and renovation for site labs, and recurrent categories from site labs such as lab reagents and supplies, travel and transport, building rental and utilities will not be included