



The Opportunity Proposition: Illustrative Country Scenarios for Accelerated Progress toward Achieving an AIDS-free Generation

Through rapid scale up of high-impact HIV combination prevention interventions, including antiretroviral treatment (ART), the global community can ultimately achieve an AIDS-free generation. One way of measuring progress toward this goal, in a country or globally, is to compare the annual number of new HIV infections with the annual increase in new patients on ART. By bringing this ratio below 1.0, through reduced infectivity and rapid treatment expansion, it is possible to achieve what many have called a programmatic “tipping point” in the epidemic. Table 1 illustrates country progress toward reaching this tipping point. Countries that achieve—and progress beyond—this tipping point lay the foundation for more successful, country-driven and economically-sustainable responses moving forward.

Illustrative modeling based on data from four countries (Zambia, Kenya, Uganda and Cambodia) demonstrate the extraordinary potential impact of bringing combination HIV prevention interventions to scale. Figures 1-4 show the estimated expected decline in the adult HIV incidence rate in these four countries under three different scale-up scenarios.

These countries are used as examples because they are generally representative of different stages of progress toward achieving an AIDS-free generation. Thereby, they help to highlight the broader implications of pursuing different policy and programmatic approaches as all countries move forward. These examples all suggest that through robust scale-up of high-impact combination prevention interventions, with support from all partners, it is possible for countries to get on the path toward achieving an AIDS-free generation in the next 3-5 years.

Table 1: Country Progress in Reducing New HIV Infections and Scaling up of Antiretroviral Treatment

Country	2011 New HIV Infections	2011 Increase in New Patients on Treatment	Ratio of New HIV Infections to Increase in New Patients on Treatment ***
Botswana	8,500	17,811	0.5
Cote d'Ivoire	13,000	6,844	1.9
DRC	46,000*	9,375	4.9
Ethiopia	11,000	40,507	0.3
Kenya	91,000	93,912	1.0
Lesotho	22,000	5,845	3.8
Mozambique	100,000	48,912	2.0
Namibia	80,000	14,539	0.6
Nigeria	270,000	56,789	4.8
Rwanda	8,400	4,083	2.1
South Africa	350,000	276,017	1.3
Swaziland	12,000	11,751	1.0
Tanzania	120,000	31,700**	3.8
Uganda	120,000	60,014	2.0
Zambia	42,000	66,479	0.6
Zimbabwe	60,000	142,155	0.4

* Official data not available for new HIV infections; data generated through internal PEPFAR modeling.

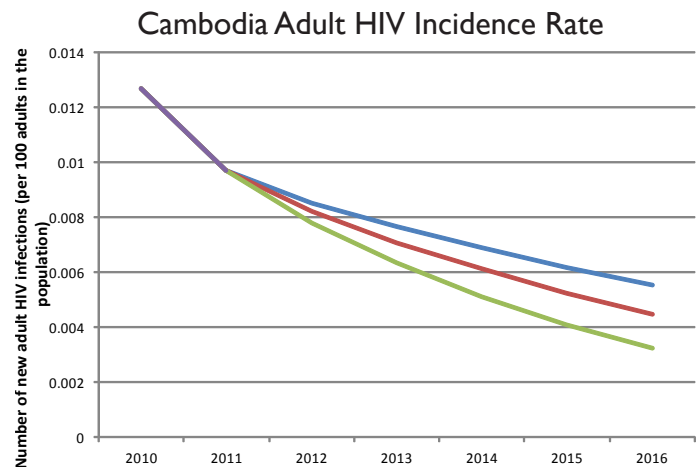
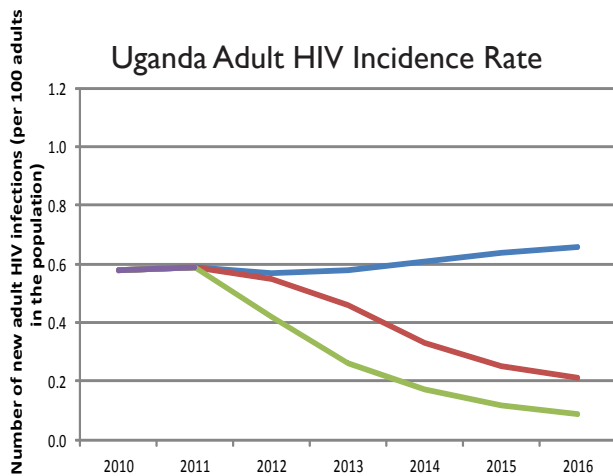
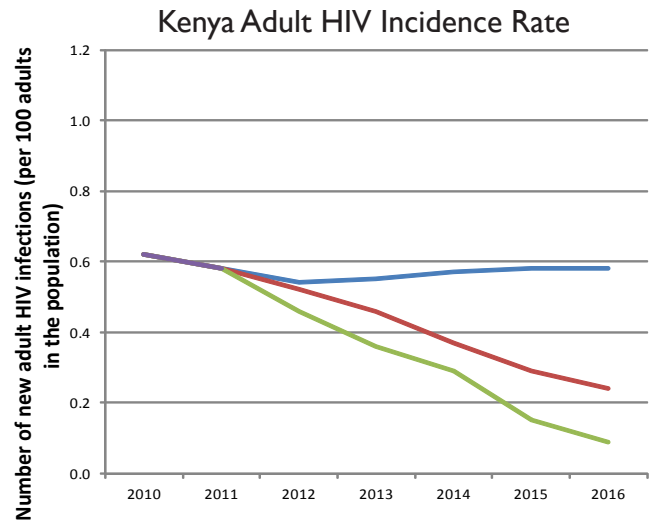
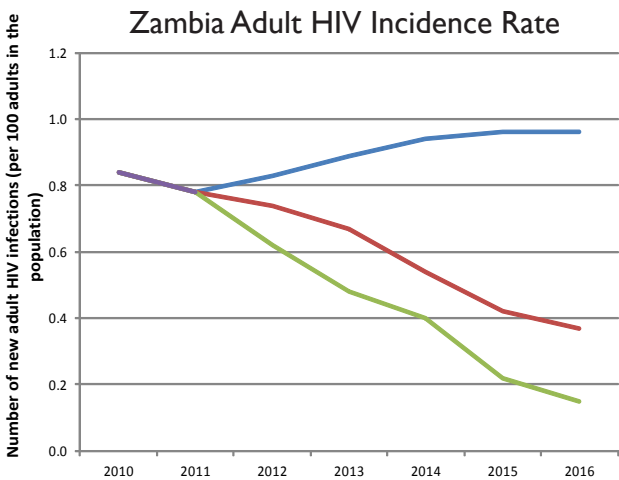
**Due to concerns about data validity, the ratio shown for Tanzania was calculated using the increase in new patients on ART directly supported by PEPFAR in 2011.

***For countries that have already achieved high ART coverage, this ratio may less accurately reflect their progress toward achieving an AIDS-free generation. In such cases, earlier ART expansion has resulted in less unmet need for ART, and thereby relatively fewer patients to be newly initiated on ART.

Source: UNAIDS 2012 World AIDS Day report/Data from WHO

In each of the figures below, the baseline scenario includes the expected impact on the adult HIV incidence rate of holding programmatic coverage steady at 2011 levels. The combination prevention with treatment scale-up (CD4 350 cells/mm³ scenario) includes the expected impact of concurrently increasing coverage rates of a combination prevention package comprising prevention of mother-to-child transmission (PMTCT), voluntary medical male circumcision (VMMC), HIV testing and counseling (HTC), condoms and ART for individuals with CD4 counts below 350 cells/mm³. Finally, the combination prevention with treatment scale-up (CD4 550 cells/mm³ scenario) includes the expected impact of concurrently increasing coverage rates of this same combination prevention package but with ART for individuals with CD4 counts below 550 cells/mm³.

- Baseline (2011 programmatic levels)
- Combination prevention with treatment scale up (350 scenario)
- Combination prevention with treatment scale up (550 scenario)

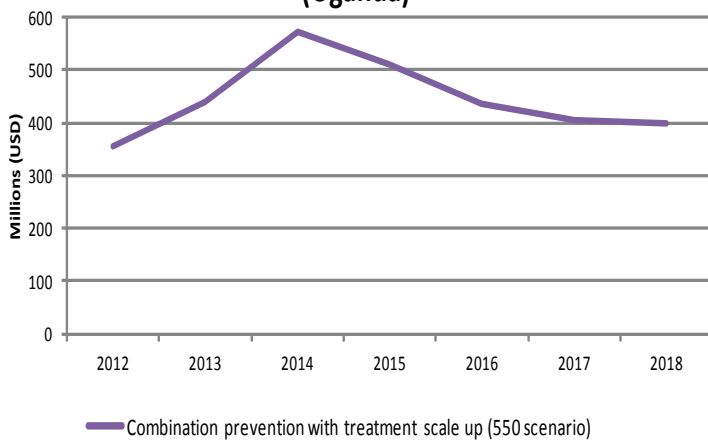


Rapid Scale up of Combination Prevention Can Reduce Resource Needs and Support Sustainability

The challenge ahead is to scale up effective combination prevention quickly enough to have a transformative impact on the epidemic and make national AIDS responses sustainable over time. This requires strategic reallocation of existing resources toward high-impact interventions, and increased and sustained investments through shared responsibility, led by countries, with support from donors and other partners. While the upfront costs associated with such scale up are substantial, these

investments do not result in ever-increasing costs. In fact, as is illustrated by the Uganda estimates in Figure 6, the impact of these upfront investments lead to a decline and then flattening of out-year costs, as fewer new services are required and the number of newly infected individuals falls substantially. Strong country ownership and optimized investments can put countries on the path toward an AIDS-free generation, and support efforts to make their AIDS responses more economically-sustainable over time.

Rapid Scale Up of Combination Prevention Can Reduce Resource Needs and Support Sustainability (Uganda)



Estimated Proportional Contributions of Core Combination Prevention Interventions to HIV Infections Averted

While the impact of individual interventions with the core combination prevention package are not easily compartmentalized—particularly given that these interventions work best when implemented in concert—it is possible to roughly compare interventions and their relative impact on averting new HIV infections. Figure 6 highlights the estimated proportional contribution of each core combination prevention intervention—PMTCT, VMMC, ART; as well as HTC, condoms and other evidence-based and appropriately targeted prevention activities (collectively represented below as “Other”)—through 2016. ART and VMMC clearly make major contributions in averting new HIV infections in each epidemic; however, there are complex interrelationships that make each core intervention important in helping each country progress toward achieving an AIDS-free generation. In particular, ongoing expansion of HTC remains vital as a gateway to successful scale up of all interventions within the core combination prevention package.

HIV Infections Averted by Intervention

