

Appendix

Figure S1. Cumulative resources required by 9 sub-Saharan countries (\$ billions) between 2015-2050 by different scenarios of coverage for ART

Assuming 3 percent discount rate, and all costs increase by the average projected annual GDP per capita income growth of 2.5 percent

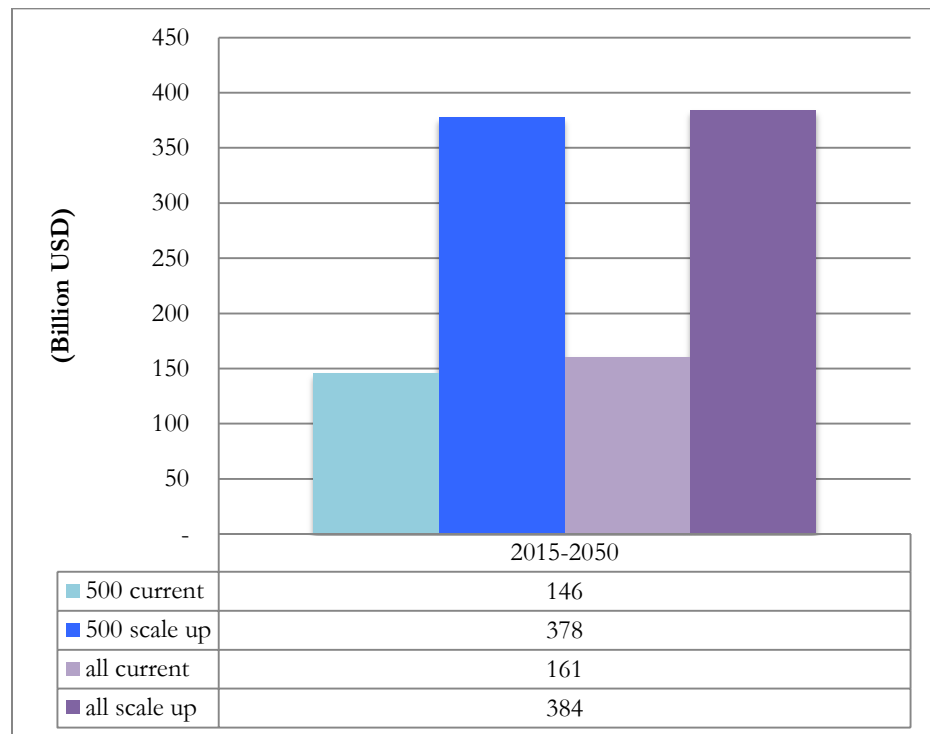


Figure S2. Annual resources required by 9 sub-Saharan countries (\$ billions) in 2015, 2025, 2035 and 2050 by different scenarios of coverage for ART

Assuming 3 percent discount rate, and all costs increase by the average projected annual GDP per capita income growth of 2.5 percent.

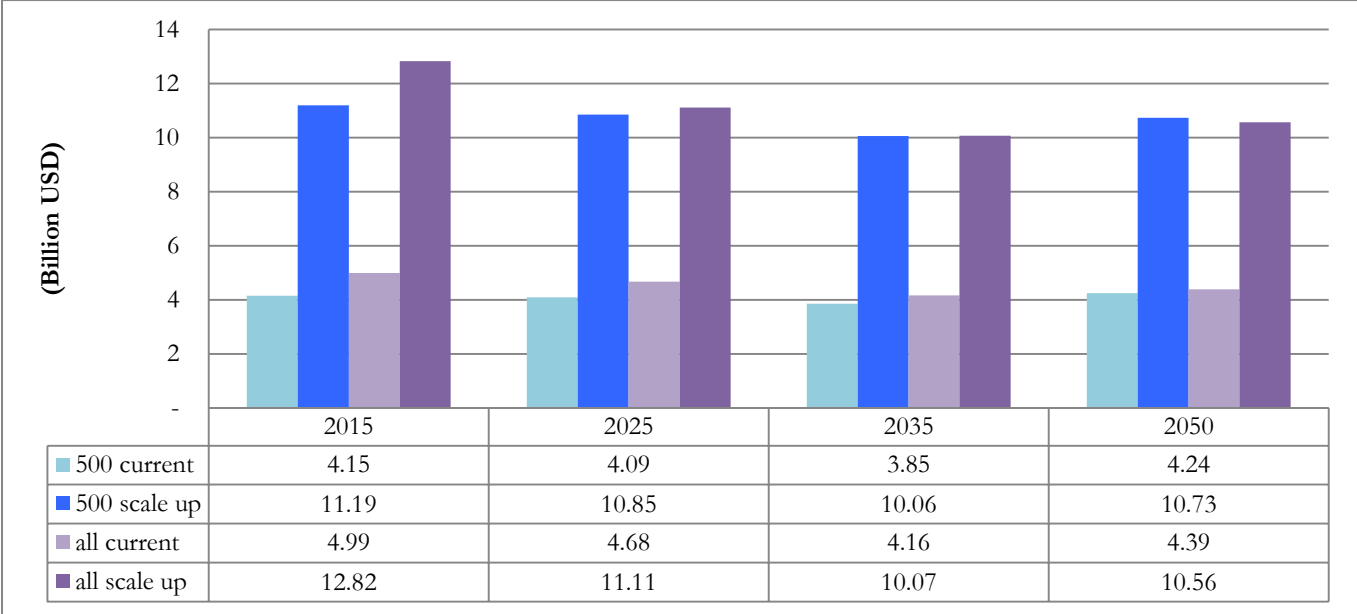
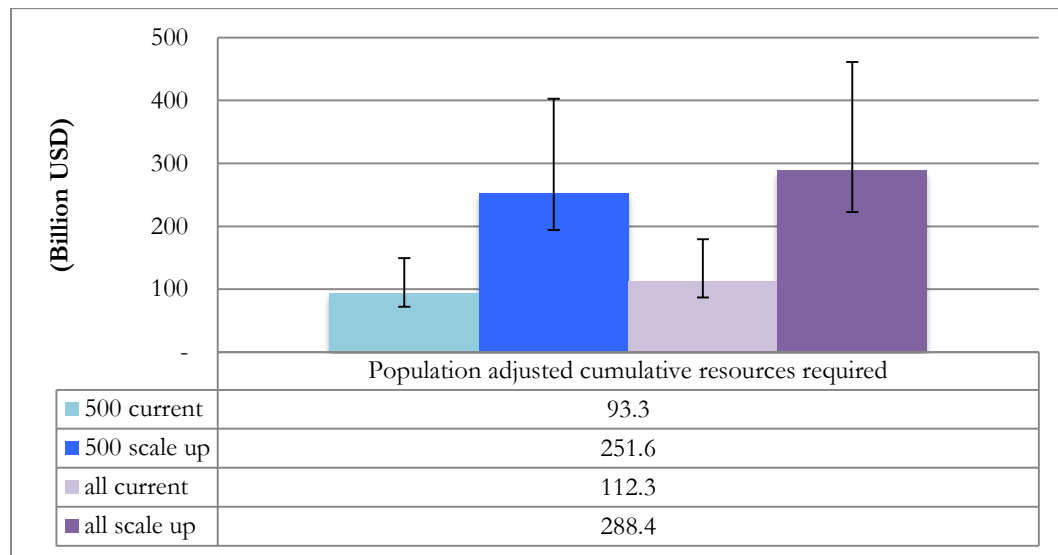


Figure S3. Cumulative resources required by nine sub-Saharan countries (\$ billions) in between 2015-2050 (the numbers show projections with 3 percent discounting; the error bars show result for 0 and 5 percent), adjusted by population size, by different scenarios of service coverage.



Calculation of Target Population for HIV Screening in Pregnancy

The Centers for Disease Control and Prevention (CDC) estimates the number of pregnant women in a population at any given time using the following equation¹:

$$\text{No. of Pregnant women} = \text{WRA}/1000 * [(B*P_b) + (A*P_a) + (D*P_d)]$$

Where WRA = women of reproductive age (15-44 years), B = annual birth rate, A = Annual abortion rates, D = annual fetal loss rate, P_b = proportion of the year a woman is pregnant before a normal delivery, P_a = proportion of the year a woman is pregnant before an abortion, P_d = proportion of the year a woman is pregnant before the event of fetal loss.

There are no reliable estimates for A and D in our countries of interest so we estimate number of pregnant women as

$$\text{No. of Pregnant women} = \text{WRA}/1000 * (B*P_b)$$

For each country, we use the UN Estimates of women of reproductive age for “WRA”, and the World Bank Crude Birth Rates for “B”.

We calculate P_b to be 0.75 = 9/12, (assuming an average duration of pregnancy of 9 months divided by 12 calendar months)

¹ Estimating the Number of Pregnant Women in a Geographic Area – CDC Division of Reproductive Health accessed 7th October, 2015 at <http://www.cdc.gov/reproductivehealth/Emergency/PDFs/PregnacyEstimateBrochure508.pdf>