

Supplement

Table S1: The HIV-positive prevalence of detectable viremia (PDV₊), the population prevalence of detectable viremia (PDV_P), and the HIV prevalence by sex in 2011, 2013, and 2014.

	Females		Males	
	Estimate	95% CI	Estimate	95% CI
<i>PDV₊</i>				
2011	71.80	(67.36–76.49)	77.80	(67.65–89.40)
2013	62.01	(57.61–66.72)	70.33	(60.72–81.39)
2014	55.30	(51.22–59.67)	67.18	(57.06–78.94)
<i>PDV_P</i>				
2011	21.35	(20.19–22.56)	14.58	(13.11–16.16)
2013	20.09	(18.85–21.39)	17.60	(15.67–19.70)
2014	19.23	(18.01–20.51)	16.18	(14.31–18.22)
<i>HIV Prevalence</i>				
2011	30.56	(29.18–31.99)	19.63	(17.92–21.45)
2013	33.72	(32.12–35.39)	25.50	(23.16–28.02)
2014	35.61	(33.96–37.33)	27.05	(24.62–29.67)

Table S2: Regression results showing the relative odds (odds ratio) of a detectable viral load for the HIV-positive and HIV-negative population (PDV_P) by sex, adjusting for year and age.

	Females						Males					
	Model 1			Model 2			Model 3			Model 4		
	OR	95% CI	p-value	OR	95% CI	p-value	OR	95% CI	p-value	OR	95% CI	p-value
Year (Ref: 2011)												
2013	0.921	(0.858, 0.989)	0.024	0.916	(0.853, 0.983)	0.015	1.131	(0.989, 1.293)	0.073	1.185	(1.031, 1.362)	0.017
2014	0.868	(0.804, 0.937)	<0.001	0.846	(0.784, 0.913)	<0.001	1.050	(0.901, 1.223)	0.534	1.044	(0.893, 1.221)	0.586
Age (>25 years)				2.213	(1.998, 2.452)	<0.001				7.438	(6.081, 9.098)	<0.001
Constant	0.296	(0.28, 0.314)	<0.001	0.170	(0.154, 0.187)	<0.001	0.155	(0.139, 0.171)	<0.001	0.040	(0.033, 0.049)	<0.001
HIV tests, N	15,337			15,337			6,830			6,830		
Participants, N	10,701			10,701			5,618			5,618		

Figure S1: Shows the important role of HIV prevalence in evaluating the potential for HIV transmission at the population level. Consider two hypothetical communities, A and B, which have 10 residents and the same HIV-positive prevalence of detectable viremia (PDV_+) and rate of sexual contact. In Community A, the HIV prevalence is 20% and in Community B it is 40%. Multiplying the PDV_+ (50%) by the HIV prevalence gives a population prevalence of detectable viremia (PDV_p) of 10% for Community A and 20% for Community B. Thus, we expect the potential for HIV transmission to be higher in Community B because there are more HIV-infected people with detectable viral loads.

