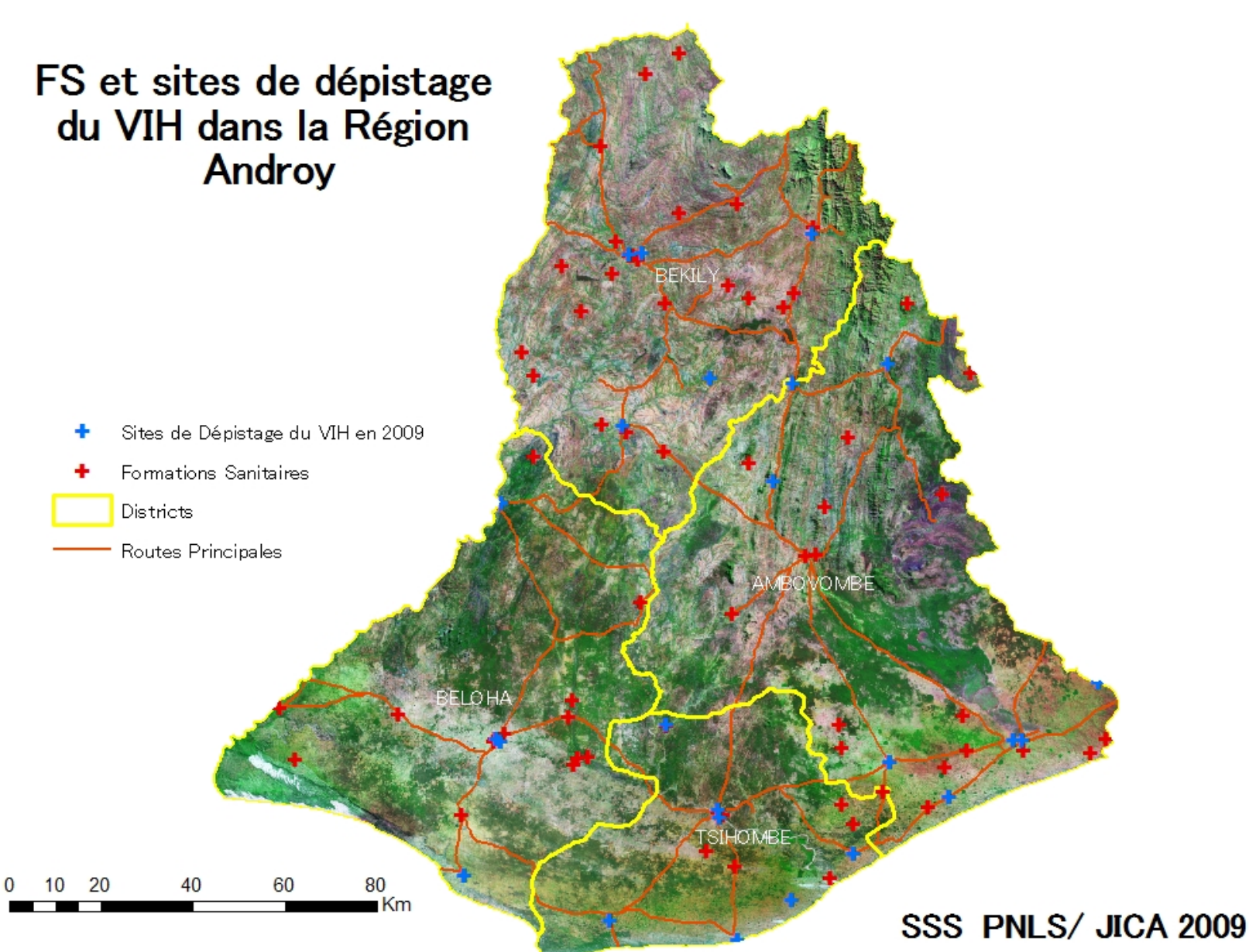


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## Background

The government has improved the location information including both health and HIV-testing centers with Google Earth workshops between October 2010 et February 2011 in collaboration with JICA HIV Prevention Strengthening Project. By using the information, we found that the distance to HIV-testing center increased the probability of non-experience of HIV testing. In this time, we evaluated the association between a proximity to health center and individual experience of HIV testing for people who lived in further area from HIV-testing center.



HIV testing sites and health facilities Mapping in Androy Region, southern part of Madagascar

## Methods:

The subjects, who live further than 5km from HIV-testing center, were 4592 men aged 15-60 and 8884 women aged 15-49, and obtained from the 2008-2009 Demographic and Health Survey. We measured the distance from each village point to a nearest health center. The odds ratios and their confidence intervals (CIs) were estimated by using multilevel logistic-regression models.

## Results

The probability of men who had no experience of HIV testing among those who lived in >5km away from health center was 2.07 times (95% CI=1.27-3.36) higher than those who lived ≤5km away, and women was 1.21 times (95% CI=0.88-1.67). After adjusting covariates, the probability of man was 1.5 times (95% CI=0.94-2.38), and women was 1.06 times (95% CI=0.78-1.45).

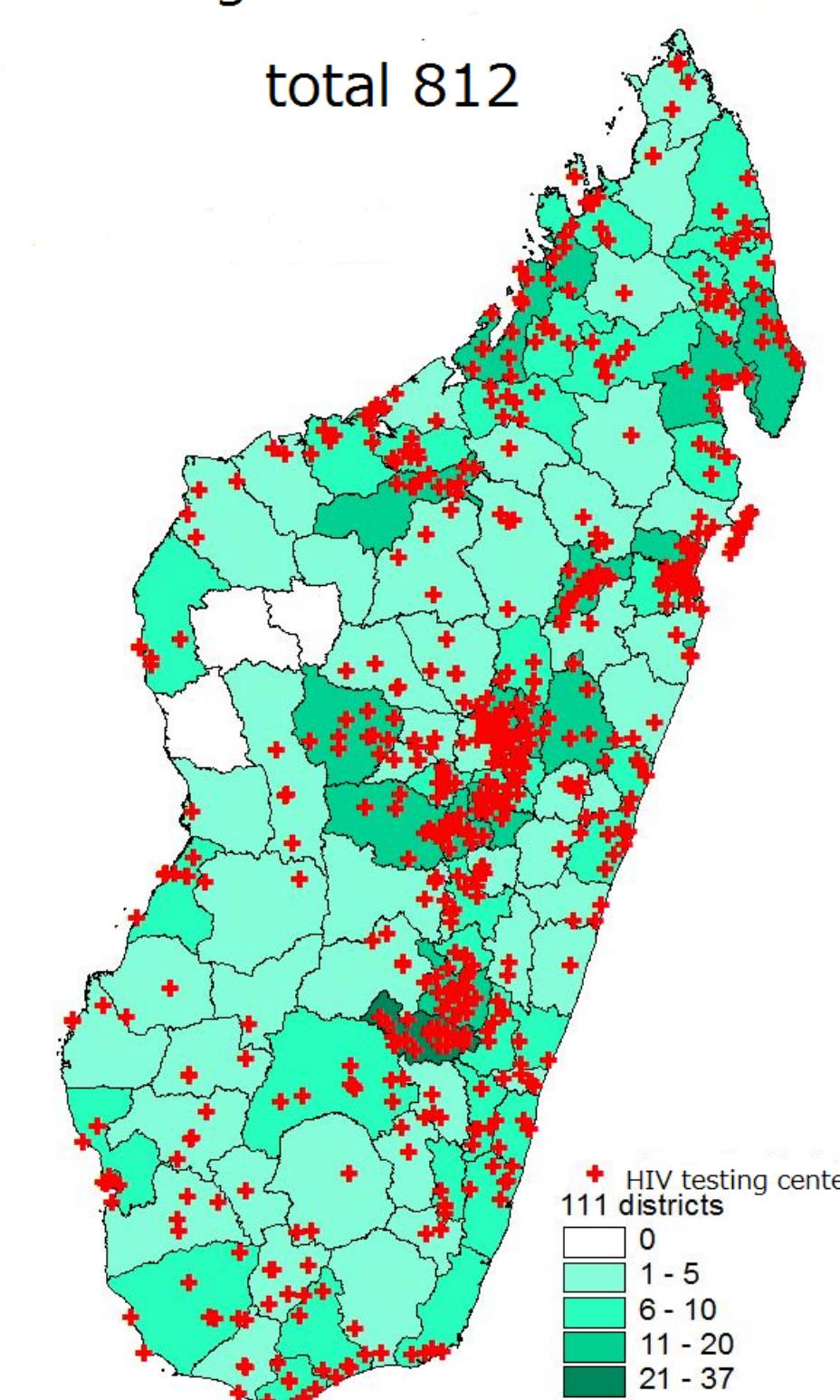
Table2. Numbers, proportion, and ORs with 95% CIs between proximity to a health center and no experience of HIV testing for participants who live further than 5km from HIV-testing center separated, Madagascar. (n=13476)

Distance from health facility	Total N	N for no-experience of HIV testing	(%)	Crude		Adjusted model*	
				OR	(95% CI)	OR	(95% CI)
<b>Men</b>							
≤5 km	2430	2317	95.3	1	(reference)	1	(reference)
>5 km	2162	2110	97.6	2.07	(1.27 - 3.36)	1.50	(0.94 - 2.38)
<b>Women</b>							
≤5 km	4707	4534	96.3	1	(reference)	1	(reference)
>5 km	4177	4055	97.1	1.21	(0.88 - 1.67)	1.06	(0.78 - 1.45)

OR, odds ratio; CI, confidence intervals; N, number.

\* Adjusted for the age, and highest education attainment.

HIV Testing centers in 2009 total 812



HIV Testing sites in Atsimo Andrefana Region



3 D visualization in HIV testing centers and Health facilities

Table1. Demographic characteristics of the participants who live further than 5km from HIV-testing center in the 2008-2009 Madagascar Demographic and Health Survey separated for a distance from a health center. (n=13476)

	Men		Women	
	≤5 km from health facility	> 5 km from health facility	≤5 km from health facility	>5 km from health facility
subject	2430	2162	4707	4177
Age [no. (%)]				
15-19	516(24)	396(20)	1044(22)	1003(24)
20-24	327(15)	336(17)	795(17)	698(17)
25-29	330(15)	332(17)	744(16)	698(17)
30-34	304(14)	271(14)	680(14)	601(14)
35-39	241(11)	245(13)	573(12)	485(12)
40-44	233(11)	195(10)	479(10)	369(9)
45-49	196(9)	166(9)	392(8)	323(8)
50-55	154(7)	139(7)		
55-60	129(6)	82(4)		
Highest Education [no. (%)]				
more than secondary school	557(23)	269(12)	908(19)	461(11)
primary school	1366(56)	1197(55)	2638(56)	2188(52)
no education	507(21)	696(32)	1161(25)	1528(37)

no, number.

**Conclusions:** We found that men who live further away from a health facility had tendency for less experience of HIV testing. But this was not observed among women. The government policy to integrate HIV testing in all of health facilities by 2015 might be contributed to increase HIV testing experience for women who live further than 5km from HIV testing center, based on this research and previous research.