Getting to Zero Infections: HIV Testing and Counseling in Kenya – Results from a Nationally Representative Population-based Survey

Contact Information:
Anne Ng'ang'a BDS, MSc
National AIDS and STI Control Programme, Kenya Ministry of Health
Email annie@nascop.or.ke

Anne Ng'ang'a[1], Wanjiru Waruiru[2], Carol Ngare[1], Victor Ssempijja[3], Davies Kimanga[1], Patricia Oluoch[3], Inviolata Njoroge[4], Thomas Gachuki[5], William Maina[1], Rex Mpazanje[6], and Andrea A. Kim[3] for the KAIS Study Group

1. National AIDS and STI Control Programme, Ministry of Health, Nairobi, Kenya 2. University of California, San Francisco, California 3. US Centers for Disease Control, Nairobi, Kenya 4. Liverpool VCT Care and Treatment, Nairobi, Kenya 5. National Public Health Lab services, Nairobi, Kenya 6. World Health Organisation, Nairobi, Kenya

Introduction

- HIV counseling and testing (HTC) is an important gateway into receiving HIV prevention and treatment services.
- In order for HIV-infected persons to receive lifesaving treatment, they must know their HIV serostatus.
- Based on the Kenya AIDS Indicator Survey 2007, one-third of adults had ever been tested for HIV, and among HIV+ Kenyans, only 16% were aware of their infection.
- In response to these data, Kenya expanded HIV testing and set a national adult testing goal of 80% by 2013.

Aim

To measure progress in HIV testing and counselling from 2007 to 2012.

Methods

- Two-stage, stratified cluster sample aimed to generate national and sub-national estimates of HIV prevalence.
- Interviews administered to persons aged 15-64 years to collect socio-demographic and HIV testing information.
- Blood specimens collected for centralized HIV testing at the national HIV reference laboratory.
- Participants offered on-site rapid HIV testing through home-based testing and counselling (HBTC) services and point-of-care CD4 count measurement if tested HIV+.
- Proportions and 95% confidence intervals (CI) weighted to account for sampling and adjust for nonresponse.

Results

Table 1. Proportion of Kenyans aged 15-64 years who have been tested for HIV by select characteristics, KAIS 2012 (N=13,720)

Variables	Weighted % (95% CI)
Total	71.6 (70.2 - 73.1)
Sex	
Women	80.4 (78.9 - 81.9)
Men	62.5 (60.4 - 64.6)
Age group (years)	
15-24	65.2 (63.0 - 67.5)
25-34	84.6 (83.1 - 86.2)
35-44	77.8 (75.9 - 79.7)
45-54	63.2 (60.4 - 66.1)
55-64	50.1 (45.4 - 54.8)
Marital status	
Never married	58.8 (56.4 - 61.2)
Widowed	72.0 (67.9 - 76.1)
Divorced/separated	78.9 (75.3 - 82.5)
Married/cohabiting	77.6 (75.9 - 79.2)
Education level	
No primary	56.3 (50.9 - 61.8)
Primary incomplete	64.0 (59.3 - 68.8)
Primary complete	72.5 (70.6 - 74.3)
≥Secondary	74.3 (72.6 - 76.0)
Wealth index	
Poorest	61.8 (58.3 - 65.4)
Second	66.9 (64.2 - 69.5)
Middle	71.3 (69.2 - 73.5)
Fourth	76.1 (73.8 - 78.3)
Richest	81.6 (79.4 - 83.8)
Residence	
Rural	67.0 (65.0 - 69.0)
Urban	79.5 (77.7 - 81.4)

Figure 1. Proportion of Kenyans aged 15-64 years who have ever been tested for HIV, KAIS 2007 and 2012

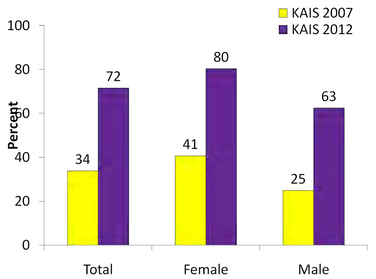


Figure 2. Proportion of HIV-infected Kenyans aged 15-64 years by knowledge of HIV status, KAIS 2007 and 2012

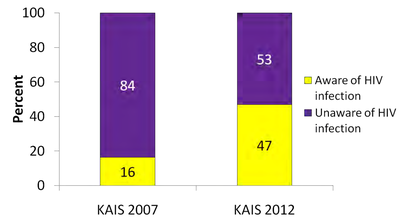


Table 2. Characteristics of KAIS particpants aged 15-64 years who accepted HBTC, KAIS 2012 (N=9,037)

Variables	Weighted % (95% CI)
Sex	
Women	51.3 (50.2 - 52.5)
Men	48.7 (47.5 - 49.8)
Age group (years)	
15-24	33.8 (32.5 - 35.0)
25-34	26.8 (25.6 - 28.0)
35-44	19.0 (18.1 - 20.0)
45-54	12.3 (11.5 - 13.1)
55-64	8.1 (7.3 - 9.0)
Residence	
Rural	64.9 (61.9 - 67.9)
Urban	35.1 (32.1 - 38.1)
Ever been tested for HIV	
Yes	70.7 (69.0 - 72.4)
No	29.3 (27.6 - 31.0)
Self-reported HIV status	
HIV-positive	1.9 (1.4 - 2.4)
HIV-negative	66.9 (65.2 - 68.6)
Indeterminate	0.1 (0.0 - 0.1)
Tested, never received results	1.8 (1.4 - 2.1)
Don't know/never tested	29.4 (27.7 - 31.1)
HBTC HIV test result	
HIV-positive	4.1 (3.3 - 4.9)
HIV-negative	95.5 (94.7 - 96.3)
Indeterminate	0.4 (0.2 - 0.6)
CD4 cell count (cells/mm^3) among persons not on antiretroviral therapy	
≤200	16.9 (12.5 - 21.2)
200-350	23.4 (18.3 -28.4)
351-500	23.0 (17.9 – 28.1)
>500	36.8 (31.5 – 42.1)

Conclusions

- Between 2007 and 2012, HIV testing increased substantially among men and women, with women surpassing the national testing goal of 80% in 2012.
- Knowledge of HIV status among HIV-infected persons has tripled since 2007, but remains low, highlighting a major challenge to HIV care and treatment programs.
- Home-based testing and counseling and point-of-care CD4 testing was successfully integrated into a national household survey and identified persons who required immediate HIV treatment.

Recommendations

- Despite progress, significant work is needed to increase diagnosis of HIV-infected persons.
- All facility and community-based testing modalities should be expanded to increase identification of HIV-infected persons and facilitate linkage to care with prompt treatment for those that need it.
- New approaches such as family testing and self-testing (currently NASCOP is undertaking formative research with support of Bill and Melinda Gates Foundation) should be promoted in efforts to improve access among men and youth.

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