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ABSTRACT
This paper demonstrates the importance of utilising official statistics from the voluntary counselling and testing centres (VCT) to determine the association between gender and HIV infection rates in Kenya. The study design adopted was a record based survey of data collected from VCT sites in Kenya between the second quarter of 2001 and the second quarter of 2004. Of those who were tested, significantly more females tested positive (P<0.0001) and had twice as high a chance of being infected by HIV (Odds ratio 2.27 with CI 2.23 to 2.31) than males. We conclude that VCT statistics may lead to better planning of services and gender sensitive interventions if utilised well.

Keywords: VCT, HIV, gender.

RÉSUMÉ
Cette communication montre l’importance de l’utilisation des chiffres officiels de centres de consultation et de dépistage volontaires (CDV) lorsqu’on établie un lien entre le genre et le taux d’infection par le VIH au Kenya. Le plan d’étude suivi était celui d’une recherche basée sur des dossiers de données recueillies du CDV au Kenya entre le deuxième trimestre de l’an 2001 et le deuxième trimestre de l’an 2004. Parmi les personnes dépistées, plus de femmes étaient séropositives (P<0,0001) et elles avaient deux fois plus de chance d’être infectées par le VIH (Odds ratio 2.27 avec CI 2.23 à 2.31) que des hommes. En conclusion, nous estimons que les chiffres du CDV peuvent mener à une planification de services et des interventions sensibles au genre s’ils sont utilisés à bien.

Mots clés: CDV, VIH, genre.

INTRODUCTION
HIV has posed a great threat in sub-Saharan Africa from the time it was first diagnosed. Over the years, research has shown that men and women are affected differently. However these effects seem to be more pronounced in third world countries as opposed to richer nations, possibly due to differences in socio-economic status. Using VCT results from Kenya, we attempt to affirm that infection rates vary by gender and hence the need for gender sensitive interventions.

The understanding of the association between gender and HIV requires that we have data. Following the successful VCT data collection exercise in Kenya (Otwombe et al., 2007), we review these results with regard to gender. Health status, disparities and research in gender may be addressed by utilising the outcome of official statistics (Dunne, Fitzpatrick & Bunting, 1999). Health research data collected over a period of time is important for purposes of future planning.

HIV/AIDS remains a challenge in Kenya, despite the lower numbers of infection reported recently. Results from the Government of Kenya (GoK) Kenya Demographic and Health Survey (2003) indicate that 7% of Kenyan adults are infected with HIV. The
Using VCT statistics from Kenya in understanding the association between gender and HIV

The Ministry of Health has continuously developed the 5-year strategic plan (GoK, Kenya National Strategic Plan, 2005/2006, 2009/2010) for AIDS control since 1987, and VCT is recognized as an essential component for prevention and transmission of HIV.

VCT data is intended to be used to understand VCT demand, utilization, and surveillance, and for improving management of VCT services (GoK, 2001). The objective of this paper is to show the association between gender and HIV infection rates, gauging its strength, and establishing the trend of VCT uptake in Kenya between the second quarter of 2001 and the second quarter of 2004. We show how this output may enhance planning and delivery of VCT services by gender. Data from this period has been used because there was a comprehensive national exercise to update VCT uptake commissioned by the national office at the time, hence its reliability.

**METHODOLOGY**

**Study design**

In this exercise, we utilized an evaluative operations research approach that was non-experimental. In our sample, all registered VCT sites were surveyed for missing data at various times (quarters). We adopted a record-based quantitative survey from 332 registered sites.

**Data collection**

Two teams of four members each were selected and worked simultaneously in different provinces collecting data between 5th September and 15th October 2004. There was a short training session for data collectors before the start of the exercise, with regard to completion of the VCT quarterly reports. Their role entailed collecting missing data from the logbooks in each of the sites. The key variables in this exercise were number of clients presenting for VCT by gender and number testing positive.

Data were collated from September 2001 (shortly after the scale-up of VCT began) up to the second quarter of 2004. For the sites with missing data in the central database (monthly and quarterly) or those with reports that did not disaggregate their data by gender, the teams manually extracted this information from the on-site logbooks and client forms. More information on the challenges encountered in the data collection exercise is encapsulated in Otwombe et al. (2007).

**Statistical analysis**

MS Excel was used for data entry, data cleaning, descriptive analysis and generation of the graphs showing the trend of client visits to the VCT sites over the period 2001 (second quarter) up to 2004 (second quarter). Odds ratio (Bland & Altman, 2000) and Pearson correlation analysis were performed in SAS 9.1.

**RESULTS**

414,903 clients visited VCT sites in Kenya between 2001 and mid 2004. Figure 1 and 2 display the trend of the uptake of VCT sites and the numbers testing positive between 2001 and mid 2004 by gender. Figure 1 indicates there were more males than females attending VCT sites. Given this trend, it is likely that the 2004 uptake would surpass the 2003 figures. Table 1 shows more females testing positive (p<0.0001) than males. The odds ratio analysis (odds ratio, 2.27: 95% CI 2.23, 2.31) indicates that females were twice as likely to get infected as males. Whereas this is not new information, these results show that this conclusion can be drawn using VCT statistics from the Kenyan context.

Table 2 presents the VCT uptake before and after the data collection exercise. Pearson correlation analysis on the trends in Figures 1 and 2 were greater than 0.9, indicating that VCT uptake increased over the years by gender and this increase was significant (p<0.05).

**Limitations**

Statistical analysis of data was limited to the above mentioned methods, since data collection was confined to the following specific variables that were extracted from the quarterly reporting tool: number of males and females attending VCT, and number of males and females testing positive.

**DISCUSSION**

This paper highlights the importance of analysis of actual VCT data collected at service delivery level, and

| SEX  | HIV STATUS | Positive | Negative | Total |
|------|------------|----------|----------|-------|
|      | Females    | 40 190   | 150 466  | 190 656|
|      | Males      | 23 611   | 200 636  | 224 247|
| Total|            | 63 801   | 351 102  | 414 903|
its utilisation in making policy and programming decisions that are gender sensitive. The findings demonstrate the role of official statistics in understanding the association between gender and HIV.

In Kenya, VCT data reporting tools are disaggregated by gender, which allows for the identification of discrepancies that could readily be explored. Furthermore, gender is about males and females and how they relate to each other for healthy and equitable relationships on a daily basis.
The trend in the tables and figures above clearly shows that VCT uptake increased significantly by gender. Whereas this is not new information, male uptake remains higher than for females, but HIV infection rates are higher for females than males. The increasing vulnerability to infection for females is certainly a cause of concern for stakeholders. Liverpool VCT and Care, a leading NGO in Kenya with regard to VCT services, has re-examined their own VCT structure with the aim of engendering service delivery (Taegtmeyer et al., 2006). There is a need to strengthen interventions put in place to increase female access to the existing VCT services.

Effective provision of VCT services and understanding of gender issues relies on proper planning by the stakeholders. However, proper planning can only be effective with the provision of accurate and up-to-date data from VCT sites. Hence the need for an up-to-date national database, which could be used to identify both good and bad (acceptable and unacceptable) trends in the performance of sites (Bolsin & Colson, 2003; Colson & Bolsin, 2003).

Gender and HIV are interrelated and since VCTs are an entry point to health care services in Kenya, there is a need to mainstream gender into VCT programmes. However, the identification of discrepancies in the VCT uptake by gender is only feasible with up-to-date national official statistics.

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