

# Private healthcare sector doctors and HIV testing practices in the eThekweni Metro of KwaZulu-Natal

Naidoo P, BPharm, MMedSc(Pharmacology), PhD

School of Pharmacy and Pharmacology, Faculty of Health Science, University of KwaZulu-Natal, Durban

Correspondence to: Panjasaram Naidoo, e-mail: naidoopj@ukzn.ac.za

Keywords: HIV, AIDS, private healthcare sector doctors, HIV testing

## Abstract

**Background:** Human immunodeficiency virus (HIV) testing has many logistic and ethical challenges. The UNAIDS/WHO policy statement states that the testing of individuals must be confidential, be accompanied by counselling, and be conducted with informed consent. HIV testing is integral to the management of the epidemic, and since KwaZulu-Natal (KZN) has the highest prevalence of AIDS in South Africa, it is vital that doctors in this province are knowledgeable about HIV testing practices. This study was undertaken in view of the lack of data on private sector doctors' HIV testing practices in KwaZulu-Natal.

**Method:** A descriptive cross-sectional study was conducted among private sector doctors who manage HIV and AIDS patients in the eThekweni Metro of KZN. One hundred private practitioners were randomly selected from a sample of 175 consenting private sector doctors. These doctors were asked to fill in an anonymous questionnaire. The questionnaires were collected and analysed using SPSS® version 15.

**Results:** A response rate of 60% was obtained, with 57 (95%) indicating that they do HIV testing after obtaining patients' consent. Over 96% of the doctors carried out pre-test counselling, while over 98% did post-test counselling. Eighty-one per cent did a confirmatory test if the patient tested positive, while 49% performed a confirmatory test if the patient tested negative; over 50% did the test after three months. Forty-seven per cent did not know or failed to indicate what confirmatory test they used. The majority did not disclose patient status or do counselling in the presence of others. However, if it was done, it was done with the consent of the patient or the parents in cases where the patient was a minor. The majority stated that they follow the guidelines when testing.

**Conclusion:** The HIV testing practices of private sector doctors who participated in the study are compliant with the UNAIDS/WHO policy statement regarding confidentiality, informed consent and counselling. However, doctors' knowledge of confirmatory test appears to be inadequate.

© Peer reviewed. (Submitted: 2010-12-21. Accepted: 2011-03-31.) © SAAFP

S Afr Fam Pract 2011;53(6):573-578

## Background

The acquired immune deficiency syndrome (AIDS) was first recognised in 1981, and the causative agent, human immunodeficiency virus (HIV), was isolated in 1984.<sup>1</sup> The laboratory test for HIV became commercially available a year later.<sup>1</sup> Today HIV/AIDS is one of the major communicable diseases affecting people worldwide.<sup>2</sup> The Joint United Nations Programme on HIV/AIDS (UNAIDS) and World Health Organization (WHO) estimated that, in 2007, AIDS killed 350 000 people, which amounts to almost a thousand a day.<sup>3</sup> South Africa is currently experiencing one of the most severe AIDS epidemics in the world: in 2007, 5.7 million people in South Africa were living with HIV and AIDS.<sup>4</sup> This

fast-growing epidemic poses a great threat to the majority of South Africans, including those living without the virus.

The management of HIV/AIDS does not only depend on drugs, but also on prevention, which continues to be the mainstay of the response to the HIV epidemic, because, without effective prevention, more people will require treatment.<sup>5</sup>

HIV testing is integral to prevention, treatment and care efforts. Early knowledge of one's HIV status is important to curb the spread of the disease. Awareness of their HIV status also links those with HIV to medical care and services that may reduce morbidity and mortality and improve the quality of life.<sup>6</sup>

HIV testing has many logistic and ethical challenges that render the need for effective communication between practitioners and their patients paramount.<sup>7</sup> The UNAIDS/WHO policy statement on HIV testing states that the conditions of HIV testing must protect patients' human rights, and pay due respect to ethical principles.<sup>5</sup> Testing must be confidential, accompanied by counselling, and conducted with informed consent. This "3 Cs" concept continues to be the underpinning principle for the conduct of HIV testing of individuals since HIV tests became available in 1985.<sup>5</sup>

The UNAIDS/WHO further recommend the following four types of testing:

- Voluntary counselling and testing (VCT), which is client-initiated testing to determine HIV status, remains critical to the effectiveness of HIV prevention
- Diagnostic HIV testing, which is indicated whenever a person shows signs or symptoms that are consistent with HIV-related disease, helps in clinical diagnosis and management
- Routine HIV testing, which is offered by healthcare providers to all patients for various reasons
- Mandatory testing of all blood that is destined for transfusion or for manufacture of blood products, which is routinely carried out for HIV and other blood-borne viruses

However, in 2006 the Centers for Disease Control and Prevention (CDC) recommended routine HIV screening in healthcare settings for all adults aged 13 to 64, and repeat screening at least annually for those at high risk.<sup>6</sup> HIV testing was also recommended for all pregnant women and for any newborn whose mother's status was unknown. The CDC recommended that the screening be done on a voluntary and opt-out basis, i.e. the patient will be notified that the test will be performed and consent inferred, unless the patient declines. This differs from the opt-in option, in which the test is offered to the patient who must then explicitly consent to an HIV test, often in writing.<sup>6</sup> As VCT is the entry point to management, it should be an important part of any country's response to AIDS. Although VCT is promoted by the South African government and numerous VCT centres have been established, there are concerns about the quality of VCT services being provided in some areas.<sup>8</sup> Some reports suggest that counsellors are not always adequately trained, may lack medical knowledge about HIV, and are often overworked.<sup>8</sup> The CDC also stated that private providers were not providing enough counselling to patients when they were given their HIV test results, and that patients in the public sector were one-and-a-half times more likely to receive counselling than those treated at private sites.<sup>9</sup>

All types of testing should be clearly distinguished, and practitioners both in the public and the private healthcare sector should be aware of them. A study done in India among private providers concluded that some doctors had inadequate knowledge about the diagnostic tests: fewer than half gave their patients any advice or information prior to testing, while few laboratories reported adequate patient counselling before testing.<sup>10</sup> In many countries, private sector doctors are "the backbone of treatment service";<sup>11</sup> however, the management of HIV has many challenges, and more so for those private sector doctors qualified in the pre-pandemic era. These doctors have to rely on continuing professional education in order to enhance their knowledge of the management of HIV-infected patients.<sup>12</sup> In addition, private sector doctors in particular are becoming more interested in HIV testing as an entry point to providing treatment for HIV/AIDS through the private sector.<sup>13</sup> However, they are often not sufficiently motivated and experienced or lacking adequate resources to provide the level of advice or counselling required for clients to make decisions about their HIV status.<sup>13</sup> In South Africa there is a large public sector and a smaller, growing private sector.<sup>14</sup> 16% of the population uses the private sector for the diagnosis, treatment and management of HIV/AIDS.<sup>15</sup>

Little is known about the HIV testing practices of private sector doctors and their knowledge of the types of testing used in the eThekweni Metro of KwaZulu-Natal (KZN), the province with the highest HIV prevalence rate in South Africa. In view of the various health and social effects of HIV/AIDS and the absence of related studies in the province, this study was carried out to explore the HIV testing practices of private healthcare sector doctors in the eThekweni Metro of KZN. The objectives of the study were to describe the types of testing carried out by private sector doctors, and the way in which these tests are carried out with respect to confidentiality and consent. Additional objectives were to investigate the diagnostic tests used by doctors and their knowledge of such tests, as well as to determine whether patients are counselled before and after an HIV test is performed.

## Method

### Study design and sample size

A descriptive cross-sectional study was conducted among private sector doctors in the eThekweni Metro of KZN. A list of all doctors that manage HIV and AIDS patients was obtained from a previous study.<sup>16</sup> In the previous study, 235 doctors indicated that they managed HIV-infected patients; however, only 170 doctors consented to participation in the study. From this list of 170 doctors, one hundred were randomly selected to be part of the current study.

The doctors were not stratified according to age, gender, specialisation or area where they practised.

### Questionnaire

An anonymous questionnaire was used, containing both open- and closed-ended questions. Variables included demographics of the participants, their testing practices in terms of the 3 Cs principle of the UNAIDS/WHO, and variables regarding the knowledge of the types of tests used. The questionnaire was piloted among a few doctors who were not involved in the study. After obtaining the 100 doctors' consent again, the questionnaire was faxed or personally delivered to the doctors. The doctors were allowed two weeks to complete the questionnaires. Some doctors faxed the completed questionnaires on the same day that they received it, while others returned their completed questionnaires at varying time intervals. The questionnaires were coded to ensure anonymity and the participants were informed that the data would be confidential.

### Data analysis

The data were captured and analysed using SPSS® version 15 (SPSS® Inc., Chicago, Illinois, United States of America). Descriptive analysis (e.g. counts, percentages and means) was used to obtain the results. Frequency tables were generated and responses were graphed against the independent variables: type of practice, specialisation of the private practitioner and different types of tests. A P value of equal to or less than 0.05 was regarded as statistically significant. The modified Wald method was used to compute the confidence interval.

## Results

A response rate of 60% was obtained, and 73.3% of the respondents were male. The mean number of years since qualification as medical doctor was 15.4 (n=59) while the mean number of years as HIV/AIDS specialist was 7.4.

The profile of the doctors' practices is depicted in Figure 1. Seventy-five per cent were general practitioners, 25% specialist and 6.7% indicated that they were HIV/AIDS specialists.

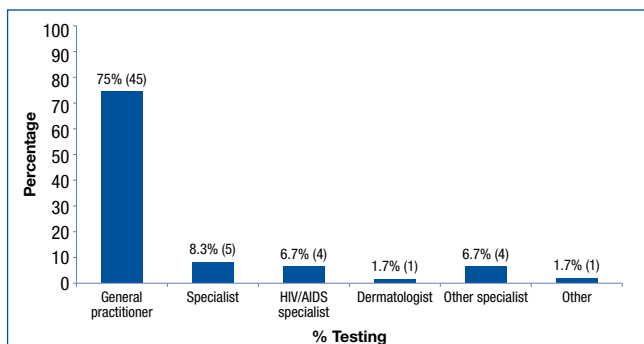


Figure 1: Profile of participating doctors' practices (n = 60)

## HIV testing practices

Fifty-seven (95%) of the respondents reported that they performed testing and screening of HIV/AIDS patients, while the remaining three (5%) indicated that they referred patients either to a hospital/clinic, to other general practitioners or to a specialist. Thirty-seven (69%) of the 54 doctors who answered this question stated that patients came to them to confirm HIV diagnosis done by another doctor.

### Types of HIV testing

Figure 2 illustrates the types of HIV testing carried out by the study subjects. VCT is most commonly practised by the respondents, followed by diagnostic, routine and mandatory testing. Of the respondents who answered the question, if they performed HIV testing on pregnant women (n=43), 83.7% answered "yes". Of the respondents who answered the question, if they performed HIV testing on patients when their partners were positive, 77.8% (n=45) answered "yes".

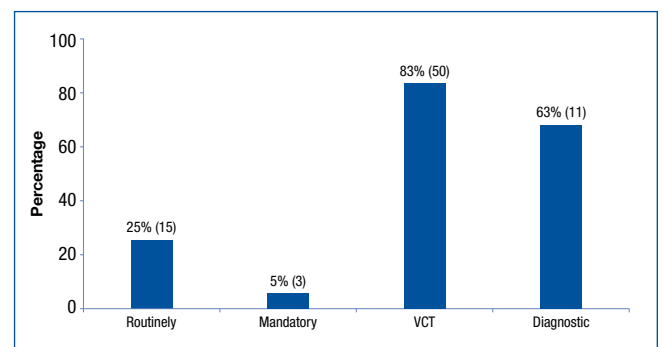


Figure 2: Types of HIV testing

## Laboratory tests

Figure 3 depicts the methods used to detect HIV. The standard antibody test is most commonly employed.

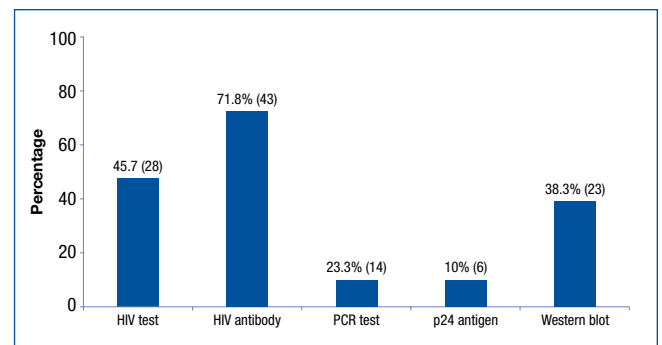


Figure 3: HIV testing methods

## Patient confidentiality

Of the 55 respondents who answered this question, 81.8% stated that they record the patient's details on the blood sample when sent to the laboratory for analysis, while 18.2% stated that laboratory testing of the sample is done anonymously.

## Confirmatory testing

Figure 4 indicates the responses to the question, whether doctors carried out a confirmatory test after a positive or negative result. More respondents did confirmatory testing after obtaining a positive result.

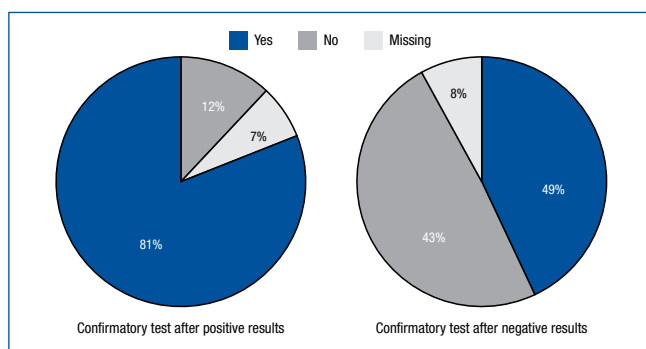


Figure 4: Confirmatory test practice (n = 60)

It was found that 54.8% of the respondents did a confirmatory test after three months, 25.8% after one month and 9.7% after six months. The remaining respondents (n=31) did confirmatory tests after two or four months.

Of the respondents who did confirmatory tests, 47% did not know which test they used. Western blot analysis was significantly more commonly used (88.2%) than any of the other methods ( $p=0.05$ ).

## Disclosing practices

The majority (82%) of the doctors (n=56) stated that they did not disclose the patient's results in the presence of someone else. Sixty per cent of the 18% who did, did so because the patient gave consent. A small percentage of doctors (19%) stated that they disclosed minors' results to parents without consent.

When asked whether they would counsel patients in the presence of a parent or a spouse, over 25% responded that they did, with the majority stating that they did this with the patient's consent at the patient's request. Another reason given was that both patients wanted to be tested and did not mind being counselled together. One doctor answered that it depended on the circumstances, but did not elaborate.

## Counselling practices

As can be seen in Figure 5, over 96% of the doctors performed pre-test counselling, while over 98% performed post-test counselling [pre-test counselling: 95% confidence interval (CI), range 0.87-1.00; post-test counselling: 95% CI, range 0.90-1.00].

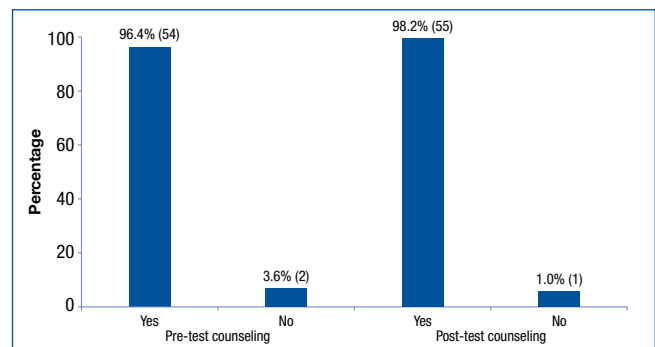


Figure 5: Pre- and post-test counselling (n = 56)

## Compliance with guidelines

All 54 doctors (100%), that answered the question whether they followed guidelines when testing, indicated that they did. Six doctors did not answer the question.

## Discussion

The findings of this study have shown that doctors in the private sector of the eThekweni Metro of KZN who participated in the study follow the 3 Cs principle of the WHO. With respect to counselling, over 96% of the doctors do pre-test and post-test counselling, while over 77% of the doctors indicated that they do not counsel or disclose patient status in the presence of an accompanying person, unless they are given permission to do so or the patient is a minor. Furthermore, all the doctors obtained patient consent prior to HIV testing. Over 90% of the doctors surveyed follow the recommended guidelines when they test patients for HIV.

Counselling is vital in the management of HIV patients. Pre-test counselling is essential, because it ensures that an individual has sufficient information to make an informed decision about having an HIV test done. It also provides patients with the skills to cope if they test positive and informs them about available support systems, thereby making them confident to take the test. The CDC recommends that all patients undergoing an HIV test be given pre-test and post-test counselling regardless of their results, based on the finding that private healthcare providers were not providing enough post-test counselling to HIV patients. Concerns were raised by both the CDC

and the American Medical Association, giving rise to a pilot project to determine the most suitable type of counselling training for these doctors.<sup>9</sup> However, in the current study, over 98% of the respondents did post-test counselling. In studies conducted both in India and Nigeria, it was found that only 47% of the respondents counselled their patients,<sup>17</sup> 39% of private healthcare providers reported breach of confidentiality of the results,<sup>18</sup> and doctors in the Nigerian study (28%) felt that it was appropriate or acceptable to reveal the patient's status to relatives.<sup>19</sup> In contrast, confidentiality appeared to be maintained by our respondents in keeping with the 3 Cs principle, evidenced by their disclosure and counselling practices. However, with regard to the analysis of blood samples, only a small minority sent these samples anonymously to the laboratory.

The study conducted in Pune, India, furthermore showed that 55% of private practitioners did not perform confirmatory tests.<sup>18</sup> However, in our study, 81% performed a confirmatory test following a positive result, while 49% performed a confirmatory test following a negative result. It is important to perform confirmatory tests if the results are negative, as the test could have been taken during the "window period", the interval between the onset of HIV infection and the appearance of detectable antibodies to the virus. During the window period an antibody test may give a false negative result, which means the test will be negative, even though a person is infected with HIV. To avoid false negative results, antibody tests are recommended three months after potential exposure to HIV infection. It is very important to note that if a person is infected with HIV, he or she may still transmit the virus to others during the window period.<sup>20</sup> Therefore a confirmatory test is important to exclude this risk. Over half of the respondents in the current study did a confirmatory test after three months as recommended, which demonstrates that private sector doctors in this region are up to date with certain HIV testing practices. However, it would be important to identify any barriers that prevent some private sector doctors from doing confirmatory tests after a negative result. It was evident from the findings of this study that not all respondents that conducted confirmatory tests were well informed about their tests, as some did not even know which laboratory method was used.

The majority (83.3%) of the respondents performed testing at patients' request, i.e. VCT. A client-initiated test or VCT still remains critical to the effectiveness of HIV prevention and implementation of precautions. However, since 2006, routine testing has been advocated by the CDC. More recently, the UNAIDS/WHO released their new HIV testing guidelines, in which they advise that healthcare workers in countries with an HIV prevalence greater than 1% routinely

offer confidential voluntary HIV tests to all patients seeking treatment at clinics or hospitals, regardless of why they initially sought care.<sup>21</sup> Routine testing has its advantages, in that people can be aware of their HIV status and provide critical information both for the diagnosis and management of a number of potentially life-threatening conditions; it will also assist in identifying a seropositive patient, so that management of the condition can be started early enough to make it a manageable chronic condition; and finally, routine testing helps protect healthcare workers from infection.<sup>5</sup>

Although 82% of doctors in another study indicated that they have conducted routine testing,<sup>18</sup> only 25% of the respondents in our cohort did so. This could be attributed to the fact that South Africa at the time of the study had not promoted routine testing, because VCT was the advocated method of testing. However, on World AIDS Day 2009, the South African State President announced that South Africa was going to commence the biggest HIV counselling and testing (HCT) campaign on 1 April 2010. The objectives of this campaign were to mobilise people to make them aware of their HIV status with access points to treatment, care and support, and to encourage people to take proactive steps towards living a healthy lifestyle irrespective of their HIV status.<sup>22</sup> The South African Minister of Health urged all healthcare workers to be part of the campaign and went on to state that all health facilities, whether public or private, should offer HCT services. In addition, the Minister of Health approved changes to the HCT guidelines, thereby requiring all healthcare workers in the public sector to offer HCT routinely to all people who enter any healthcare facility for any ailment,<sup>23</sup> thereby endorsing the new UNAIDS/WHO testing guidelines.

The doctors in this study have shown compliance with current guidelines, therefore it would only be a matter of time before doctors in the private sector will adopt the approved changes in HIV testing guidelines, if they have not already done so. A follow-up study at a later date may be able to confirm this.

In this study, the HIV antibody test, either the standard or the rapid test, was the most commonly used diagnostic method. Through communication with doctors that manage HIV patients, it was established that these tests are convenient to use as well as cost-effective. The UNAIDS/WHO also recommends this method.

### Limitations

The relatively small sample size limits the generalisability of these findings to all the private sector doctors of the eThekweni Metro. The reliability of self-reporting may also be problematic, as information was collected and analysed

based on what the doctors reported. In addition, as compliant doctors are probably more likely to participate in a voluntary study, this could be a potential source of bias. Furthermore, because this was a cross-sectional study, the direction of the association may not be causal. However, the results provide important new information, as no such study had been previously conducted among private sector doctors in South Africa.

## Conclusion

Private sector doctors from the eThekweni Metro district participating in this study adhere to guidelines when testing patients for HIV status, and their testing practices are compliant with the UNAIDS/WHO policy statement in terms of confidentiality, informed consent and counselling. However, their knowledge of confirmatory testing appears to be inadequate in some parts, as not all respondents performed these tests and, among those that did, some did not even know the name of the test used. With a massive HCT campaign in progress, it would be prudent to make doctors aware of all components of HIV testing practices.

A future study with a bigger sample size should be conducted, in order to establish the HIV testing practices of doctors in the private healthcare sector throughout the country, especially in the light of the changes to the HIV testing guidelines. The accuracy of the doctors' reporting could perhaps be validated by a survey of their patients.

## Acknowledgements

The author would like to thank DJ Lebina, NN Nzama, SS Seme and A Jezile for their help with the data collection, A Govender and A Bagwandeen for the technical support, T Esterhuizen for the statistical support, and all the participating doctors.

## References

- HIV testing policies and guidelines. World Health Organization SEARO publications on HIV/AIDS [homepage on the Internet]. c2006. Available from: [http://www.searo.who.int/en/Section10/Section18/Section356/Section426\\_1599.htm](http://www.searo.who.int/en/Section10/Section18/Section356/Section426_1599.htm)
- UNAIDS. Report on the global HIV/AIDS epidemic, 2002 [document online]. c2002. Available from: [data.unaids.org/pub/Report/2002/brglobal\\_aids\\_report\\_en\\_pdf\\_red\\_en.pdf](http://data.unaids.org/pub/Report/2002/brglobal_aids_report_en_pdf_red_en.pdf)
- UNAIDS. Report on the global HIV/AIDS epidemic, 2008 [document online]. c2008. Available from: [http://www.unaids.org/en/media/unaids/contentassets/dataimport/pub/globalreport/2008/jc1510\\_2008globalreport\\_en.zip](http://www.unaids.org/en/media/unaids/contentassets/dataimport/pub/globalreport/2008/jc1510_2008globalreport_en.zip)
- HIV and AIDS statistics for South Africa. Avert [homepage on the Internet]. No date [cited 2010 Feb 2]. Available from: <http://www.avert.org/safricacstats.htm>
- UNAIDS/WHO policy statement on HIV testing [document online]. c2004. Available from: [http://data.unaids.org/una-docs/hivtestingpolicy\\_en.pdf](http://data.unaids.org/una-docs/hivtestingpolicy_en.pdf)
- Updated fact sheet: HIV testing in the United States. Henry Kaiser Family Foundation [homepage on the Internet]. c2011. Available from: <http://www.kff.org/hiv/aids/6094.cfm>
- Daye V, Kielmann K, Sheikh K et al. Private practitioners' communications with patients around HIV testing in Pune, India. *Health Policy Plan.* 2006;21(5):343-352.
- HIV and AIDS in South Africa. Avert [homepage on the Internet]. No date [cited 2009 Jan 17]. Available from: <http://www.avert.org/aidsouthafrica.htm>
- No counseling for HIV tests: a problem at private sites. *AIDS Alert.* 1995;10(5):64-65.
- Sheikh K, Rangan S, Kielman K, et al. Private providers and HIV testing in Pune, India: challenges and opportunities. *AIDS Care.* 2005;17(6):757-766.
- Colvin M. Doctors on a learning curve. ALAFA newsletter July 2007 [document online]. c2007. Available from: <http://www.alafa.info/Downloads/ALAFA%20Newsletter%20-%20July%202007.pdf>
- Fournier PO, Baldor RA, Warfield ME, Frazier B. Patients with HIV/AIDS: physicians' knowledge, attitudes, and referral practices. *J Fam Pract.* 1997;44(1):85-89.
- Ray S. Innovative approaches to encourage doctors in Zimbabwe to refer clients for HIV counselling and testing. Proceedings of the International Conference of AIDS; 2002 Jul 7-12; Barcelona, Spain (abstract no. MoOrF1076).
- Healthcare in South Africa. MediaClubSouthAfrica.com [homepage on the Internet]. No date [cited 2009 Jan 08]. Available from: [http://www.medioclubsouthafrica.com/index.php?option=com\\_content&view=article&id=102%3Ahealthcare&catid=34%3Adevelopment\\_bg&Itemid=52](http://www.medioclubsouthafrica.com/index.php?option=com_content&view=article&id=102%3Ahealthcare&catid=34%3Adevelopment_bg&Itemid=52)
- Bridging the gap in South Africa. *WHO Bulletin.* 2010;88(11):797-876. Available from: <http://www.who.int/bulletin/volumes/88/11/10-021110.pdf>
- Naidoo P, Jinabhai CC, Taylor M. Role and contribution of private healthcare sector doctors in the management of HIV-infected patients in the eThekweni Metropolitan area of KwaZulu-Natal. *South Afr J Epidemiol Infect.* 2007;22(1):13-17.
- Sheikh K, Rangan S, Deshmukh D, et al. Urban private practitioners: potential partners in the care of patients with HIV/AIDS. *Natl Med J India.* 2005;18(1):32-36.
- Sheikh K, Rangan S, Kielmann K, et al. Private providers and HIV testing in Pune, India; challenges and opportunities. *AIDS Care.* 2005;17(6):757-766.
- Ihekweazu CA, Stark D, Gboun M, Edeoga N. Ethical considerations in the management of patients with HIV/AIDS among physicians in private practice in two Nigerian states. Proceedings of the International Conference of AIDS; 2002 Jul 7-12; Barcelona, Spain (abstract no. TuPeE5168).
- HIV testing. The different types of HIV test. Avert [homepage on the Internet]. No date [cited 2010 Feb 2]. Available from: <http://www.avert.org/testing.htm>
- UNAIDS, WHO release new HIV testing guidelines. *Medical News Today* [homepage on the Internet]. c2007. Available from: <http://www.medicalnewstoday.com/articles/72735.php>
- SANAC Secretariat. The national HIV counseling and testing campaign strategy [document online]. c2010. Available from: [www.redribbon.co.za/...v2/HCT-Campaign-Strategy-2\\_3\\_10%20final.doc](http://www.redribbon.co.za/...v2/HCT-Campaign-Strategy-2_3_10%20final.doc)
- Thom A. Motsaledi makes personal HIV testing appeal to health workers. *Health-e* [homepage on the Internet]. c2010. Available from: <http://www.health-e.org.za/news/article.php?uid=20032665>