AIDS briefs

ARVs at only R350/m

Until recently, South Africans infected with HIV have had two options for health care. Those who could afford it went to private and expensive clinics and service providers for ARV drug treatment, and generally those without financial means went to public sector clinics and took a day off work each month.

Zuzimpilo (gain health) Medical Centre is situated in the Johannesburg city centre and is the first of its kind to finally give patients and their health care providers a choice. It's a private clinic that provides comprehensive HIV/AIDS care at one-third of its cost. Doctors don't have to lose their patients either as the clinic treats only HIV/AIDS.

The notion of charging people for care has sparked much debate but in the context of South Africa, with its enormous requirement for HIV care, this model offers a bridge between private and public HIV care.

Dr Tinyiko Khosa, director of Zuzimpilo, asserts: 'The current cost of providing ARV treatment including drugs, lab tests and consultations is about R1 200 a month. Zuzimpilo Medical Centre charges only R350 monthly to cover doctors' consultations, blood tests and ARV treatment. We provide comprehensive outpatient HAART according to South African government guidelines. The small fee will help make the centre sustainable and may inspire similar centres throughout the country.'

Because of sustained economic growth, increasing numbers of people can pay for a portion of their HIV care but cannot afford health insurance. They may be reluctant to attend overburdened public sector clinics – some of which have stopped accepting new patients.

'Patients can now be treated more cost effectively and could be referred to the clinic, thanks to the support of USAID with funding from President Bush's Emergency Plan for AIDS Relief. Zuzimpilo is an initiative of the Perinatal HIV Research Unit (PHRU),' Khosa explains.

Zuzimpilo's main aim is to provide high-quality care at a one-stop clinic where virtually all consultations are by appointment. Phlebotomy is performed on site and the pharmacy is also on site, avoiding long waiting times. Patients will be able to go through voluntary HIV counselling and testing (VCT).

Those who are negative are counselled to stay negative; if people are positive, clinic staff perform a CD4 count to determine whether they need ARVs. Those not yet eligible for ARV treatment will be put on a wellness programme for guidance and education to stay as healthy as possible.

Targeted patients are those who want to know their HIV status, those who are HIV infected, and those earning less than R12 000 per month and who may be reluctant to take a day off to attend a public sector clinic. The centre is especially for people who are employed but do not yet have medical aid to get ARVs. They may even have an employer or loved one willing to pay for the cost of care.

In cases where a patient of the clinic can no longer afford the costs, Zuzimpilo is able to offer free care for several months. Should circumstances not change, the patient will be referred to a free-of-charge service in the vicinity.

The clinic aims to have 700 people on ARV treatment and another 800 on pre-ARV wellness care in the first year. It has provided care to 500 people since inception 4 months ago; 210 people have had VCT, 160 are in pre-ARV care and 130 are receiving HAART. The male:female ratio of those on HAART is 2:3.

For more information, patients can call the helpline on 0860 IMPILO (467456) or go to the website: www.zuzimpilo.co.za

Zuzimpilo is based in the historic Ansteys Building at 59 Joubert Street, corner of Jeppe Street, in central Johannesburg. The location was chosen with the hope that it will contribute to the regeneration of the inner city and can be accessed by many people owing to its proximity to public transportation.

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Genital herpes quadruples risk of HIV infection among women in Tanzania

Chronic or acute infection with genital herpes (HSV-2) increases the risk of HIV infection four or five times, according to research published online in the *Journal of Infectious Diseases*. The study took place in Tanzania and researchers found that, although other sexually transmitted infections (STIs) also increased the risk of HIV infection, approximately 63% of HIV incidence in this study was attributable to HSV-2 infection. This was even without symptomatic disease.

Researchers enrolled 1 050 women who worked at bars and in hotels in Moshi, Tanzania between December 2002 and December 2003. Of the 1 050 women enrolled, 1 044 (99.4%) provided baseline blood samples for HIV antibody testing and 199 (19.1%) were found to be already HIV positive. Of the 845 HIV-negative women at baseline, 156 did not return for any of their follow-up visits; consequently, the final sample for this analysis was 689. The 689 women were monitored every 3 months for a median of just over 1 year. During the follow-up period, there were 32 HIV seroconversions – an overall incidence rate of 4.6 per 100 person-years at risk (PYARs).

The baseline prevalence of STIs among this group of women was very high. Over half the women were infected with HSV-2, 28% had bacterial vaginosis, 20% were diagnosed with thrush, 7.5% were diagnosed with trichomonas, 5.1% were infected with chlamydia and 1% had active syphilis.

A high risk of HIV infection was seen in women with non-ulcerative bacterial vaginosis and chlamydia at baseline and among women with genital ulcer disease during follow-up. After adjusting for risk factors, the greatest risk was seen among women with active HSV-2 infection, women with a history of genital ulcer disease at follow-up and women with bacterial vaginosis or severe changes in vaginal flora at baseline.

This research adds to a growing body of evidence linking HSV-2 infection to HIV infection. The underlying biological mechanisms for this link are that subclinical mucosal reactivations occur in 90% of HSV-2 seropositive women and 80% of HSV-2 seropositive men. These reactivations also occur in 20% of daily samples and that these shedding episodes are associated with microscopic ulcerations and an influx of CD4+ T cells to the ulcerated region.

Kapiga SH, *et al. J Infect Dis* 2007; 195: 1260.
Corey L. *J Infect Dis* 2007; 195: 1242.

Parasitic infections have no effect on HIV levels in adults in Malawi

Parasitic infections, particularly infections with helminths, were more common in HIV-uninfected than in HIV-infected adult outpatients, and neither helminth infections nor antiparasitic treatment had an impact on HIV viral loads, Malawian and US researchers report in a recent edition of the *Journal of Infectious Diseases*.

Co-infection with parasites is common in African countries with high HIV prevalence and is a common cause of morbidity and mortality among the HIV infected. There has been a long-standing concern that helminth co-infections in people living with AIDS might drive the CD4 T-lymphocyte response from a Th1 to Th2 response and cause chronic immune activation. These effects might not only combine to exacerbate the virulence of both infections but might also increase the risk of HIV transmission to sexual partners or unborn babies.

Researchers looked at HIV-positive individuals in Lilongwe, Malawi. At enrolment, patients received HIV counselling and testing including viral load determinations, stool and urine samples were collected for parasitological examinations, and a demographic and clinical questionnaire was completed. One week after enrolment, all patients returned to receive treatment for the specific identified infections. HIV-infected patients and those with parasitic co-infections returned 4 weeks after treatment. Blood samples were taken again for HIV viral loads, as were stool and urine samples for parasitological examination to ascertain treatment success.

Out of 389 patients, 266 were HIV infected. At baseline, 43% of patients had evidence of at least one parasitic infection. Most had single infections; double and polyinfections were seen in 25% and 6% of patients, respectively. The commonest helminth infection was with hookworms. Overall, HIV-uninfected patients were significantly more likely to have at least one parasitic infection including a helminth, geohelminth, schistosomiasis, hookworm, or mixed infection compared with HIV-infected patients.

Lower CD4 counts were seen in patients who were not infected with parasites. There was also no significant change in HIV RNA type by type of parasitic infection, age, sex or CD4 baseline count.

The authors point out three major limitations of the study. First, worm burdens were not quantified and lighter worm burdens may not cause the immune activation or Th1 and Th2 response that is significant enough to affect HIV replication. Second, other co-endemic infections such as malaria and tuberculosis were not investigated and these are known to have an effect on HIV replication. Third, faecal stool samples may not have been enough to detect helminth infection. A more sensitive antigen detection technique would have been better. However, the study does suggest that treating parasitic infections will have no specific effect on HIV replication.

Hosseinipour M, *et al. J Infect Dis* 2007; 195: 1278-1282.

Circumcision of particular benefit to high-risk men

Research carried out in Rakai, Uganda suggests that circumcision may be of even greater benefit than originally thought, particularly among high-risk men. This is both because the benefit, for reasons as yet unclear, appears to grow over time and because the highest-risk men, namely those with multiple partners and/or with genital ulcer disease, appeared to benefit particularly.

Almost 5 000 men aged between 15 and 49 in Rakai, Uganda, were randomised either to immediate circumcision or to be offered circumcision at the end of the 2-year study. Fifty per cent of the men reported extramarital partners and 40% reported inconsistent condom use. Men who turned out to be HIV positive on screening were referred to a parallel and ongoing study of the effect of circumcision on HIV transmission by positive men. The study was stopped early when interim analysis showed that circumcised men had a significantly reduced risk of HIV acquisition.

The risk of HIV infection between circumcised and uncircumcised men was compared at follow-up visits at 6, 12 and 24 months after circumcision. Data were also gathered on rates of genital ulcer disease and urethral infections in circumcised and uncircumcised men. The men were also asked if they had had symptoms suggestive of a sexually transmitted infection, including general ulcers, discharge from the penis, or urethral pain. They were also tested for HIV and for syphilis, herpes, human papillomavirus, gonorrhoea, chlamydia and trichomoniasis at every visit.

The incidence of HIV infection in the circumcised group was reduced by 51%. The protective effect of circumcision also appeared to increase over time. HIV incidence for circumcised men was 1.19% a year from 0 to 6 months after circumcision, 0.42% from 6 to 12 months and 0.40% from 12 to 24 months. The corresponding incidence rates in uncircumcised men for the same time periods were 1.58%, 1.19% and 1.19%. This effect may be due to keratinisation of the glans penis over time, but researchers are not sure why the protective effect increases over time.

The efficacy of circumcision was 45% in men with one partner but 70% in men with 2 or more partners; it was 36% in men whose only sex was with their wives but 66% in men who had extramarital partners. This suggests that men who are at higher risk of HIV infection gain greater protection from circumcision. Researchers have speculated that this may be due to an induced mucosal immune response in regular partners. In other words, the men have acquired some immunity to the HIV of their regular partners, which has been shown in other studies.

The circumcision operation takes 20 - 25 minutes. Moderate or severe side-effects after circumcision were reported by 4% of men who remained HIV negative and 3% of the circumcised men who became infected with HIV. After the trial closure, 80% of the men in the control arm elected to be circumcised.

Gray R, *et al.* Randomized trial of male circumcision for HIV prevention in Rakai, Uganda. Fourteenth Conference on Retroviruses and Opportunistic Infections, Los Angeles, abstract 155aLB, 2007.

Wawer M, *et al.* Effects of male circumcision on genital ulcer disease and urethral symptoms, and on HIV acquisition: an RCT in Rakai, Uganda. Fourteenth Conference on Retroviruses and Opportunistic Infections, Los Angeles, abstract 155bLB, 2007.

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