



GAY COMMUNITY TO TEST HIV PREVENTION PILL



The local principal investigator of the PreP study, Professor Linda-Gail Bekker.

The recruiting of 200 HIV-negative Capetonian men who have sex with men (MSM) has begun for a (unique in Africa) clinical trial of a once-daily pre-exposure prophylactic ARV pill.

The 'proof of concept' study which kicked off locally in August this year, is part of a 2-year global study of 3 000 high-risk volunteers that hopes to add the 'HIV prevention pill' as a potent weapon to the woefully inadequate traditional prevention arsenal. The multicentre international study has already commenced in South and North America.

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There were an estimated 4.3 million new HIV infections world-wide last year, more than half of which were in sub-Saharan Africa. Some 700 000 people around the globe were started on ART in 2006, an estimated 28% of those in need. Actuarial figures suggest six new infections for every person started on therapy.

The scientists involved in the latest protective measure, operating under the Desmond Tutu HIV Foundation (DTHF) and based at the University of Cape Town, said all volunteers will get extensive safer sex counselling and condoms plus monthly testing for HIV and any other STIs.

The local principal investigator, Professor Linda-Gail Bekker, produced data countering contentions that the trial would encourage further risky sexual behaviour in a group who have an already increased risk of HIV transmission. Speaking at the 22 July study launch, she said most studies so far revealed a decline in high-risk sexual acts following the safer sex counselling and condom use promotion that have accompanied HIV vaccine and post-exposure prophylaxis trials.

More sex, fewer partners...

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The pilot study (in Cameroon, Ghana and Nigeria) showed a 'trend towards efficacy' but study was under-powered to show significant efficacy.

There were two seroconversions among those using the drug and six among those using the placebo. The two cases occurring in participants who received the drug occurred early in the study and it could not be shown whether infection occurred prior to the study's commencement. There was 'no single *bona fide* case of PreP failure' nor any significant toxicity concerns.

Bekker likened the strategy to oral contraception or malarial prophylaxis. 'By making the pill a daily routine, it becomes unlinked to sex and doesn't require a conscious action to access the treatment after a risky encounter in the

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way that POST-exposure prophylaxis would,' she said. She also stressed that the key to reducing the risk of sexual disinhibition is participant education and continual counselling. Participants would be constantly reminded that neither the study staff nor the volunteers would know who was receiving the drug and who was receiving the placebo and that the strategy is experimental with, as yet, no proven efficacy.

Any volunteer who became HIV positive would be counselled and managed, which would include including referral for ART when appropriate.

Success in Macaque monkeys

The study drug is Truvada, a mixture of tenofovir (TDF), and emtricitabine (FTC), a combination which has been shown to be 100% protective after repeated rectal exposures to HIV in Macaque monkeys. Both show high concentrations in genital tissues and fluids and, importantly, a long intracellular half-life.

Preliminary studies carried out by Bekker and Programmes Manager of the Mother City Men's Health Project, Earl Burrell, indicate the prevalence of HIV infection in a venue-based study among MSM to be 10% in Cape Town and its suburbs and up to 35% in the townships.

Burrell said one 'surprising' figure to emerge was that in the overall 34.3%



HIV-positive figure among the MSMs tested (HIV prevalence among the general local population is 25%) a full 31.5% were unaware of their status. Just over half of the MSMs surveyed 'always' used condoms, 43.1% were jobless, 26.4% used lubricating gel with condoms and 31.5% had STIs.

The study, done earlier this year, canvassed 542 'self-identified' MSMs at 16 'gay-friendly' venues across the Cape Peninsula. Of these, 57.5% reported unprotected anal intercourse in the previous 12 months with a mean of 2.9 partners and 7.3% reported participating in commercial sex work.

The researchers said this study underscored the need to focus again on the MSM population in Cape Town, a sector largely forgotten since the 1980s. Burrell said the UNAIDS 2006 report suggested that MSMs, prisoners, sex workers and intravenous drug users were among the most vulnerable at-risk populations, and yet had received only a small proportion of prevention efforts in the global fight against HIV/AIDS.

'In Cape Town it's time to recognise that we have multiple vulnerable groups,' he added.

'Complex ethical/moral debate urgently needed'

Dr Francois Venter, President of the SA HIV Clinicians Society, said there were 'precious few interventions that work... we need to explore every one of them'.

However, he added that 'there are complex operation ethical and moral debates that need to occur around

PrEP before it becomes a public health intervention – and these need to be had urgently'.

Bekker concurs: 'The research must happen – we need to know what works, but there is no doubt that it must be stressed this is experimental and we are a long way from any hint of implementation.'

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Burrell said the Medicines Control Council had approved the first version of the MSM trial while a ruling on the most recent amendment of the trial protocol was 'imminent'. No work would begin until all ethical and regulatory approvals were complete. In order to be eligible volunteers have to be born male, willing and able to provide written informed consent, be 18 years or older, HIV-1 uninfected and have taken part in any one of six high-risk behaviours to qualify. These are: (i) no condom use during intercourse with an HIV-positive male partner or (ii) male partner of unknown HIV status during the last 6 months; (iii) anal intercourse with more than 5 male sex partners during the last 6 months; (iv) exchange money, gifts, shelter or drugs for anal sex with a male partner

during the last 6 months; (v) sex with a male partner and STI diagnosis during the last 6 months or at screening; and (vi) sexual partner of an HIV-infected man with whom condoms are not consistently used.

Other criteria include being able to provide a street address of residence for themselves or one personal contact and the ability to understand and speak English, Xhosa or Afrikaans.

Trial 'fully inclusive'

Bekker said consultation with and the participation of local affected communities were a cornerstone in developing the Cape Town PrEP study. A community advisory board consisting of leaders of HIV/AIDS service organisations, lesbian, gay, bi-sexual and transvestite (LGBT) community activists and members of the at-risk community helped develop the study design, the informed consent process and recruitment strategies as well as educate the community about the trial.

Twice weekly 'open house' sessions were being held at the medical school to explain the study. The trial is sponsored by the National Institute of Health with the Bill and Melinda Gates Foundation. The other study sites are in Brazil, Ecuador, Peru, Thailand and the USA.

Bekker said the final outcome would be 2 years after the last study participant is enrolled but 'we want a result by the end of 2010'.

Chris Bateman