



Identifying acute HIV infection — a major new public health challenge

HIV/AIDS poses a huge public health challenge to South Africa, with the HIV prevalence rising steadily. South Africa now has an estimated 5.3 million adults and children living with HIV/AIDS and annual national antenatal surveillance shows an HIV prevalence of 26.5% among pregnant women.¹ By 2005, it is expected that HIV/AIDS will cost South Africa 1% of the gross domestic product and account for a staggering 75% of its health budget.²

Most of the adult HIV infections in South Africa are acquired through heterosexual contact. Sexual transmission risk is closely correlated with escalating viral load.^{3,5} It is now recognised that acute HIV infection is the most infectious stage of the disease, significantly more so than advanced AIDS.³ Risk of transmission is greatest during initial acute HIV infection when viral load is highest, with up to 50% of heterosexual transmission occurring within the first 5 months following seroconversion.³ Co-infection with sexually transmitted infections (STIs) is significantly associated with HIV transmission.⁶ Among women, high maternal viral load is also recognised as a strong risk factor for mother-to-child transmission of HIV.⁷

Identifying those with highly infectious acute HIV infection would be important for preventing transmission of HIV. Nucleic acid amplification techniques, which would identify those with acute infection, are both technically complex and expensive, particularly for a resource-poor environment such as South Africa. However, pooling sera for HIV-1 viral RNA could potentially identify those with acute HIV infection at a significantly lower cost than testing individual samples.⁸

Targeting particular 'high risk' groups with this developing technology would allow for even greater cost effectiveness. Those attending clinics for STIs would be an obvious group since they have been shown to be at greater risk for acute HIV infection.⁹ Identifying acute HIV infection in pregnant women would also be important in preventing mother-to-child transmission of the virus.

The next challenge is identifying what intervention should be offered to people with acute HIV. This may range from

counselling acutely infected persons to make them aware of their highly infectious status and providing them with condoms, to providing anti-retrovirals to decrease their viral load.

In a situation where prevention efforts are having a limited impact on the HIV epidemic in South Africa, it is crucial that imaginative and novel interventions are explored. Identifying this group, as an important factor in tackling the epidemic, may become a public health priority.

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