

Viewpoint

A serostatus-based approach to HIV/AIDS prevention and care in Africa

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Africa's HIV/AIDS epidemic has stimulated calls for increased resources,¹⁻³ science-based public-health interventions,⁴⁻⁶ and access to treatment.^{2,7} The declaration of commitment⁸ from the United Nations General Assembly Special Session on HIV/AIDS in 2001 called for a 20% reduction in the proportion of infants infected with HIV by 2005, and 50% by 2010 (in this article, HIV is used to mean HIV-1 and HIV-2). Describing lack of access to antiretroviral therapy as a global emergency, WHO and UNAIDS launched an initiative to treat 3 million people by 2005.⁷

To address prevention and care, WHO estimated that up to 180 million individuals per year will need HIV testing by 2005.⁹ Current practice around HIV testing, counselling, and consent is an obstacle to scale-up of services and attainment of targets. How to use testing is perhaps the most challenging question in HIV/AIDS policy today. We argue that universal voluntary knowledge of HIV serostatus should be a prevention goal and that facilitation of HIV testing is central to responding effectively to the epidemic in Africa.

Rights, liberties, and informed consent

HIV testing raises concerns about stigma and infringement of the rights of HIV-infected people. Central issues are autonomy and privacy, or, clinically, informed consent and confidentiality. Outside of health care, diagnosis of HIV infection is self-initiated. In clinical practice, consent is assumed for non-invasive investigations that form part of standard care. The provision of information with ability of patients to decline HIV testing, informed right of refusal or the opt-out approach, balances autonomy with usual medical practice and meets ethical standards of informed consent.

Advocates for care have emphasised social and economic rights, including the right to treatment, citing the 2001 declaration of commitment⁸ and other covenants and conventions, including those relating to women and children. Focusing on positive aspects of rights rather than negative consequences of public health action, and strengthening efforts to prevent discrimination, offer synergy between science-based HIV prevention and increased access to care. Proposals to ease HIV testing policies satisfy preconditions for potentially burdensome public health action required by the Siracusa principles.¹⁰ These are that the intervention (HIV testing) should be sanctioned by law, aimed at a legitimate public health

goal, necessary to achieve that goal, no more intrusive or restrictive than necessary, and non-discriminatory in application.

Placing HIV testing at the centre of prevention and care

HIV testing is done for different purposes in different contexts, and application of one model—voluntary counselling and testing—to all settings is inappropriate. We proposed different categories of testing in an earlier paper.¹¹ Mandatory testing is not further discussed here.

HIV testing and prevention counselling

Self-initiated HIV testing and prevention counselling allows people to voluntarily learn their status and reduce risk of acquisition or transmission of HIV infection. Ammann⁵ recently advocated universal voluntary testing irrespective of risk factors, and Frieden, commissioner of health for New York City, said everyone who had ever had sex or used drugs should know their serostatus.¹² A public health goal should be for every African adolescent and adult to know his or her HIV status, and to be retested in case of potential exposure.

The panel shows an approach to HIV prevention based on knowledge of infection status. The prevention acronym ABC (abstinence, be faithful, use condoms) ignores the possibility that partners in a relationship might unknowingly have different HIV serostatuses. In Kisumu, Kenya, the prevalence of HIV infection in women aged 15–19 years in 1997–98 was 23%, and in those aged 20–24 years reached 38.3%.¹³ Prevalence in men of the same ages was 3.5% and 12.3%, respectively.¹³ Stable

Messages for a serostatus approach to HIV/AIDS prevention and care in Africa

- Your undiagnosed HIV infection can give your partner HIV/AIDS
- Your partner's undiagnosed HIV infection can give you HIV/AIDS
- Undiagnosed HIV infection in pregnant and breast-feeding women can give children HIV/AIDS

Therefore

- 1 Learn your HIV status
- 2 Disclose your HIV status to your partner before you have sex
- 3 Never have unprotected sex with someone who is HIV-positive or whose HIV status you are uncertain of
- 4 If you are HIV-positive, abstain from sex or use a condom when having sex
- 5 If you are HIV-positive, seek medical advice, care, and support
- 6 Learn your HIV status before or during pregnancy, and, if you are HIV-positive, seek services to prevent pregnancy or transmission to your infant

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relationships in which one partner is HIV-seropositive might account for many new HIV infections in a mature, generalised epidemic.¹⁴ In rural Uganda, the age-specific incidence of HIV infection in seronegative women married to HIV-infected men was 106 times that among seronegative women whose spouses were uninfected.¹⁵ Counselling and testing of couples together can help to make both partners aware if one of them is HIV-infected, to protect the seronegative partner in such relationships, and thus reduce the risk of their children being orphaned.

Different service models for HIV testing and prevention counselling include free-standing sites, integration into health facilities, and community-based and mobile services. Clients' needs include belief in the quality of testing, confidentiality, and convenience. Uptake has been enthusiastic in different African countries¹⁶ despite limited treatment options. Because most clients are well and uninfected, HIV testing and prevention counselling is not the primary avenue for expansion for antiretroviral drug access, efforts for which should initially concentrate on clinical settings attended by symptomatic persons at greatest risk for mortality.

Routine HIV testing

Routine testing refers to HIV testing done as an integral part of a preventive health service.

Prevention of mother-to-child transmission

African programmes to reduce mother-to-child transmission have been hampered by low uptake of HIV testing and associated interventions.^{17,18} The basis of the opt-out approach to HIV testing¹⁹⁻²¹ recommended by the US Institute of Medicine²² is to do antenatal testing unless women actively refuse. All women receive standard information but emphasis is on post-test counselling for those infected with HIV. In North America, this approach resulted in increased uptake of testing,¹⁹⁻²¹ although additional efforts are required to improve other components of African programmes.

Sexually transmitted infection clinics

In Kenya, surveillance showed a 2-3 fold higher HIV prevalence in clients at sexually transmitted infection clinics than in pregnant women.²³ Clients are routinely tested for syphilis and other infections, since attendance is assumed to show a desire for diagnosis and care. Treatment of sexually transmitted infection is an important strategy in prevention of HIV,²⁴ and should be combined with routine HIV testing and counselling on risk reduction, especially to help infected people not to transmit to others.²⁵

Increased emphasis on the duty of practitioners to assist infected people in notifying their contacts, or to do so on their behalf, is consistent with international guidelines; this principle also applies to all contexts of HIV testing discussed.

Diagnostic HIV testing

Diagnostic testing refers to confidential testing of patients with disease potentially attributable to HIV. Different barriers to testing have deprived African patients of affordable interventions such as prophylaxis for opportunistic infections²⁶ and advice about prognosis and prevention. By seeking medical assistance, patients implicitly state their desire for diagnosis and care. Frequently, HIV tests are only done to confirm clinically obvious diagnoses, or as a last resort after exclusion of improbable conditions. Anecdotal reports suggest that patients are sometimes tested without their knowledge but results are

not shared with them. Professional organisations in Africa have been silent on such practices, and the rights of patients to an accurate diagnosis and the duty of physicians to provide and respond to diagnosis have been ignored.

People who are most immediately in need of antiretroviral therapy and easy to reach are symptomatic patients attending health facilities. Findings from urban Malawi²⁷ showed that 70% of medical and 36% of surgical patients were infected with HIV. Overall, 31% of cases of tuberculosis in Africa are attributable to HIV infection;²⁸ the prevalence of HIV among tuberculosis patients is generally about 3-5 times that suggested by local antenatal surveillance.²⁹ In Abidjan, 8% of children admitted to hospital and 20% of children who died were infected with HIV.^{30,31} Under such conditions, we believe that universal diagnostic HIV testing is indicated among patients with tuberculosis or in hospital—in the same way that other important blood tests are applied for investigation and care—backed up by post-test counselling and clinical and prevention support.

Harnessing new technology

Simple, rapid HIV tests providing immediate results without need for running water, electricity, or laboratories have greatly facilitated practice.^{32,33} Clients can see their own tests, increasing trust and reducing errors, and trained non-laboratory staff can do tests accurately. Rapid tests using oral fluids could further simplify and expand testing, perhaps allowing HIV testing of sputum from people with suspected tuberculosis,³⁴ and eliminating skin puncture. These and future developments, such as self-administered tests, will challenge orthodoxy further, and a balance between autonomy and protection against coercion will be needed.

Conclusions

Prevention and care in Africa need a serostatus-based approach (panel) aimed at universal voluntary knowledge of serostatus, simplified clinical testing, and prevention of discrimination. Defining different categories of testing, consent, and counselling is necessary. International agencies should reassess their HIV testing policies on the basis of public health needs and targets, and the declared global emergency relating to treatment. Of three possible positions, staying silent will abdicate leadership, and endorsing traditional practice will reinforce barriers to prevention and care; only strong guidance to promote and facilitate HIV testing will allow urgently-needed expansion of treatment and prevention services.

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Conflict of interest statement

None declared.

Contributors

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