

# COMMENTARY

## Routine Screening for HIV Infection in Booked Antenatal Women: How Justified in Developing Countries?

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Infection with the human immunodeficiency virus (HIV) has become a pandemic and has posed a great health problem both in developed and developing countries. According to a report published by the Joint United Nations Programme on HIV/AIDS and the World Health Organization, at the end of the year 2000, an estimated 36.1 million of the world's children and adults aged 15-49 years were living with HIV or AIDS.<sup>1</sup> According to the same report, during that year, 3 million people died from AIDS worldwide and 5.3 million people acquired HIV infection in 2000, with 3.8 million (71.7%) occurring in sub-Saharan Africa. In Nigeria, the prevalence of HIV infection in pregnant women has increased from 4.5% in 1996 to 5.4% in 1999.<sup>2</sup> It is estimated that approximately 6000 women of childbearing age, mostly living in developing countries acquire HIV infection everyday.<sup>3</sup>

In most developed countries, it is routine to offer screening to all pregnant women and to test them for HIV after counselling and obtaining informed consent.<sup>4,5</sup> In developing countries, this approach has also been suggested<sup>7</sup> but has not been seriously implemented. However, following the increasing incidence of HIV infection through-

out the world, a policy of routine HIV screening for pregnant women was adopted in the obstetric department of the University of Nigeria Teaching Hospital, Enugu, Nigeria, in the latter part of 1998. How justified is this routine test in our setting?

In a retrospective analysis of the antenatal records of 600 women, 234 (39%) failed to have the HIV test performed even when they had consented to it.

One of the main reasons for determining HIV status in pregnancy is to reduce mother to child transmission, taking into account that approximately 98% of HIV positive children acquire HIV from their mother during pregnancy, at delivery or through breastfeeding.<sup>3</sup> Several studies have shown that mother to child transmission of HIV can be prevented by administering antiretroviral drugs to pregnant women. Administration of Zidovudine during pregnancy, at delivery, or to the newborn has been shown to significantly reduce vertical transmission of HIV.<sup>3-5</sup> Also, the avoidance of breastfeeding and use of caesarean section as a mode of delivery may reduce vertical transmission rate.

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In developed countries where there is increasing understanding of HIV infection and better possibilities of insinuating medical prophylaxis and early therapy, there are definite advantages to individual women in knowing their HIV status. There are thus strong grounds for offering routine HIV testing in pregnancy. By contrast, in developing countries where the cost of routine screening is prohibitively high and only available to women who can pay, and where the structure for taking care of HIV positive pregnant mothers and their babies are not in place, routine screening in pregnancy is questionable. The full cost of an HIV test is borne entirely by the woman and most often is out of reach of the average woman. Thirty nine per cent of consenting women in our case series failed to have the test, probably due to consideration of cost. In addition, most of the women were nonchalant because they were aware that nothing more could be done for them even if it was discovered that they are HIV positive. Zidovudine or other antiretrovirals are out of the question, as they are not available. Even if they were, we doubt if any woman could afford more than a few tablets. Secondly, in our society where the pride of a woman in the family rests on her ability to achieve vaginal delivery, affected women would go to any length to resist caesarean section if it is offered to them. While breastfeeding may account for up to one third of cases of vertical transmission in Africa, the benefits of breastfeeding outweigh its risks, even in HIV infection, and breastfeeding is still recommended for HIV positive women in this area.<sup>10</sup>

One may therefore ask: what is the need performing a very expensive test at entirely the woman's expense when she is not in a position to benefit from the result of the test? In developing countries, therefore, the emphasis should still be on prevention through education, information and communication since the wherewithal to take care of HIV positive pregnant women and their babies is non-existent. Health education campaigns should be intensified on the mode of spread of HIV infection. Prevention and treatment of sexually transmitted diseases, changes in behavioural patterns of the people, promotion of barrier methods of contra-

ception (especially use of condoms) and the practice of monogamous faithful relationships are areas that need emphasis. In Tanzania, prevention and adequate treatment of sexually transmitted diseases has resulted in the reduction of HIV infection by 42% over two years.<sup>11</sup> Also in Magu district of rural Tanzania, local governments and village councils have enacted traditional laws to assist in the battle against HIV transmission.<sup>12</sup>

In the short term, government and other health care providers should explore other cost-effective approaches to take care of HIV positive pregnant women and their babies. Without anti-HIV treatment, mother to child transmission occurs in 21-32% of HIV positive pregnant women.<sup>13</sup> With antiretroviral treatment, this risk is reduced by 67%.<sup>17</sup> Where full treatment from antenatal to postnatal periods cannot be undertaken, probably due to considerations of cost, short-course regimen has proved helpful. Abbreviated Zidovudine prophylaxis that are begun intrapartum or in the first 24 hours of life has been found efficacious in the reduction of perinatal transmission of HIV infection from 26.6% to 9.3%.<sup>13</sup> Other studies have also confirmed the cost-effectiveness of short-course antiretroviral regimen in preventing mother to child transmission of HIV in developing countries.<sup>14,15</sup> The Paediatric Aids Clinical Trials Group Protocol 250 Team has proved the success of a simple cost-effective two-dose Nevirapine in the prevention of mother to child transmission of HIV infection.<sup>16</sup>

These cost-effective interventions are worth exploring in resource poor countries, governments and other health care providers are called upon to make this a priority. When an HIV test becomes available at a highly subsidised rate (or there is provision of an inexpensive on-site rapid testing kit), when antiretroviral agents become available and affordable, and when women become aware that these drugs can reduce vertical transmission, even in populations where there is no alternative to breastfeeding; only then will women be willing to undertake routine screening, and only then will routine screening be more meaningful and beneficial to them.

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