Integrating family planning and prevention of mother-to-child HIV transmission in resource-limited settings

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Every year, about 700 000 children under the age of 15 years are newly infected with HIV. More than 90% of paediatric HIV infections are due to mother-to-child transmission, and more than 90% are in sub-Saharan Africa.1 In June, 2001, the UN General Assembly Special Session on HIV/AIDS set targets to reduce the proportion of infants infected with HIV by 20% by 2005, and by 50% by 2010.2 The UN Interagency Task Team on Mother-to-Child Transmission of HIV Infection has proposed a four-component strategy: (1) prevent HIV infection in all people, especially young women; (2) prevent unintended pregnancies in HIV-infected women; (3) prevent HIV transmission from HIV-infected women to their infants through antiretroviral therapy, safe delivery practices, and counselling and support on infant-feeding methods; and (4) provide care and support to HIV-infected women, and their infants, and families.1

Emphasis has been placed on the third component, focusing mainly on antiretroviral interventions.1 Much less attention has focused on prevention of unintended pregnancy in HIV-infected women. This approach, however, is not only beneficial in itself, but could be as effective as antiretroviral interventions.1 We explore a strategy of integrating family planning services into existing mother-to-child prevention programmes in settings, such as sub-Saharan Africa, where HIV seroprevalence and rates of unintended pregnancy are high.

Adverse consequences of pregnancy for HIV-infected women

For women in resource-limited settings, pregnancy and the postpartum period are associated with health risks, which may be heightened for HIV-infected women.1 Although the exact contribution of HIV infection to maternal mortality is unclear, increases in HIV prevalence in women of childbearing age have been accompanied by increases in the maternal mortality ratio in several sub-Saharan African countries, including Malawi (ratio in 1992: 620 per 100 000 livebirths and in 2000: 1120 per 100 000) and Zimbabwe (1994: 283 per 100 000 and 1999: 695 per 100 000). Prospective studies noted higher risk of maternal death for HIV-infected women: 5·4-fold in Uganda and 2·2-fold (323 vs 148 per 100 000) in South Africa.2 Decreasing the pregnancy rate in HIV-infected women who do not desire more children should decrease maternal deaths.

Children of HIV-infected women are not only at risk for HIV infection. Stillbirth, low birthweight, and prematurity are more common in infants of HIV-infected women.3 Childhood mortality rates are also high (irrespective of the child’s HIV status), probably because of maternal ill health or death.3-5 Children born to HIV-infected women are at high risk for orphanhood and adverse effects on education and nutrition.3,5

Unintended pregnancy in HIV-infected women

In many areas of sub-Saharan Africa where HIV infection is common in women of reproductive age, there may be many unintended births to HIV-infected women. For example, according to recent data from nationally representative household surveys, of all births in 5 years in Kenya, only 51% were planned; in 3 years in Zambia, only 59% were planned,11,12 many to women who were HIV-infected but did not know their status. Even when aware of their status, many women lack the social support, or access to contraceptive services, to avoid an unwanted pregnancy. Of 149 postpartum women in a study in Côte d’Ivoire, more than 60% did not use contraception after delivery, although they were sexually active, and the vast majority of them (>97%) did not want another pregnancy.13 These women had a high rate of repeat pregnancy (16·5 per 100 person-years); more than half of their pregnancies were unwanted, and roughly a third were aborted.13 Similarly, of 288 Tanzanian women, the repeat pregnancy rate was 4·4 pregnancies per 100 person-years and more than 55% of these pregnancies were unwanted.14

Paradoxically, some interventions advocated by mother-to-child transmission prevention programmes might increase rates of unintended pregnancy. For example, current WHO guidelines support keeping the period of breastfeeding to a minimum for HIV-infected women. Because prolonged breastfeeding is common (roughly 20 months in Kenya and Zambia)10,11 and affords some protection against repeat pregnancy through amenorrhoea and suppressed ovulation, reducing duration of breastfeeding could inadvertently increase the risk of another pregnancy.

Contraceptive options for HIV-infected women

Contraceptive options that are appropriate for HIV-infected women are generally available, though limited in many developing countries11,12. These options include hormonal contraceptives (oral, injectable, and implantable formulations), which can provide effective and safe contraception for HIV-infected asymptomatic women and women with AIDS.13 Hormonal contraceptives can be prescribed according to guidelines used for HIV-uninfected women, although special attention is needed for women taking antiretroviral drugs.16 There is some evidence that hormonal
contraceptives increase genital tract viral shedding, but this possibility need not alter contraceptive counselling, because all HIV-infected women should be advised to use male latex condoms or female condoms to protect their sexual partners from HIV and both partners from sexually transmitted diseases. Condoms alone are also an appropriate method. WHO recommendations are that HIV-infected women can generally use intrauterine devices, but women with AIDS generally should not, unless they are clinically healthy on antiretroviral therapy.\textsuperscript{15} The suitability of surgical sterilisation should be assessed without regard to a woman’s HIV serostatus. Guidance about contraceptive options for postpartum and breastfeeding women does not vary by HIV status.\textsuperscript{15}

Service integration
Mother-to-child transmission prevention programmes often lack the budget, organisational structure, and technical expertise to provide comprehensive services. A review of programmes in 11 countries in Africa, Asia, and Latin America and the Caribbean reported that family-planning services were generally separately organised and not integrated, and often not tailored to the needs of HIV-infected women, resulting in missed opportunities to provide counselling and service (Rutenberg N, unpublished). Although strengthening existing contraceptive services will be helpful, integrated services offer unique advantages. Integration links family planning counselling and services closely in space and time to mother-to-child transmission prevention programmes. Mother-to-child transmission prevention programmes identify childbearing HIV-infected women (the target group for the second component of the UN strategy described earlier), who could be at risk for subsequent unintended pregnancy but who may not otherwise access family planning services. Integration takes advantage of mother-to-child transmission prevention providers’ knowledge of the HIV status of their clients and being sensitive to their needs. The experience of integrating family planning with other HIV services suggests that integrated services increase contraceptive use and reduce unwanted pregnancies for both HIV-positive and HIV-negative couples. At a voluntary counselling and testing site in Haiti with integrated reproductive health services, 19% of clients presenting for an HIV test became new users of a contraceptive method.\textsuperscript{17} Introducing contraceptive services into a Rwandan voluntary counselling and testing clinic resulted in increased use of hormonal contraception, reduced contraceptive discontinuation (from 50 to <15%) and a significantly reduced annual pregnancy rate in HIV-positive women (from 22% to 9%).\textsuperscript{18} Integration also increased service use in Uganda and Cambodia.\textsuperscript{19}

Integration of family planning and prevention of mother-to-child transmission offers an opportunity to integrate family planning more broadly into antenatal care. Many women do not return for postnatal follow-up. Emphasising family-planning counselling in the antenatal period and ensuring that women have access to a contraceptive method would reduce the need to re-establish contact after delivery and create an opportunity for contraception in the immediate post-partum period (eg, tubal sterilisation).

Access can also be facilitated by programme managers and policymakers. An analysis of the national strategic HIV/AIDS plans or policies of 14 African countries documented that only half mentioned family planning.\textsuperscript{20} Strengthening family planning services in general as well as integrating them into other HIV services, particularly voluntary counselling and testing and antiretroviral treatment programmes, will help ensure access. At the national level, although prevention of mother-to-child transmission and family planning are often managed separately, technical groups with representatives from both divisions can bring programme planners and managers together. Two international initiatives with a wide range of stakeholders identified opportunities for strengthening synergies between reproductive health and HIV/AIDS efforts.\textsuperscript{21,22} Programme integration has been beneficial in other areas, but we lack documentation of the effectiveness of integrating family planning services with mother-to-child transmission prevention programmes. Operations research evaluating integration efforts is needed to assess their usefulness and to improve and scale-up successful programmes.

Strengthening family planning within mother-to-child transmission prevention programmes is not without its challenges. Pregnant women might be more concerned about their recent HIV diagnosis, pregnancy, delivery, and care of the newborn than about post-partum contraception. Family planning counselling for HIV-positive women must be respectful of their rights and sensitive to their needs, including their right to make informed decisions about their current pregnancy and about involving their male partners in discussion of family planning. In some regions, maternal-child health providers are already overstretched; even so, several mother-to-child transmission prevention providers in resource-poor settings emphasise the importance of contraceptive services (Rutenberg N, unpublished).

Despite limitations, modern contraceptives are generally available in many areas with high HIV infection rates in women, and access could be facilitated for HIV-infected women who want contraception as part of mother-to-child transmission prevention programmes. This approach can be as effective at decreasing HIV infection in infants as strategies that provide antiretroviral drugs to HIV-infected pregnant women.\textsuperscript{23} Furthermore, provision of contraceptive services would provide substantial additional health benefits to HIV-infected women and their families.
Conflict of interest statement
We declare that we have no conflict of interest.

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