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Subject Headings/Subheadings

Conference summary
Contraception
Gynaecology
Infant feeding/Breastfeeding
MTCT (Mother-to-Child Transmission)
Obstetrics
PMTCT/ARV (Prevention of Mother-to-Child Transmission/AntiRetroVirals)
Primary prevention of sexual transmission/VCT (Voluntary Counselling and Testing)
Termination of pregnancy/Abortion

Citation format (by alphabetical order of the authors)

Author(s). Title. Source.
Notes (prepared by the Bordeaux Working Group)
Author address, if available (for reprints)
URL, if available (link to author abstract/full text/journal TOC)
Subject Headings

**Notes:** This report evaluated the success of a national program for the prevention of mother-to-child transmission (MTCT) of HIV-1 in 874 mother-infant pairs from Buenos Aires and surroundings. Results show that of the mothers who were referred to the National Reference Centre for AIDS for diagnosis of neonatal HIV-1 infection during 1993-2000: 72.4% were asymptomatic before 1995, this percentage significantly increased to 90.2% between 1995 and 2000 (p<.0001). 10% of mother-baby pairs who had incomplete antiretroviral therapy (ART) were under 20 years of age (p < .01) and had a history of injection drug use (IDU) (p < .02). There was an increase in the use of antiretroviral therapy during pregnancy from 3.2% in 1993-1994 to 73.1% in 1999-2000 and in the use of caesarean delivery reaching 54.8% in 1999-2000. The proportion of HIV-infected mothers who breastfed remained steady throughout the study period (12%) and the main factors related to breast-feeding were lack of ART (98%; p< .00001) and living in poor suburban areas near Buenos Aires (41%; p< .0005). Furthermore, general improvement of the conditions for decreasing MTCT resulted in a significant decrease in the proportion of infected infants from 37% before 1995 to 10.7% in 1999-2000 (p= .0005) and 6.5% during 2001. Data on the time of diagnosis indicated that only 42.7% of the women knew about their HIV status before pregnancy, 44.8% knew during pregnancy, and 12.3% knew after the birth of the child. Among 636 women, the most frequent risk factor for HIV infection was sexual contact (73%) followed by IDU (17%). This study by Ceballos et al suggests that MTCT of HIV is decreasing in this setting and as a consequence, a decrease in paediatric AIDS cases should be expected in the future. The authors conclude that although there is progress in access to treatment and caesarean delivery for HIV-infected pregnant women, there is still a substantial proportion of young women who are unaware of their HIV status until late in pregnancy or even after childbirth. Thus, strategies need to be developed to have HIV-VCT and health education more widely available.

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**Notes:** Evaluation of factors that influence the survival of HIV-1-infected infants is important for development of effective strategies to prevent and treat paediatric HIV-1 infection. Virological factors may influence survival of HIV-1 infected infants. Eshleman et al analyzed the impact of HIV-1 subtype on mother-to-child transmission (MTCT) of HIV-1 in the Ugandan clinical trial HIVNET 012. A previous study, in the nevirapine (NVP) arm (n=102 women) had found the following subtypes: 50 with subtype A, 35 with subtype D, 4 with subtype C and 13 with intersubtype recombinant HIV-1. No association was found between subtype (A vs D) and the rate of MTCT. In this report, the authors include infants in the zidovudine (AZT) arm of the same trial who were HIV-1 infected by 6 to 8 weeks of age and analyzed the survival of infants with subtype A and subtype D HIV-1 infection. HIV-1 subtyping was performed using samples from the mothers of HIV-1 infected children in both study arms: NVP (n=32) and AZT (n=54). A total of 72 infants who were diagnosed with HIV-1 infection by 6 to 8 weeks of age, were followed-up through 18 months of age. Among infants in the NVP arm, the proportion of HIV-1-infected infants who died by 18 months of age was 60% for those with subtype A infection versus 18% for those with subtype D infection. The difference was not statistically significant. The proportion of infants who died within 18 months in the AZT arm and in the NVP and AZT arms combined was similar for infants with subtype A versus subtype D (p=.352 for the subtype comparison in the combined arms). Thus, when data from the NVP and AZT arms were combined, there was no apparent association between HIV-1 subtype and infant survival. The authors highlight the relatively small sample size as a possible inability to demonstrate an association between HIV-1 subtype and infant survival and emphasize the need of further studies.

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**Notes:** A randomized, double blind, placebo controlled trial was conducted in Tanzania to examine the efficacy of vitamin supplements on HIV-1 transmission through breastmilk after 6 weeks of age, and on child mortality in the first 2 years of age. After randomization, women received one of the following four regimens, from enrollement and throughout the pregnancy and the lactating period: vitamin A alone (i), multivitamins excluding vitamin A (ii), multivitamins including vitamin A (iii), or a placebo (iv). Data were analysed with a two-by-two factorial design: multivitamins (ii & iii) vs. no multivitamin (i & iv), vitamin A (i & iii) vs. no vitamin A (ii & iv). Of the 985 born alive children, 898 had at least one blood specimen for HIV testing. The final HIV status was obtained for 580 of these children. At 12 months (and 24 months respectively), survival status was known for 94% (93%) of the children. Multivitamins had no significative protective effect on death and HIV-free survival by 24 months of age, and no effect on the overall risk of HIV transmission. However, multivitamins supplements reduced child mortality among HIV-uninfected children. Children born to immunologically and nutritionally compromised mothers had better chances of survival up to 24 months if the mothers received multivitamins. Vitamin A supplements had no effect on mortality and HIV-1 free survival. The risk of HIV-1 transmission was higher in the vitamin A arm compared with the no vitamin A group (RR=1.38, 95% CI: 1.09 - 1.76). In the vitamin A arm (and in the no vitamin A arm respectively), 15.4% (21.2%) of the children were infected at 6 weeks of age, 22.4% (28.1%) at 6 months, and 33.8% (42.4%) at 24 months. This increased occurrence of infection in the vitamin A group was unexpected and needs to be further investigated, before leading to public health recommendations. The results of this study underline also the benefits on child health of provision of multivitamins supplements to HIV-1 infected mothers during the lactation period.

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**PMTCT**


**Notes:** The objective of this study was to assess the magnitude of MTCT of HIV-1 through breastfeeding in Tanzania and its determinants. The context and the methods of the study are described in the same issue of the IR (see above). HIV-1 transmission rates were calculated on the basis of the 445 children born to mothers who did not receive vitamin A supplements, and data from 659 children who were not HIV positive at 6 weeks of age were used for the analysis of covariates. Breastfeeding was almost universally adopted in this population (96% at 3 months, 79% at 18 months), with a median duration of 20.3 months. Among uninfected infants at 6 weeks of age, HIV transmission rates through breastfeeding were 2.8% at 3 months (95% CI: 0.9 - 4.6), 7.8% at 12 months (95% CI: 4.6 - 11.1), and 17.9% at 24 months (95% CI: 11.2 - 24.5). Low CD4 cell counts, low haemoglobin at delivery, high erythrocyte sedimentation rate and breast lesions were significantly associated with HIV-1 transmission through breastmilk. These results clearly underline that early cessation of breastfeeding should be considered as an option to reduce transmission rates. Interventions enhancing immune reconstitution, such as micronutrient supplements and methods to prevent nipple cracks and mastitis are important to reduce HIV-1 transmission through breastmilk.

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**Notes:** This paper relates to HIV infection and reproductive health in adults. The authors evaluate the association between the intention to bear children and the knowledge of HIV status with its consequences on subsequent pregnancy. A total of 774 women and 859 men (individuals and couples) seeking HIV-related services in an urban public hospital in Dar es Salaam (Tanzania) and a low-income suburb clinic in Nairobi (Kenya) were recruited from the Voluntary Counselling and Testing (VCT) Efficacy Study. The longitudinal study method involved an assessment of demographic, psychosocial and sexual behaviour variables at baseline (T1), six months (T2) and 12 months (T3), followed by the randomisation of participants to either 1) a VCT intervention at T1 or 2) general health information at T1 plus VCT at T2. Study results show that younger women, not using modern contraceptives and HIV-infected were more likely to be pregnant six months after VCT. Women who were planning a pregnancy at baseline and were newly diagnosed with HIV infection reported fewer pregnancies (5.8%) than did infected women who were not planning a pregnancy (14.4%; odds ratio [OR]=0.3%; 95% CI=0.10, 0.92). HIV-infected women who were planning a pregnancy at baseline reported fewer symptoms associated with HIV disease than did infected women who were not planning a pregnancy (p<.05). These findings suggest that HIV diagnosis may have precipitated a reduction in fertility among healthier women while accelerating fertility among less healthy women. Serostatus had no direct effect on pregnancy status of men, highlighting the importance of cultural beliefs and social norms conflicting with HIV-preventive behaviours. The authors insist on the challenge of reproductive counselling of HIV-infected persons in developing countries and the opportunity lying in VCT sessions to encourage preventive dialogue between men and women.

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**Primary prevention of sexual transmission/VCT, Contraception**


**Notes:** An editorial review of the most recent findings of the PMTCT trials conducted in Africa. The authors summarize and try to put into perspective the data from five antiretroviral-based trials and the Nairobi infant feeding trial. They claim that pooling these results is inadequate but propose algebraical derivations of the available data to compute estimates of the average monthly hazard of HIV infection related to breastfeeding. In doing this, they omit that such transmission is conditional on breastfeeding exposure. This may be the primary reason why they conclude that the risk of acquisition of HIV early in life is very high. Their two main general conclusions remain however highly consensual: 1) there is a need to evaluate strategies reducing further peripartum transmission well below 5% in the African context ; 2) targeted breastmilk replacement and early weaning strategies may contribute to further reduction in early transmission and possibly late transmission but this needs to be confirmed by adequate field research.

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**PMTCT/ARV**

USAID and UNICEF. **Children on the Brink 2002/ A joint report on orphan estimates and program strategies.** Washington: USAID; 2002.

**Notes:** In 12 African countries, orphans (four out of five due to AIDS) will comprise more than 15% of children under 15 years of age by 2010. AIDS challenges the safety, health and survival of children. For example a survey in Kenya found that respectively 52% and 2% of orphaned and non-orphaned children were not in school. The third in a series, this report compiles comprehensive statistics on the historical, current and projected number of children orphaned by HIV/AIDS, covering a 1990-2010 period. It summarises the impact of HIV/AIDS on children and their caregivers, and also provides recommendations to coordinate responses from families, communities and governments to the orphan crisis.

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**PMTCT**

**Notes:** The objective of this study was to assess the effect of vitamin supplementation on weight gain during pregnancy, among HIV-1 infected pregnant women in Tanzania. The context and the methods of the study are described in the same issue of the IR (see above). Results are shown for 957 women. Multivitamin supplementation significantly increased weight gain during the third trimester, with an average total gain of 304g (95% CI : 17 - 590). Reduced risks of low total weight gain, weight loss, and low rate of weight gain were shown for women of the multivitamin arm compared with the no multivitamin arm. Vitamin A supplements did not have any significant effect on weight gain outcomes. However, women receiving multivitamins including vitamin A had lower risk of low total weight gain than women supplemented with multivitamins alone. These effects appeared to be greater for women at early stages of infection. As a conclusion, multivitamin supplementation during pregnancy improves the pattern of weight gain among HIV infected women in addition to the fact that it could be a useful method to improve pregnancy outcomes (see Fawzi et al, AIDS commented in the same issue of the IR).

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