HIV Care & PMTCT in Resource-Limited Settings

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Back Issues on Line

prepared by the Bordeaux Working Group

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Citation format (by alphabetical order of the authors): Author(s). Title. Source. Abstr. (Authors' text) or Introduction (Authors' text) or Selection (Selected sections of the paper) or Notes or Abstr. Edited (Written by the Bordeaux Working Group). Author Address, if available, Free Full Text, if available

Abstr. Objective: To provide HIV-positive mothers who opted for exclusive breastfeeding or formula feeding from birth to 6 months postpartum as a means of prevention of mother-to-child transmission (PMTCT) of HIV with a sustainable infant food support programme (FSP) from 6 to 12 months postpartum. We describe the implementation and assessment of this pilot initiative. Design: The FSP included a 6-month provision of locally produced infant fortified mix (IFM; 418 kJ/100 g of gruel) for non-breastfed infants coupled with infant-feeding and psychosocial counselling and support. Acceptability and feasibility were assessed in a subsample of sixty-eight mother-infant pairs. Setting: The FSP was developed in collaboration with local partners to support participants in a PMTCT prevention study. Formula WAS provided for free from 0 to 6 months postpartum. Cessation by 6 months was recommended for breastfeeding mothers. Results: The FSP was positively received and greatly encouraged breastfeeding mothers to cease by 6 months. As recommended, most infants were given milk as an additional replacement food, mainly formula subsidised by safety networks. Among daily IFM consumers, feeding practices were satisfactory overall; however, the IFM was shared within the family by more than one-third of the mothers. Cessation of IFM consumption was observed among twenty-two infants, seventeen of whom were fed milk and five neither of these. Conclusions: Without any food support most mothers would have been unable to provide appropriate replacement feeding. The food security of non-breastfed infants urgently needs to be addressed in HIV PMTCT programmes. Our findings on a simple cost-effective pioneer intervention provide an important foundation for this process.

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Abstr. Background We evaluated the efficacy of a maternal triple-drug antiretroviral regimen or infant nevirapine prophylaxis for 28 weeks during breast-feeding to reduce postnatal transmission of human immunodeficiency virus type 1 (HIV-1) in Malawi. Methods We randomly assigned 2369 HIV-1-positive, breast-feeding mothers with a CD4+ lymphocyte count of at least 250 cells per cubic millimeter and their infants to receive a maternal antiretroviral regimen, infant nevirapine, or no extended postnatal antiretroviral regimen (control group). All mothers and infants received perinatal prophylaxis with single-dose nevirapine and 1 week of zidovudine plus lamivudine. We used the Kaplan-Meier method to estimate the cumulative risk of HIV-1 transmission or death by 28 weeks among infants who were HIV-1-negative 2 weeks after birth. Rates were compared with the use of the log-rank test. Results Among mother-infant pairs, 5.0% of infants were HIV-1-positive at 2 weeks of life. The estimated risk of HIV-1 transmission between 2 and 28 weeks was higher in the control group (5.7%) than in either the maternal-regimen group (2.9%, P = 0.009) or the infant-regimen group (1.7%, P<0.001). The estimated risk of infant HIV-1 infection or death between 2 and 28 weeks was 7.0% in the control group, 4.1% in the maternal-regimen group (P = 0.02), and 2.6% in the infant-regimen group (P<0.001). The proportion of women with neutropenia was higher among those receiving the antiretroviral regimen (6.2%) than among those in either the nevirapine group (2.6%) or the control group (2.3%). Among infants receiving nevirapine, 1.9% had a hypersensitivity reaction. Conclusions The use of either a maternal antiretroviral regimen or infant nevirapine for 28 weeks was effective in reducing HIV-1 transmission during breast-feeding. (ClinicalTrials.gov number, NCT00164736.)

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Nevertheless, survival in patients with extensively drug-resistant tuberculosis is better than previously reported. The priorities for the country are still prevention of XDR tuberculosis, and early detection and management of multidrug-resistant and XDR tuberculosis through strengthened programmes and laboratory capacity. 

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Abstract edited. Objectives: We aimed to compare the incidence of meningococcal disease amongst HIV-infected and uninfected individuals and to evaluate whether HIV is a risk factor for mortality and bacteremia amongst patients with meningococcal disease. Design: Cohort surveillance study. Methods: We conducted laboratory-based surveillance for meningococcal disease in Gauteng Province, South Africa. HIV status and outcome data were obtained at sentinel sites. Incidence in HIV-infected and uninfected persons was calculated assuming a similar age-specific HIV prevalence in tested and untested individuals. Risk factors for death and bacteremia (as compared with meningitis) were evaluated using multivariable logistic regression. Results: From 2003 to 2007, 1336 meningococcal cases were reported. Of 504 patients at sentinel sites with known outcome, 308 (61%) had HIV serostatus data. HIV prevalence amongst cases of meningococcal disease was higher than the population HIV prevalence in all age groups. In 2005, the incidence of meningococcal meningitis was 7.5 per 100 000 population (95% CI 6.1–9.1) in HIV-infected individuals as compared to 2.1 (95% CI 1.8–2.4) in HIV-uninfected individuals. The incidence of meningococcal disease in HIV-infected individuals was elevated in all age groups with an age-adjusted relative risk of 8.2, 95% CI 6.2–10.8. The case-fatality ratio (CFR) was 20% (27/138) amongst HIV-infected and 11% (18/170) amongst HIV-uninfected individuals [odds ratio (OR) 2.1, 95% CI 1.1-3.9]. On multivariable analysis, CFR was greater amongst patients with bacteremia (35%, 29/82) compared with meningitis (7%, 16/226) (OR 7.8, 95% CI 3.4-17.7). HIV infection was associated with increased odds of bacteremia (OR 2.7, 95% CI 1.5-5.0). Conclusion: HIV-infected individuals may be at increased risk of meningococcal disease. The increased CFR in HIV-infected patients may be explained by their increased odds of bacteremia compared to meningitis.

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**Abstr.** Introduction: Data on efavirenz safety in first trimester pregnancy are conflicting. We conducted a systematic review and meta-analysis of the available evidence from observational cohorts. Methods: We ran duplicate searches of databases (up to 02 January, 2010) and searchable websites of major HIV conferences (up to February, 2010) to identify observational cohorts reporting birth outcomes among women exposed to efavirenz during the first trimester of pregnancy. Our primary endpoint was birth defects of any kind; secondary outcomes were spontaneous abortions, termination of pregnancy, stillbirths, and preterm delivery. Results: Sixteen studies met our inclusion criteria, comprising 11 prospective cohorts and five retrospective reviews. Nine prospective studies reported on rates for birth defects both among women exposed to efavirenz-containing regimens (1132 live births) and non-efavirenz-containing regimens (7163 live births) during first trimester, giving a pooled, nonsignificant relative risk of 0.87 [ 95% confidence interval (CI) 0.61-1.24%, P = 0.45]. Low heterogeneity was observed between studies (I-2 = 0, 95% CI 0-56.3%, P = 0.85). Across all studies (1256 live births), one neural tube defect (meningomyelocele) was observed with first trimester efavirenz exposure, giving a prevalence of 0.08% (95% CI 0.002-0.44%). Conclusion: We found no increased risk of overall birth defects among women exposed to efavirenz during the first trimester of pregnancy compared with exposure to other antiretroviral drugs. Prevalence of overall birth defects with first trimester efavirenz exposure was similar to the ranges reported in the general population. However, the limited sample size for detection of rare outcomes such as neural tube defects prevents a definitive conclusion. (C) 2010 Wolters Kluwer Health vertical bar Lippincott Williams & Wilkins. **Address:** Ford, N, Univ Cape Town, Ctr Infect Dis Epidemiol & Res, Za-7925 Cape Town, South Africa. Nathan.ford@joburg.msf.org

Groves AK, Maman S, Msomi S, Makhanya N, Moodley D. **The complexity of consent: women’s experiences testing for HIV at an antenatal clinic in Durban, South Africa.** Aids Care-Psychological and Socio-Medical Aspects of Aids/Hiv 2010;22(5):538-544.

**Abstr.** Informed consent has historically been a cornerstone to ensuring autonomy during HIV testing. However, recent changes to global guidance on HIV testing have led to substantial debate on what policy provisions are necessary to ensure that consent remains meaningful in the context of testing. Despite disproportionate rates of testing during pregnancy, pregnant women’s perspectives on the HIV testing process are underrepresented in the testing discourse. This study explores women’s experiences with HIV testing and the consent process in a public antenatal clinic in South Africa. Qualitative interviews with 25 women were conducted at the clinic at either an antenatal visit or an infant immunization visit that followed HIV testing. Interviews were transcribed, translated, and coded for analysis. Women were categorized into one of the three groups based on their perceptions of choice in consenting for an HIV test. Matrices were used to allow for cross-category and cross-case comparison. Half of the women described having a clear choice in their decision to test. Others were less clear about their choice. Some women felt they had no choice in testing for HIV. None of the women stated that they were tested without having signed a consent form. We found that half of the women’s narratives illustrated direct and indirect ways in which providers coerced them into taking an HIV test while receiving antenatal care. As the new guidance on HIV testing is implemented in different settings, it is critical to monitor women’s testing experiences to ensure that a woman’s right to make an informed, voluntary choice is not violated. Furthermore, models of testing that allow us to meet broader public health goals while simultaneously respecting women’s autonomy are needed. **Address:** Groves, Ak, Univ N Carolina, Dept Hlth Behav & Hlth Educ, Gillings Sch Global Publ Hlth, 319 Rosenau Hall,Cb 7440, Chapel Hill, NC 27599 USA. grovesa@email.unc.edu


**Abstr.** Despite policies, strategies, and guidelines, the epidemic of HIV-associated tuberculosis continues to rage, particularly in southern Africa. We focus our attention on the regions with the greatest burden of disease, especially sub-Saharan Africa, and concentrate on prevention of
tuberculosis in people with HIV infection, a challenge that has been greatly neglected. We argue for a much more aggressive approach to early diagnosis and treatment of HIV infection in affected communities, and propose urgent assessment of frequent testing for HIV and early start of antiretroviral treatment (ART). This approach should result in short-term and long-term declines in tuberculosis incidence through individual immune reconstitution and reduced HIV transmission. Implementation of the 3Is policy (intensified tuberculosis case finding, infection control, and isoniazid preventive therapy) for prevention of HIV-associated tuberculosis, combined with earlier start of ART, will reduce the burden of tuberculosis in people with HIV infection and provide a safe clinical environment for delivery of ART. Some progress is being made in provision of HIV care to HIV-infected patients with tuberculosis, but too few receive co-trimoxazole prophylaxis and ART. We make practical recommendations about how to improve this situation. Early HIV diagnosis and treatment, the 3Is, and a comprehensive package of HIV care, in association with directly observed therapy, short-course (DOTS) for tuberculosis, form the basis of prevention and control of HIV-associated tuberculosis. This call to action recommends that both HIV and tuberculosis programmes exhort implementation of strategies that are known to be effective, and test innovative strategies that could work. The continuing HIV-associated tuberculosis epidemic needs bold but responsible action, without which the future will simply mirror the past.

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Abstr. Background: Once-daily dosing of abacavir and lamivudine has been approved for adults, but paediatric data are insufficient. We conducted a pharmacokinetic study of once-daily and twice-daily abacavir and lamivudine in children aged 3<36 months. Methods: Children with stable HIV type-1 (HIV-1) RNA levels after 12 weeks treatment with twice-daily abacavir (8 mg/kg) with or without lamivudine (4 mg/kg) underwent plasma pharmacokinetic sampling. Children then switched to once-daily abacavir (16 mg/kg) with or without lamivudine (8 mg/kg), and sampling was repeated 4 weeks later. The area under the plasma concentration-time curve over 24 h (AUC(0-24)) and the maximum concentration (C-max) were compared using geometric mean ratios (GMRs); 90% confidence intervals (CIs) within the range of 0.80-1.25 were considered bioequivalent. Results: A total of 18 children (4, 6 and 8 in the 3<12, 12<24 and 24<36 month age ranges, respectively) provided pharmacokinetic data for abacavir (17 for lamivudine). The GMR of AUC(0-24), once-daily versus twice-daily, was 1.07 (90% CI 0.92-1.23) for abacavir and 0.91 (90% CI 0.79-1.06) for lamivudine. C-max almost doubled on once-daily versus twice-daily dosing: abacavir and lamivudine GMRs were 2.04 (90% CI 1.73-2.42) and 1.78 (90% CI 1.52-2.09), respectively. At baseline, 12, 24 and 48 weeks, 89%, 94%, 100% and 89% of children had HIV-1 RNA<400 copies/ml, respectively. Conclusions: Bioequivalence was demonstrated on AUC(0-24) between twice-daily and once-daily abacavir; very similar AUC(0-24) values were seen for twice-daily and once-daily lamivudine. Given that viral load suppression rates were maintained, these data suggest that once-daily abacavir and lamivudine might be an option for children aged 3<36 months.

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Abstr. Background: The Prevention of Mother to Child Transmission of HIV (PMTCT) programme was introduced at Bindura Hospital in 2003. Seven additional satellite PMTCT clinics were set up in the district to increase service coverage but uptake of PMTCT interventions remained unsatisfactory. In this study we determined the prevalence of and factors associated with non-adherence to the single dose nevirapine (SD-NVP) regimen for PMTCT in Bindura town. Methods: An analytic cross-sectional study was conducted in four health institutions in Bindura town. Participants were mother-baby pairs on the PMTCT programme attending routine six weeks post natal visits in the participating health institutions from March to July 2008. We interviewed 212 mothers using a structured questionnaire. Results: The non-adherence rate to the maternal nevirapine dose was 30.7%, while non-adherence to
the newborn nevirapine dose was 26.9%. The combined mother-baby pair nevirapine non-adherence was 42.9%. Non-adherence to the maternal dose of nevirapine was associated with lack of maternal secondary education (POR = 2.38; 95% CI: 1.05-3.39) and multi-parity (POR = 2.66; 95% CI: 1.05-6.72), while previous maternal exposure to the PMTCT programme (POR = 0.22; 95% CI: 0.08-0.57) and giving the mother a NVP tablet to take home during antenatal care (POR = 0.03; 95% CI: 0.01-0.09) were associated with improved maternal adherence to nevirapine. Non-adherence to the infant dose of nevirapine was associated with maternal non-disclosure of HIV results to sexual partner (POR = 2.75; 95% CI: 1.04-7.32) and home deliveries (POR = 48.76; 95% CI: 17.51-135.82). Conclusions: Non-adherence to nevirapine prophylaxis for PMTCT was high in Bindura. Ensuring institutional deliveries, encouraging self-disclosure of HIV results by the mothers to their partners and giving HIV positive mothers nevirapine doses to take home early in pregnancy all play significant roles in improving adherence to PMTCT.

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Abstr. Objective: To determine the baseline prevalence of tuberculosis (TB) in a cohort using a strategy of intensive pretreatment screening for TB and the subsequent incidence rate and temporal distribution of cases during the first year of antiretroviral therapy (ART). Design: Prospective observational community-based ART cohort in South Africa. Methods: Adults enrolling for ART and who did not have a current TB diagnosis were intensively screened for TB at baseline using culture of two sputum samples, chest radiography and investigations for extrapulmonary disease as required. Patients who developed symptoms consistent with incident TB during ART were similarly investigated. Results: Two hundred forty-one patients had a median CD4 cell count of 125 cells/μl (interquartile range 70-186) and 200 (83%) started ART. TB was diagnosed in 87 (36%) patients, with 82% of pulmonary cases being culture-proven. Most TB cases (87%) were prevalent disease detectable at baseline, whereas just 11 (13%) were incident cases that presented during the first year of ART. The incidence rate during 0-4 months of ART was similar to the rate during months 5-12 of ART [10.9 (95% confidence interval [CI] 4.6-23.3) cases per 100 person-years versus 8.1 (95% CI 3.6-18.0) cases per 100 person-years]. Conclusion: Systematic culture-based screening detected a very high burden of prevalent TB present at baseline. This intensified screening strategy was associated with an approximately two-fold lower incidence rate in the first 4 months of ART than previously observed in this cohort. This suggests that many incident cases of symptomatic TB presenting during early ART can be detected as prevalent disease prior to ART initiation using sensitive diagnostic tests.

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Abstr. Background: Pneumocystis pneumonia (PCP) is a major cause of hospitalization and mortality in human immunodeficiency virus (HIV)-infected African children. Aim: The aim of this study was to investigate the incidence and outcome of PCP in South African children living in a high HIV-prevalence area in the context of a free, available antiretroviral therapy program. Methods: Sequential children hospitalized with hypoxic pneumonia were prospectively enrolled from November 2006 to August
2008. Sociodemographic, historical, clinical, and outcome data were collected. A nasopharyngeal aspirate and lower respiratory tract sample (induced sputum or bronchoalveolar lavage) were submitted for PCP immunofluorescence. Lower respiratory tract samples were also investigated for bacterial, mycobacterial, and viral pathogens. Results: A total of 202 children were enrolled; 124 (61.4%) were HIV-infected; 34 (16.8%) were HIV-exposed but uninfected and 44 (21.8%) were HIV-unexposed. Among HIV-exposed children, 70 (44.3%) had participated in the Prevention of Mother to Child Transmission program, but only 18.4% were taking trimethoprim-sulfamethoxazole prophylaxis. PCP occurred in 43 children (21.3%) of whom 33 (76.7%) were HIV-infected. The case fatality of children with PCP was higher than those without PCP (39.5% vs. 21.4%; relative risk, 1.85; 95% confidence interval, 1.15-2.97; P = 0.01). Conclusions: PCP is a common cause of hypoxic pneumonia and mortality in HIV-infected South African infants. Underuse of the Prevention of Mother to Child Transmission program and failure to institute trimethoprim-sulfamethoxazole prophylaxis in HIV-exposed children identified through the program are important obstacles to reducing PCP incidence.

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Abstr. Background. As prevention of mother-to-child transmission of HIV (PMTCT) programs and HIV treatment programs rapidly expand in parallel, it is important to determine factors that influence the transition of HIV-infected women from maternal to continuing care. Design. This study aimed to determine rates and co-factors of accessing HIV care by HIV-infected women exiting maternal care. A cross-sectional survey of women who had participated in a PMTCT research study and were referred to care programs in Nairobi, Kenya was conducted. Methods. A median of 17 months following referral, women were located by peer counselors and interviewed to determine whether they accessed HIV care and what influenced their care decisions. Fisher's exact test was used to assess the association between client characteristics and access to care. Results. Peer counselors traced 195 (82%) residences, where they located 116 (59%) participants who provided information on care. Since exit, 50% of participants had changed residence, and 74% reported going to the referral HIV program. Reasons for not accessing care included lack of money, confidentiality, and dislike of the facility. Women who did not access care were less likely to have informed their partner of the referral (p=0.001), and were less likely believe that highly active antiretroviral therapy (HAART) is effective (p0.01). Among those who accessed care, 33% subsequently discontinued care, most because they did not qualify for HAART. Factors cited as barriers to access included stigma, denial, poor services, and lack of money. Factors that were cited as making care attractive included health education, counseling, free services, and compassion. Conclusion. A substantial number of women exiting maternal care do not transit to HIV care programs. Partner involvement, a standardized referral process and more comprehensive HIV education for mothers diagnosed with HIV during pregnancy may facilitate successful transitions between PMTCT and HIV care programs.

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Abstr. Aim To evaluate the long-term safety and effectiveness of lopinavir/ritonavir (LPV/r) in a population-based cohort of HIV-1-infected children. Methods All children enrolled in the Swiss Mother and Child HIV Cohort Study, treated with LPV/r-based combination antiretroviral treatment (cART) between November 2000 and October 2008, were included. Results 88 children (25 (28%) protease inhibitor (PI)-naive, 16 (18%) ART-naive) were analysed (251 patient-years on LPV/r). After 48 weeks on LPV/r, 70 children had a median (interquartile range (IQR)) decrease in HIV-1 viral load of 4.25 log (5.45-3.17; PI-naive, n=17) and 2.53 (3.68-1.38; PI-experienced, n=53). Median (IQR) increase in CD4 count was 429 (203-593; PI-naive) and 177 (21-331; PI-experienced) cells/mu l. These effects remained stable throughout 192 weeks for 25 children. Treatment was stopped for viral rebound in

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seven and suspected toxicity in 12 children. Conclusion Long-term treatment with LPV/r-based cART is safe and effective in HIV-1-infected children.

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Abstr. Background The most effective highly active antiretroviral therapy (HAART) to prevent mother-to-child transmission of human immunodeficiency virus type 1 (HIV-1) in pregnancy and its efficacy during breast-feeding are unknown. Methods We randomly assigned 560 HIV-1-infected pregnant women (CD4+ count, >= 200 cells per cubic millimeter) to receive coformulated abacavir, zidovudine, and lamivudine (the nucleoside reverse-transcriptase inhibitor [NRTI] group) or lopinavir-ritonavir plus zidovudine-lamivudine (the protease-inhibitor group) from 26 to 34 weeks' gestation through planned weaning by 6 months post partum. A total of 170 women with CD4+ counts of less than 200 cells per cubic millimeter received nevirapine plus zidovudine-lamivudine (the observational group). Infants received single-dose nevirapine and 4 weeks of zidovudine. Results The rate of virologic suppression to less than 400 copies per milliliter was high and did not differ significantly among the three groups at delivery (96% in the NRTI group, 93% in the protease-inhibitor group, and 94% in the observational group) or throughout the breast-feeding period (92% in the NRTI group, 93% in the protease-inhibitor group, and 95% in the observational group). By 6 months of age, 8 of 709 live-born infants (1.1%) were infected (95% confidence interval [CI], 0.5 to 2.2): 6 were infected in utero (4 in the NRTI group, 1 in the protease-inhibitor group, and 1 in the observational group), and 2 were infected during the breast-feeding period (in the NRTI group). Treatment-limiting adverse events occurred in 2% of women in the NRTI group, 2% of women in the protease-inhibitor group, and 11% of women in the observational group. Conclusions All regimens of HAART from pregnancy through 6 months post partum resulted in high rates of virologic suppression, with an overall rate of mother-to-child transmission of 1.1%. (ClinicalTrials.gov number, NCT00270296.).

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Abstr. Expanded access to antiretroviral therapy (ART) offers opportunities to strengthen HIV prevention in resource-limited settings. We invited 27 ART programmes from urban settings in Africa, Asia and South America to participate in a survey, with the aim to examine what preventive services had been integrated in ART programmes. Twenty-two programmes participated; eight (36%) from South Africa, two from Brazil, two from Zambia and one each from Argentina, India, Thailand, Botswana, Ivory Coast, Malawi, Morocco, Uganda and Zimbabwe and one occupational programme of a brewery company included five countries (Nigeria, Republic of Congo, Democratic Republic of Congo, Rwanda and Burundi). Twenty-one sites (96%) provided health education and social support, and 18 (82%) provided HIV testing and counselling. All sites encouraged disclosure of HIV infection to spouses and partners, but only 11 (50%) had a protocol for partner notification. Twenty-one sites (96%) supplied male condoms, seven (32%) female condoms and 20 (91%) provided prophylactic ART for the prevention of mother-to-child transmission. Seven sites (33%) regularly screened for sexually transmitted infections (STI). Twelve sites (55%) were involved in activities aimed at women or adolescents, and 10 sites (46%) in activities aimed at serodiscordant couples. Stigma and discrimination, gender roles and funding constraints were perceived as the main obstacles to effective prevention in ART programmes. We conclude that preventive services in ART programmes in lower income countries focus on health education and the provision of social support and male condoms. Strategies that might be equally or more important in this setting, including partner notification, prompt...
diagnosis and treatment of STI and reduction of stigma in the community, have not been implemented widely.

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Abstr. Objective: To estimate the effect of delaying antiretroviral treatment (ART) for 15, 30, or 60 days after tuberculosis (TB) treatment initiation on mortality and virological suppression. Design: Cohort of 573 ART-naive HIV-infected children initiated on TB treatment at an outpatient clinic in South Africa between April 2004 and March 2008. Methods: Hazard ratios for mortality and viral suppression were estimated using marginal structural models and multivariate Cox models, respectively. Results: During follow-up (median 9.64 months), 37 HIV-infected children died after a median of 62 days of TB treatment. ART was initiated in 461 children at a median of 17 days after TB treatment initiation, 415 (90%) achieved viral suppression. The hazard ratios of death for initiating ART more than 15, more than 30, or more than 60 days of TB treatment compared with initiating within 15, 30 and 60 days, respectively, were 0.82 (95% CI: 0.48, 1.41), 0.86 (95% CI: 0.46, 1.60), and 1.32 (95% CI: 0.55, 3.16). Hazard ratios for analysis restricted to severely immunosuppressed children were: 0.92 (95% CI: 0.51, 1.63), 1.08 (95% CI: 0.56, 2.08), and 2.23 (95% CI: 0.85, 5.80), respectively. Hazard ratios for viral suppression were 0.98 (95% CI: 0.76, 1.26), 0.95 (95% CI: 0.73, 1.23), 0.84 (95% CI: 0.61, 1.15), respectively and did not change with restriction to children severely immunosuppressed. Conclusion: In this observational study, we found that delaying ART for 2 months or more in children diagnosed with TB may be associated with poorer virological response and increased mortality, particularly in children with severe immunosuppression. These findings should be confirmed in a randomized controlled trial.

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Abstr. Background: Coinfection of hepatitis B virus (HBV) or hepatitis C virus (HCV) may compromise pediatric antiretroviral therapy (ART) in China. In this study, we evaluated the seroprevalence of HBV and HCV in children receiving ART and associated factors. Methods: Patients were selected from HIV-1-infected children under age 16 enrolled in China National Pediatric ART Cohort since July 2005. Medical assessments, hepatitis B surface antigen (HBsAg), and anti-HCV antibody serologies, and transaminase levels were obtained for analysis. Results: A total of 53 of 1082 children tested were HBsAg seropositive [4.9%; 95% confidence interval (CI): 3.6% to 6.2%], and 90 of 938 children tested were anti-HCV antibody positive (9.6%; 95% CI: 7.7% to 11.5%). No other serologic assays were performed for HBV detection. Age was associated with HBV coinfection in univariate analysis; older children were more likely to be HBsAg positive. Multivariate analysis revealed that children infected with HIV through transfusion of contaminated blood or blood products were more likely to be anti-HCV antibody positive than those infected with HIV through other routes (adjusted odds ratio = 6.2; 95% CI: 3.3% to 11.7%). Conclusions: The high prevalence of HBV and HCV coinfection in HIV-infected children in China receiving ART demands routine screening for viral hepatitis coinfection, intensive prevention of childhood HBV and HCV transmission, and modification of the management of pediatric HIV infection.

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