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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** (Written by the Bordeaux Working Group). **Author Address**, if available, **Free Full Text**, if available

Baeten JM, Chohan B, Lavreys L, Chohan V, McClelland RS, Certain L, Mandaliya K, Jaoko W, Overbaugh J. **HIV-1 subtype D infection is associated with faster disease progression than subtype A in spite of similar plasma HIV-1 loads.** *Journal of Infectious Diseases* 2007;195(8):1177-1180.

Abstr. We investigated the effect of human immunodeficiency virus type 1 (HIV-1) subtype on disease progression among 145 Kenyan women followed from the time of HIV-1 acquisition. Compared with those infected with subtype A, women infected with subtype D had higher mortality (hazard ratio, 2.3 [95% confidence interval, 1.0-5.6]) and a faster rate of CD4 cell count decline ($P=.003$). The mortality risk persisted after adjustment for plasma HIV-1 load. There were no differences in plasma viral load by HIV-1 subtype during follow-up. HIV-1 subtype D infection is associated with a 12-fold higher risk of death than subtype A infection, in spite of similar plasma HIV-1 loads.

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Kikaire B, Khoo S, Walker AS, Ssali F, Munderi P, Namale L, Reid A, Gibb DM, Mugenyi P, Grosskurth H. **Nevirapine clearance from plasma in African adults stopping therapy: a pharmacokinetic substudy.** *AIDS* 2007;21(6):733-737.

Abstr. Objective: To measure nevirapine elimination in African adults undertaking a structured treatment interruption (STI) in the DART trial. Design: Cohort (16 women, 5 men; median weight 61 kg) within a randomized trial of management strategies. Methods: Plasma nevirapine was measured by validated high performance liquid chromatography at 0,1,2,3 and 4 weeks after stopping the drug in a subset of patients undertaking an STI. All patients continued lamivudine plus zidovudine/stavudine for a further 7 days. Results: Two patients with no or low plasma nevirapine concentration at baseline were excluded. Geometric mean plasma concentration when nevirapine was stopped in the remaining 19 patients was 6421 ng/ml (range, 3724-9473). Nevirapine was detected in 15/18 (83%) patients at 1 week, and 5/19 (26%) patients at 2 weeks but was not found any samples collected after 2 weeks. Only one patient had > 100 ng/ml (limit of quantification) at 2 weeks (415 ng/ml, female). The median times to reach thresholds of 200, 100 and 20 ng/ml (limit of detection) were estimated to be 7.6 [interquartile range (IQR), 7.0-10.1], 9.3 (IQR, 8.7-13.0) and 13.2 (IQR, 12.3-18.4) days, respectively, with 3/19 (16%) and 14/19 (74%) estimated to have reached < 20 ng/ml by 7 and 14 days, respectively. Conclusion: Although elimination of nevirapine was faster than previously published after a single dose, the data suggest that an additional staggered period of 7-10 days with dual nucleotide reverse transcriptase inhibitor cover is necessary for African patients discontinuing nevirapine.

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Moore D, Liechty C, Ekwaru P, Were W, Mwima G, Solberg P, Rutherford G, Mermin J. **Prevalence, incidence and mortality associated with tuberculosis in HIV-infected patients initiating antiretroviral therapy in rural Uganda.** *AIDS* 2007;21(6):713-719.

Abstr. Background: Tuberculosis (TB) is the leading cause of death among people with HIV in sub-Saharan Africa. Expanding access to antiretroviral therapy (ART) may reduce the burden of TB, but to what extent is unknown. Methods: In a study of 1044 adults who initiated home-based ART in Tororo, Uganda between 1 May 2003 and 30 June 2005, participants were screened for active TB at baseline and then monitored at weekly home visits. Participants with TB at baseline or follow-up were compared with those without TB to determine factors associated with mortality in those with TB. Results: At baseline, 75 (7.2%) subjects had TB and a total of 53 (5.5%) were diagnosed with TB over a median of 1.4 years of follow-up (3.90 cases/100 person years). Cumulative mortality was 17.9/100person-years for those with TB and 3.8/100person-years for those without TB ($P < 0.001$). Mortality was associated with lowbaseline CD4 cell counts [relative hazard (RH), 0.99 per 1 cell/ μ l increase; $P = 0.03$] and marginally associated with a body mass index ≤ 18 (RH, 2.04; $P=0.10$) and increasing age (RH, 1.04 per

year; $P=0.11$). TB incidence and TB-associated mortality were highest within the first 6 months of ART and declined to 52% and 61% of expected values, respectively, from months 7 to 18 after ART initiation. Conclusion: TB remains an important cause of illness and death in patients receiving ART in Uganda. However, both appear to decline markedly, after 6 months of ART.

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O' Brien D, Sauvageot D, Olson D, Schaeffer M, Humblet P, Pudjades M, Ellman T, Zachariah R, Szumilin E, Arnould L, Read T. **Treatment outcomes stratified by baseline immunological status among young children receiving nonnucleoside reverse-transcriptase inhibitor-based antiretroviral therapy in resource-limited settings.** *Clinical Infectious Diseases* 2007;44(9):1245-1248.

Abstr. A study of 568 children aged < 5 years who commenced non-nucleoside reverse-transcriptase inhibitor-based antiretroviral therapy in resource-limited settings revealed good early outcomes. After 12 months of antiretroviral therapy, survival probability was 0.89 (95% confidence interval, 0.86 - 0.92), with no significant difference among children stratified on the basis of baseline immunological levels; 62% attained a CD4 cell percentage $\geq 125\%$, and 7% continued to have a CD4 cell percentage < 15%.

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<http://www.journals.uchicago.edu/CID/journal/issues/v44n9/41699/41699.web.pdf>

Richardson BA, Otieno PA, Mbori Ngacha D, Overbaugh J, Farquhar C, John Stewart GC. **Hormonal contraception and HIV-1 disease progression among postpartum Kenyan women.** *AIDS* 2007;21(6):749-753.

Abstr. Objective: To assess the immediate and longer-term effects of the use of hormonal contraception on the progression of HIV-1 disease in postpartum women. Design: A prospective cohort study. Methods: Information on contraceptive use, breastfeeding and intercurrent illnesses was obtained from HIV-infected postpartum Kenyan women monthly in the first year postpartum and quarterly in the second year. Blood was collected for T-cell subset analyses and HIV-1 -RNA levels at months 1, 3, 6, 9, 12, 18, and 24 postpartum. The immediate effect of the initiation of oral contraceptive pills (C)CP and depot medroxyprogesterone acetate (DMPA) was assessed by comparing the change in the HIV-1 RNA plasma viral load and CD4 T-cell counts among women remaining off these contraceptive methods with those initiating them. The longer-term effects of C)CP and DMPA on disease progression were assessed using Loess curves and linear mixed effects models to compare changes over the first 24 months postpartum in these same disease progression markers. Results: There were no significant immediate or longer-term effects of the use of C)CP or DMPA on HIV-1-RNA plasma viral loads and CD4 T-cell counts in this cohort of HIV-infected postpartum Kenyan women. Conclusion: Comprehensive contraceptive counselling for HIV-1-infected women requires an understanding of the effects of various contraceptive methods on HIV-1 disease progression. In this study, hormonal contraception reassuringly had no immediate or longer-term effects on the rate of disease progression in chronically HIV-1-infected postpartum women. This highly effective family planning method may provide a useful and safe option for the prevention of mother-to-child transmission of HIV-1.

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Schulte J, Dominguez K, Sukalac T, Bohannon B, Fowler MG. **Declines in low birth weight and preterm birth among infants who were born to HIV-infected women during an era of increased use of maternal antiretroviral drugs: Pediatric spectrum of HIV disease, 1989-2004.** Pediatrics 2007;119(4):E900-E906.

Abstr. OBJECTIVE. Our goal was to determine trends in low birth weight and preterm birth among US infants born to HIV-infected women. METHODS. We used data from the longitudinal Pediatric Spectrum of HIV Disease, a large HIV cohort, to assess trends in low birth weight and preterm birth from 1989 to 2004 among 11 321 study infants. Among women with prenatal care, we also assessed risk factors, including maternal antiretroviral therapy during pregnancy, that were predictive of low birth weight and preterm birth using univariate and multivariate logistic regression models. RESULTS. Overall, 11 231 of 14 464 infants who were enrolled in Pediatric Spectrum of HIV Disease were tested during the neonatal period. From 1989 to 2004, testing increased from 32% to 97%. The proportion of HIV-exposed infants who had low birth weight decreased from 35% to 21% and occurred in all racial/ ethnic groups. Prevalence of preterm birth decreased from 35% to 22% and occurred in all groups. Any maternal antiretroviral therapy use increased from 2% to 84%. Among 8793 women who had prenatal care, low birth weight was associated with a history of illicit maternal drug use, unknown maternal HIV status before delivery, symptomatic maternal HIV disease, black race, Hispanic ethnicity, and infant HIV infection. Antiretroviral therapy or lack of it was not associated with low birth weight. Among women with prenatal care, preterm birth was associated with a history of illicit maternal drug use, symptomatic maternal HIV disease, no antiretroviral therapy, receipt of a 3-drug highly active antiretroviral therapy regimen with protease inhibitors, black race, and infant HIV infection. CONCLUSIONS. The proportion of infants who had low birth weight or were born preterm declined during an era of increased maternal antiretroviral therapies. These Pediatric Spectrum of HIV Disease trends differ from the overall increases in both outcomes among the US population.

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Shah B, Walshe L, Saple DG, Mehta SH, Ramnani JP, Kharkar RD, Bollinger RC, Gupta A. **Adherence to antiretroviral therapy and virologic suppression among HIV-infected persons receiving care in private clinics in Mumbai, India.** Clinical Infectious Diseases 2007;44(9):1235-1244.

Abstr. Background. Adherence to antiretroviral therapy (ART) and correlates of adherence and virologic suppression among human immunodeficiency virus (HIV)-infected persons receiving ART in private, outpatient clinics in India is unknown. Methods. Between December 2004 and April 2005, persons receiving ART at 3 private clinics in Mumbai, India, were interviewed regarding HIV care and adherence to ART. Physicians also completed a survey for each participant. Quantitative HIV-1 RNA level was determined for 200 participants. Results. Of 279 participants, 73% reported $\geq 95\%$ adherence to ART. Adherence was positively associated with age ≥ 50 years (adjusted odds ratio [aOR], 3.90), presence of comorbid conditions (aOR, 1.92), medication self-efficacy (aOR, 4.01), absence of pain in the past month (aOR, 2.14), and support from family and friends (aOR, 2.57). Lack of reminders from family members to take medication (aOR, 0.27) was negatively associated with adherence. Of 200 participants, 127 (63.5%) had virologic suppression (RNA level, < 400 copies/mL). Independent correlates of suppression were a regimen containing ≥ 3 ART drugs (aOR, 5.52), first ART regimen (aOR, 3.28), adherence to therapy $\geq 95\%$ (aOR, 5.70), female sex (aOR, 3.19), and a physical component score ≥ 50 (aOR, 1.07). Conclusion. Self-reported adherence to ART in a sample of patients attending Mumbai's private clinics was relatively high. However, the fact that a detectable viral level was found in nearly 40% of patients suggests that second-line ART regimens, as well as an emphasis on adherence and appropriate ART regimens in India, is needed.

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