based on WHO / National guideline criteria’s. Like first line ART combinations for initiating treatment and second line ART combinations for treating first line treatment failure conditions. There are many combinations of first line drugs and it is important to define are all these first line regimens equally effective in real clinical set ups.

Methods: We conducted a retrospective chart review of the outcome of different ART regimens among 300 HIV-infected patients whose CD4 count was less than 200 cells/mm³ on initiation of ART and has regular follow-up at Gondar University Hospital in Gondar, Ethiopia between September 2008 and March 2009, who received standard first line combination ART regimens. Group 1 (N=100) include those treated with AZT, 3TC, EFV/NVP combinations, Group 2 (N=100) include those treated with D4T, 3TC, EFV/NVP combinations and Group 3 (N=100) include those treated with TDF, 3TC, EFV/NVP combinations.

Results: There were no difference between Group 1, 2 and 3 with regard to: IRIS [Ten (10%), Thirteen (13%) and Eleven (11%), P=ns] respectively; new opportunistic infections [Four (4%), Seven (7%), and Three (3%), P=ns] respectively; average CD4 increment by 30% [Eighty (80%), Seventy six (76%), and Eighty three (83%), P=ns] respectively and death [Six (6%), Five (5%), and Four (4%), P=ns] respectively. However, adverse drug side effect occurs more frequently in Group 1 and 2 than in Group 3 [Eighteen (18%) and Twenty (20%) versus Three (3%), P=0.03] respectively, which more frequently resulted poor adherence in Group 1 and 2 than Group 3 [Seventeen (17%) and Sixteen (16%) versus Three (3%), P=0.05] respectively.

Conclusion: This manuscript shows that in a retrospective review of HIV patients who are in different Antiretroviral drug combination regimens attending follow ups at GUH, the clinical and immunological responses for the different ART regimens are similar and comparable however it depicts differences in areas of drug side effects and adherence problems. Therefore different first line ART drug combinations selection in resource poor countries can be guided by drugs side effect and adherence issues.

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55.002

Comparison of efavirenz and nevirapine based HAART regimens in 4187 patients with up to 6 years of follow up, a prospective, open label observational study

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Background: Non nucleoside reverse transcriptase inhibitors (NNRTI) based regimens are widely recommended as 1st line HAART and they are preferred in resource constrained settings due to high efficacy and low cost. Few studies compare effectiveness of efavirenz (EFV) and nevirapine (NVP) in large, prospective cohorts with extended follow up (f/u). Objective: To determine the effectiveness, rate of discontinuation or change, toxicity and mortality of patients with EFV versus NVP based regimens as initial HAART in a nation wide cohort.

Methods: Prospective, open label, f/u of patients enrolled in the Chilean AIDS Cohort (ChiAC) from October 2001 to March 2008. All subjects receiving at least one dose of EFV or NVP were included. Primary outcomes were survival, maintenance of initial HAART, reason for change of NNRTI, viral suppression and immune recovery.

Results: Of 5120 patients initiating first HAART in ChiAC, 4187 started a NNRTI based regimen (plus 2 NRTIs); 3107 (74.2%) with EFV and 1080 (25.8%) with NVP. Median f/u was 2.7 years. At baseline the NVP group had a significantly less advanced stage (CDC classification) and higher median CD4 count (151 vs 86 cell/mm³ in EFV, p<0.001), but similar viral load (VL) compared to the EFV group. Rate of change or discontinuation was significantly lower for EFV (12.8% vs 22.3%, p<0.001), due to fewer adherence problems or toxicity. Timing for change was similar in both arms (median 950 vs 1008 days for EFV and NVP respectively). There were no statistical differences in viral suppression rate (<80 cps/mL) at any time: 67.2, 74.9, 74.4, 65.1, 59.9% vs 63.6, 74.3, 72.7, 61.7, 59.4% at 6, 12, 24, 36 and 48 months for EFV and NVP respectively. At 12 months of f/u median CD4 cell count was similar for groups (242 for EFV and 250/mm³ for NVP). Mortality for the total period was 2.89 and 2.85 per 100pts-year for EFV and NVP respectively (p=NS).

Conclusion: Efavirenz based HAART regimens were associated with similar viral and immune outcomes as Nevirapine based regimens, despite more severe disease at baseline in the EFV group. Discontinuation of NVP was more frequent, mainly due to toxicity and lower adherence, but not to viral failure.

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55.003

The economic impact of introducing HIV/AIDS guideline into Colombian National Drug Formulary. Cost-effectiveness analysis

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Background: Colombia has >165000 people infected with human immunodeficiency virus (HIV). In 2009, the World Health Organization (WHO) estimated only 40% had antiretroviral therapy coverage. Colombia’s AIDS treatments Guidelines became available in 2006 and are currently being used by physicians in their daily practice. However, these guidelines have not yet been evaluated with respect to their relative costs and effectiveness.

Methods: A Markov model was developed using TreeAge Pro-2009 and clinical experts. Success probabilities were derived from published randomized controlled trials. Drug costs were obtained from the 2009 Drug Price Guideline from Bogotá and the ISS 2008 Manual. Hospitalization costs were obtained from the West Kennedy Hospital, Bogotá 2008/2009 database, adjusted to 2008. One-way and two-way sensitivity analyses were performed to test the model’s robustness by varying clinical success rates and costs of antiretrovirals.
Probabilistic sensitivity analyses were also performed using Monte Carlo simulations.

Results: Based on our Markov model, AZT-3TC-efavirenz had the lowest cost of treatment (USD $12.09 per day) and the highest rate of success (69%). It was the primary cost-effective HAART for HIV/AIDS in Colombia. AZT-3TC-efavirenz dominated all other HAART treatments. Results were generally robust within ranges tested.

Conclusion: In Colombia, antiretroviral therapy will lead to major survival benefits and is cost-effective by World Health Organization criteria. The availability of second-line regimens will further increase survival, but their cost-effectiveness depends on their relative cost compared with first-line regimens.

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55.004
Prevalence of metabolic abnormalities and metabolic syndrome in a cohort of hispanic patients on HAART
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Background: Metabolic abnormalities are a well known side-effect of HAART. However, some studies show similar prevalences of metabolic syndrome in patients on HAART and the general population. According to different studies, prevalence of metabolic syndrome in the general population ranges from 23.7% to 24.6% using the ATP III definition. The aim of this study was to determine the prevalence of metabolic abnormalities and metabolic syndrome in a cohort of hispanic patients on HAART attending an ID Clinic in Buenos Aires, Argentina.

Methods: Retrospective cross-sectional study. The records from the patients were reviewed to determine prevalence of the metabolic syndrome (as defined by the NCEP ATP III Update), and the prevalence of metabolic abnormalities.

Results: The cohort was composed of 78 hispanic patients on stable HAART for at least 6 months (mean age: 40.89 ± 8.55 years [range: 22–64]; 9% were women). Mean CD4: 583 ± 40.89 cells/mm3; median VL: 50 (IQR: 50–50). The general prevalence of the metabolic syndrome was 24.7% (95% CI 15.6-36.8). The prevalence among patients on a protease inhibitor(PI)-based regimen (n = 15) was 26.7%, versus 24.2% among those without PI (p = NS). In this last group, those on efavirenz (n = 43) had a prevalence of 26.2% compared to 14.3% those on nevirapine (p < 0.05). The age-specific prevalence in the 30-39 years group was 22.2%, and 32.1% in the 40-49 years group. The prevalence of hypertriglyceridermia was 47.4%, but differed according to therapy group (PI, EFV or NVP; mean values (mg/dL): 240 ± 322.76; 165 ± 109 and 150 ± 80.4; respectively), and increased with age group (20-29: 33%; 30-39: 45.7%; 40-49: 50%). General prevalence of low HDL was 37.3% (women: 42%; men: 38.2%); there was no difference between patients with or without PI; but in this last group, prevalence among those on EFV was 42.5% vs 21.41% in those on nevirapine (p < 0.05). Hypertension prevalence was 39.5%.

Conclusion: In this cohort, prevalence of the metabolic syndrome was similar to the prevalence in the general population. However, patients on protease inhibitors and efavirenz had a higher prevalence than those on nevirapine (and the general population). Drug-induced hypertriglyceridermia seems to be one of the major drivers leading to the emergence of the metabolic syndrome among these patients.

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55.005
Medication errors in patients receiving antiretroviral therapy at an urban hospital
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Background: Combination Antiretroviral therapy (ART) has decreased morbidity and mortality for persons with human immunodeficiency virus (HIV) infection. These complex regimens involve three or more agents, and there are many potential errors. The errors in prescribing ART may lead to adverse/toxic effects, treatment failure, and drug resistance. We evaluated medication errors occurring among patients receiving ART at the Miami VAMC to identify potential interventions to decrease errors.

Methods: This was a retrospective study utilizing a medical chart review to evaluate medication prescribing errors occurring among patients who had received ART during January 1 through December 31, 2007 at the Miami VAMC. Using the DHHS guidelines for HIV therapy as a source, we screened for the following prescribing errors: inappropriate dosing, use of inappropriate regimen/combinations, use of other medications and ART when contraindicated, failure to adjust for renal insufficiency, and insufficient monitoring. In addition, we evaluated the frequency of errors occurring during admission in comparison to the out patient clinic.

Results: The medical charts of 833 patients of whom 514 (62%) were receiving ART were reviewed. A total of 24 significant prescribing errors involving antiretrovirals were detected. The most common errors involved failure to adjust for renal insufficiency (54%) followed by use of contraindicated combinations with potential for drug interactions (46%). Overall, 17% of the errors occurred while the patient was admitted to the hospital. Although 75% (3) of the errors in the inpatient group were due to renal dosing as opposed to 55.5% (10) in the outpatient group; this was not statistically significant. Similarly, there was no statistical difference regarding contraindicated combination medications among both groups.

Conclusion: In this Patient population, the most frequent errors involved failure to adjust ART in the face of renal insufficiency and the co-administration of contraindicated medications with ART. These errors can be avoided by automated alerts in the computerized medical record used at this facility and emphasizing to physicians the importance of adjusting dosage or changing the ART to account for renal insufficiency. System-based interven-