

C04 AUTOMATED PHONE CALLS IMPROVED ADHERENCE TO INHALED CORTICOSTEROIDS

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OBJECTIVES: Poor adherence to ICS among individuals with asthma is common and associated with increased asthma symptoms and acute health care utilization; diminished quality of life; and increased health care costs. We sought to determine if a brief, automated telephone intervention using speech recognition (SR) technology improved ICS adherence among adults with asthma. **METHODS:** PEANUT is an ongoing clinical trial involving 14,064 members of a health maintenance organization, aged >18 years, taking medication for the management of asthma. Participants were randomized to usual care (UC) or the 18-month SR arm. SR participants taking ICS receive monthly refill reminder calls, as needed, based on dispensing data derived from the electronic medical record. The calls were designed using qualitative methods and provide educational information, explore barriers to adherence, and offer transfer to an automated refill line as appropriate. The primary outcome is the continuous measure of medication adherence (CMA), a measure of medication days dispensed relative to total observation days. Preliminary results through the first 8 months are presented. **RESULTS:** Of over 10,000 calls attempted so far, we successfully reached the target participant 45% of the time and left a voice message on an additional 40% of calls. CMA scores were significantly higher for SR than UC participants (0.48 vs. 0.45, $p < 0.01$), with the strongest effects (a five percentage point net differential) in those aged >60 yrs. **CONCLUSIONS:** Early results suggest a small, significant intervention effect. Because small changes in adherence on a population basis can have important public health benefits, this study supports the potential value of SR-based adherence interventions for asthma and other chronic diseases.

PODIUM SESSION III: COST STUDIES IV

CS13 CLINICAL EFFECTIVENESS AND COST UTILITY OF TRUVADA, KIVEXA AND COMBIVIR IN THE TREATMENT OF ANTIRETROVIRAL NAÏVE HIV-1 INFECTED PATIENTS IN MEXICO

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OBJECTIVES: To evaluate the cost-effectiveness, from the Mexican Health Care System perspective, of Truvada versus Combivir and Kivexa in the treatment of anti-retroviral naïve HIV-1 infected patients **METHODS:** A Markov model was developed to assess the incremental cost effectiveness of Truvada vs Combivir and Kivexa. Clinical data was derived from published clinical trials (Study 903 and CNA30024) and other secondary sources to create a model of disease progression and treatment patterns. Both health care and treatment costs were considered. Costs were reported in 2008 US dollar. Costs and health outcomes were discounted at 5%. A second-order probabilistic Monte Carlo sensitivity analysis was conducted to assess the effects of parameter uncertainty on the study findings. **RESULTS:** The model projects an accumulated discounted cost to the Mexican health care system per patient receiving the Truvada regimen of US\$28,776 compared to US\$24,605 for the Kivexa regimen and US\$22,999 for the Combivir regimen. The accumulated discounted effect is 5.85 QALYs per patient receiving Truvada compared to 4.89 QALYs for Kivexa and 4.81 QALYs for Combivir. This results in an incremental cost for Truvada and Kivexa vs. Combivir of US\$5,805 per QALY and US\$19,436 per QALY respectively. Considering a willingness to pay (WTP) threshold of \$US 10,000 per QALY there is a 90% probability that treatment with Truvada is cost-effective relative to Combivir **CONCLUSIONS:** Results from these analyses suggest that in the Mexican setting, use of Truvada in place of standard Combivir and Kivexa for treatment of HIV is likely to be cost effective. These conclusions are supported by conservative assumptions and sensitivity analyses.

CS14 ASSESSMENT OF THE ECONOMICAL IMPACT OF NON-PERSISTENCE WITH ANTIDEPRESSANT TREATMENTS USING THE ADMINISTRATIVE CLAIMS DATABASE OF QUEBEC (CANADA)

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OBJECTIVES: To compare treatment persistence and incremental cost-persistence ratios across individual new antidepressants (SSRIs and atypical antidepressants) as well as the associated direct health care costs in the adult population covered by the public drug program of Quebec. **METHODS:** A retrospective cohort was conducted in a random sample of 13,936 adults age 18–64 years old covered by the Quebec public drug program and who initiated an antidepressant treatment in 2003. Persistence was defined as treatment duration of at least 6 months regardless of whether a product switch occurred. Economical impact was assessed over the first year of treat-

ment through drug costs (antidepressants and all other drugs), medical services costs (psychiatric- or non-psychiatric), hospitalization costs, and total health care costs. Comparisons across products were conducted using the incremental cost-persistence ratio (ICPR). **RESULTS:** Treatment non-persistence ranged from 60.4% (paroxetine) to 65.1% (citalopram). The product associated with the highest total health care costs was citalopram (CDN\$2653) and the lowest was venlafaxine (CND\$2168). Fluvoxamine had the lowest mean antidepressant costs (CND\$215) and venlafaxine (CND\$309) the highest; fluoxetine was associated with the lowest medical services costs (CND\$473) and hospitalization costs (CND\$702), and citalopram with the highest for both types of costs: CND\$559 for medical services and CND\$970 for hospitalizations, respectively. Antidepressant costs, other drug costs, medical services costs and hospitalization costs accounted for, respectively, 10.5% (CND\$249, 95%CI: 245–254), 33.7% (CND\$796, 95%CI: 753–839), 21.2% (CND\$501, 95%CI: 488–514) and 34.5% (CND\$816, 95%CI: 769–862) of the total costs. The ICPR for total health care costs ranged from CDN\$119 (fluoxetine) to CDN\$1,283 (paroxetine). **CONCLUSIONS:** Total costs were similar across products except for citalopram, which was more costly. In our ICPR analyses, paroxetine, fluoxetine and venlafaxine appear to be the best choice compared to the other antidepressant alternatives.

CS15 ECONOMIC BURDEN ASSOCIATED WITH DOSE-TITRATION AT INITIATION TO MANAGED CARE IN PATIENTS WITH NON-PSYCHOTIC MAJOR DEPRESSIVE DISORDER

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OBJECTIVES: Although serotonin reuptake inhibitors (SSRIs) are considered cost-effective medications to treat major depressive disorders, they are associated with significant dosage adjustments at treatment initiation. This study examined whether dose-titration for SSRIs at initiation was associated with increased resource utilization and costs. **METHODS:** A nationally representative cohort of individuals in the United States with MDD was identified in a large managed care database between January 1, 2004 and December 31, 2006. A study-specific titration-algorithm was used to identify patients who had dose-titration vs. not, within the first eight weeks of SSRI therapy initiation. We calculated propensity scores and identified a 1:1 matched cohort of titrating vs. non-titrating patients. We used univariate and multivariate statistical tests to compare mean therapeutic days, health care service utilization and costs between the two groups during the first 8 weeks and first 6 months of treatment initiation. **RESULTS:** At 8 weeks, The dose-titrated cohort was estimated to have a 30% decrease in adjusted mean number of therapeutic days (38 vs. 54, $p < 0.001$), a 64% increase in depression-related outpatient visits (1.8 vs. 1.1, $p < 0.001$), a 74% increase in depression-related outpatient expenditures (\$136 vs. \$78, $p < 0.001$), a 105% increase in depression-related psychiatrist visits (0.72 vs. 0.35, $p < 0.001$), an increase in anti-depressant pharmacy costs (\$138 vs. \$85, $p < 0.001$), and an increase in other pharmacy costs (\$214 vs. \$144, p -value = 0.001), compared to the matched non-titrating patient cohort. Significant differences in the same outcomes at 6 months were also observed. **CONCLUSIONS:** MDD patients who are dose-titrated with SSRIs at initiation consume more medical and pharmacy resources and have more days at a sub-therapeutic dose. Thus, antidepressants that do not require dose-titration may be cost-beneficial to payers of health care.

CS16 COST UTILITY OF POSACONAZOLE VERSUS FLUCONAZOLE/ITRACONAZOLE THERAPY IN THE PROPHYLAXIS AGAINST INVASIVE FUNGAL INFECTIONS AMONG HIGH-RISK NEUTROPENIC PATIENTS IN MEXICO

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OBJECTIVES: To estimate the cost effectiveness and long-term combined effects of Posaconazole versus fluconazole/itraconazole (standard azole) therapy in the prophylaxis against invasive fungal Infections among high-risk neutropenic patients in Mexico **METHODS:** A previously validated Markov model was used to compare the projected lifetime costs and effects of two theoretical groups of patients, one receiving Posaconazole and the other receiving standard azole. The model estimates total costs, numbers of IFIs, and QALY per patient in each prophylaxis group. To extrapolate trial results to a lifetime horizon, the model was extended with one-month Markov cycles in which mortality risk is specific to the underlying disease. Data on the probabilities of IFI were obtained from Study Protocol PO1899. Drug costs were taken from average wholesale drug reports for 2008. Cost and health effects were discounted at 5% according to the Mexican guideline. The analysis was conducted from the Mexican health care perspective using 2008 unit cost prices **RESULTS:** Our model projects an accumulated cost to the Mexican health care system per patient receiving the Posaconazole regimen of US\$5634 compared to US\$7463 for the standard azole regimen. The accumulated discounted effect is 3.13 LY or 2.25 QALYs per patient receiving Posaconazole, compared to 2.96 LY or 2.13 QALYs per patient receiving standard azole. Posaconazole remained the dominant strategy across each scenario. Probabilistic sensitivity analysis tested numerous assumptions about the model cost and efficacy parameters and found that the results were robust to most changes **CONCLUSIONS:**