

## PMH35

## COST-EFFECTIVENESS OF AGOMELATINE IN TREATMENT OF MAJOR DEPRESSIVE DISORDERS IN TURKEY

Tatar M<sup>1</sup>, Dilbaz N<sup>2</sup>, Oral ET<sup>3</sup>, Tan M<sup>4</sup><sup>1</sup>Hacettepe University, Ankara, ANKARA, Turkey, <sup>2</sup>Ankara Numune Research & Training Hospital, Ankara, Turkey, <sup>3</sup>Istanbul Ticaret University, Istanbul, ISTANBUL, Turkey, <sup>4</sup>Servier Ilac ve Arastirma A.S., Istanbul, Turkey

**OBJECTIVES:** Major Depressive Disorder (MDD) is an important and growing health problem in Turkey. Inclusion of a new drug in the positive list for its treatment requires the proof of cost effectiveness. The objective of this study was to assess the cost effectiveness of Agomelatine versus Venlafaxine and Duloxetine in treatment of MDD in Turkey. The study was undertaken from the payer perspective.

**METHODS:** A discrete event model, already validated by European health authorities was used to compare Agomelatine with Venlafaxine and Duloxetine. An indirect comparison was made between Agomelatine and Duloxetine. In order to reflect the real clinical practice, the model defined 3-6 months of treatment, however the maintenance phase, defined as the recommended time to prevent eventual recurrences, was modeled longer (12 weeks and 24 weeks). The clinical outcome was measured as life years in remission. All direct costs for the year 2011 were taken into account. Costs and benefits were discounted by 3% and robustness of the results were tested by Monte Carlo simulation. **RESULTS:** Incremental Cost Effectiveness Ratios (ICER) were calculated and results were displayed as cost per additional life year in remission. The ICER was calculated as -18,799 TL/year in remission for Agomelatine versus Venlafaxine and -27,453 TL/year in remission for Agomelatine versus Duloxetine. **CONCLUSIONS:** Agomelatine dominated Venlafaxine and Duloxetine in treatment of MDD in Turkey. Sensitivity analyses revealed that the results were robust.

## PMH36

## AN ECONOMIC EVALUATION OF SCREENING FOR DEMENTIA IN SOUTH KOREA

Yu SY<sup>1</sup>, Jang SH<sup>2</sup>, Lee JT<sup>2</sup><sup>1</sup>Health Insurance Review & Assessment Service, Seoul, South Korea, <sup>2</sup>Seoul National University, Seoul, South Korea

**OBJECTIVES:** Due to rapid aging, South Korea is expected to be the world's second oldest country by 2050. Dementia has emerged as a major health problem among old people in South Korea, and since 2010 the Korean Ministry of Health and Welfare (MOHW) has implemented "National Program for Screening Dementia (NPSD)" as one of the welfare services for the aged. This study aimed to evaluate the cost-effectiveness of early diagnosis and treatment of dementia. **METHODS:** A Markov model was developed using a societal perspective and a 10-year time horizon. Simulations were performed for hypothetical cohorts of those aged 65, 70, 75, 80 years. Data sources for model parameters included the NPSD database for cohort characteristics; the National Health Insurance claims database and survey for dementia costs; the meta-analysis for the treatment effect; and published data for other epidemiology data. Cost per quality-adjusted life-year (QALY) gained from screening compared with no screening was calculated from 10-year costs and accumulated QALYs for each strategy. **RESULTS:** Screening strategies showed a cost per QALY gained ranging from 38 million Korean Won (KRW, equivalent to US\$32,000) to 41 million KRW (US\$ 34,000), depending on the ages selected for screening. These results were most sensitive to estimates of direct health care costs and the severity of dementia among those screened. **CONCLUSIONS:** These analyses suggest that NPSD need to improve the cost-effectiveness of screening by identifying patients with mild dementia rather than severe dementia. The early diagnosis and treatment of dementia failed to achieve cost saving. This could be explained by some reasons that there is no such a dramatic difference among net costs of dementia by disease stage in South Korea compared to other countries, and that the benefits of current therapies are marginal.

## PMH37

## COST-EFFECTIVENESS OF ASENAPINE IN THE TREATMENT OF BIPOLAR I DISORDER IN CANADA

Lachaine J<sup>1</sup>, Beauchemin C<sup>1</sup>, Mathurin K<sup>1</sup>, Gilbert D<sup>2</sup>, Beillat M<sup>3</sup>, Corson H<sup>3</sup><sup>1</sup>University of Montreal, Montreal, QC, Canada, <sup>2</sup>Lundbeck Canada Inc, Montreal, QC, Canada,<sup>3</sup>Lundbeck S.A.S., Issy les Moulineaux, France

**OBJECTIVES:** Bipolar disorder (BPD) is highly prevalent and is associated with a significant economic burden. Antipsychotic drugs are one of the mainstream treatments for BPD. Asenapine is a new antipsychotic approved in Canada for the treatment to be used in monotherapy or co-therapy in BPD-I and schizophrenia. Asenapine has shown a comparable efficacy profile to olanzapine. However, in contrast to olanzapine, it is associated with a favourable metabolic profile and minimal weight gain. The objective of this study was to assess, from a Canadian perspective, the economic impact of asenapine compared to olanzapine in the treatment of BPD-I. **METHODS:** A combined decision tree and Markov model was constructed to assess the cost-utility of asenapine compared with olanzapine. The decision tree takes into account the occurrence of extrapyramidal symptoms (EPS), the probability of switching to a different antipsychotic, and the probability of gaining weight. The treatment used in case of switch was aripiprazole. The Markov model comprises the following states: long-term metabolic complications (diabetes, hypertension, CHDs, and stroke), fatal stroke, fatal CHD, and death by suicide or other causes. Due to limited data, asenapine was compared with olanzapine only. Analyses were conducted from both a Canadian Ministry of Health (MoH) and a societal perspective over a five-year time horizon with yearly cycles. **RESULTS:** In the treatment of BPD-I, asenapine is a dominant strategy over olanzapine from both a MoH and a societal perspective. Results of the probabilistic sensitivity analysis indicated that asenapine remains a dominant strategy in 99.2% of the simulations, and this result is robust to the many sensitivity analyses performed.

**CONCLUSIONS:** This economic evaluation demonstrates that asenapine is a cost-effective strategy compared to olanzapine in the treatment of BPD-I in Canada.

## PMH38

## COST-EFFECTIVENESS OF ASENAPINE IN THE TREATMENT OF SCHIZOPHRENIA IN CANADA

Lachaine J<sup>1</sup>, Beauchemin C<sup>1</sup>, Mathurin K<sup>1</sup>, Gilbert D<sup>2</sup>, Beillat M<sup>3</sup>, Corson H<sup>3</sup><sup>1</sup>University of Montreal, Montreal, QC, Canada, <sup>2</sup>Lundbeck Canada Inc, Montreal, QC, Canada,<sup>3</sup>Lundbeck S.A.S., Issy les Moulineaux, France

**OBJECTIVES:** Asenapine is a new antipsychotic approved in Canada for the treatment of schizophrenia (SCZ) and bipolar disorder I as monotherapy and co-therapy. Asenapine has shown a comparable efficacy profile to atypical antipsychotics. In contrast, however, to most atypical antipsychotics, it is associated with a favourable metabolic profile as well as with a minimal weight gain. The objective was to assess, from a Canadian perspective, the economic impact of asenapine compared to olanzapine, quetiapine, ziprasidone, aripiprazole. **METHODS:** A combined decision tree and Markov model was constructed to assess the cost-utility of asenapine compared with other atypical antipsychotics. The decision tree takes into account the occurrence of extrapyramidal symptoms (EPS), the probability of switching to a different antipsychotic, and the probability of gaining weight. The Markov model comprises the following states: long-term metabolic complications (diabetes, hypertension, CHDs, and stroke), fatal stroke, fatal CHD, and death by suicide or other causes. In the base-case analysis, asenapine was compared to olanzapine. Asenapine was also compared with atypical antipsychotics commonly used in Canada. Analyses were conducted from both a Canadian Ministry of Health (MoH) and a societal perspective over a five-year time horizon with yearly cycles. **RESULTS:** In the treatment of SCZ, asenapine is a dominant strategy over olanzapine from both an MoH and a societal perspective, and this result is robust to the many sensitivity analyses performed. Compared to quetiapine, asenapine is also a dominant strategy. Furthermore, asenapine has a favourable economic impact compared to ziprasidone and aripiprazole, as these antipsychotics are not cost effective compared to asenapine, with an incremental cost-effectiveness ratio of \$63,204/QALY and \$1,485,625/QALY from a MoH perspective and \$62,432/QALY and \$1,485,623/QALY from a societal perspective, respectively. **CONCLUSIONS:** This economic evaluation demonstrates that asenapine is a cost-effective strategy compared to olanzapine and to most atypical antipsychotics used in Canada.

## PMH39

## IMPACT OF ADHERENCE TO ANTI-DEPRESSANT MEDICATION ON SHORT-TERM DISABILITY COSTS IN AN EMPLOYER POPULATION

Wright D<sup>1</sup>, Hagen S<sup>1</sup>, Finch R<sup>2</sup>, Edington D<sup>1</sup><sup>1</sup>University of Michigan, Ann Arbor, MI, USA, <sup>2</sup>National Business Group on Health, Washington, DC, USA

**OBJECTIVES:** According to the Centers for Disease Control, nearly twenty percent of the American workforce has some type of mental disorder. Depression is especially prevalent, and antidepressant use in the United States is common; today, one in ten Americans over the age of 12 takes an antidepressant medication. This study assesses the relationships between antidepressant medication adherence and short-term disability costs in a large manufacturing company. **METHODS:** A retrospective analysis of pharmacy claims was conducted to identify individuals within a large manufacturing company who were continuously eligible for a three-year time frame (between 2001 - 2007) and who received a prescription for an antidepressant during that time. In those cases where an individual's eligibility spanned a longer time period, the most recent three-year span was chosen. The resulting sample included both treatment-naïve and treatment-experienced patients. Medical, pharmacy, and short-term disability costs were calculated for a one year follow-up. Adherence was measured using proportion of days covered (PDC), where a PDC $\geq$ 80 was considered adherent. Multi-variable linear regression was used to examine the relationships between cost and adherence, controlling for patient demographics (age, gender, and job type) and Charlson co-morbidity score. **RESULTS:** Among the 14,737 individuals in the study, the mean adherence to antidepressants was 49%, and 28% (N=4178) of the study population had a PDC $\geq$ 80. The average total medical/pharmacy costs were higher for the adherent patients. Individuals who were adherent to their antidepressant medications, however, had lower short-term disability costs (\$2129/year) than did the non-adherent (\$2440/year). **CONCLUSIONS:** In general, patients who were adherent to their antidepressant regimens had lower short-term disability costs than did the non-adherent. Employers concerned with the impact of depression on their employee costs should pay particular attention to this association between antidepressant adherence and short-term disability.

## PMH40

## NATIONAL ESTIMATES AND POTENTIAL PREDICTORS OF EMERGENCY DEPARTMENT (ED) AND INPATIENT CARE COSTS FOR EVENTS RELATED TO ABUSE OR MISUSE OF OPIOID ANALGESICS

Chandwani H, Strassels S, Rascati KL, Lawson K, Wilson JP

The University of Texas at Austin, Austin, TX, USA

**OBJECTIVES:** The purpose of this study was to estimate the effect of clinical and demographic patient characteristics, and insurance status on hospital charges associated with opioid abuse or misuse in the United States. **METHODS:** Data for this study were derived from the 2006, 2007, and 2008 Healthcare Cost and Utilization Project's Nationwide Emergency Departments Sample (HCUP-NEDS). Events and charges related to opioid abuse, dependence, or poisoning overall and by insurance status (Medicaid, Medicare, private insurance, or self-pay) were estimated using ICD-9-CM codes 304.0X, 304.7X, 305.5X, 965.00, 965.02, and 965.09, accounting for the complex sampling of the HCUP-NEDS. Charges were adjusted using the 2010 Medical Con-