

PSY30
COST-EFFECTIVENESS OF BARIATRIC SURGICAL PROCEDURES VERSUS NO TREATMENT FOR MORBID OBESITY

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OBJECTIVES: Obesity is a global epidemic and obesity-related comorbidities pose health risks alongside placing financial burden on the health care system. Bariatric surgery has been shown to reduce weight, improve quality of life, and reduce morbidity for morbidly obese individuals. The objectives of this evaluation are to assess the cost-effectiveness and cost-utility of bariatric surgery (gastric bypass (GB) and laparoscopic adjustable gastric banding (LAGB) procedures) versus no treatment for morbidly obese patients (body mass index ≥ 40 kg/m²). **METHODS:** A combined (decision tree and Markov) model was developed to compare the costs and outcomes of bariatric surgery with no treatment for morbid obesity over a 15-year time horizon. This evaluation was conducted from the perspective of the Ontario Ministry of Health and Long-Term Care. Data on BMI reduction, post-operative complications and mortality, costs of disease management, and health-related quality of life were used based on a literature review of national and international sources. Univariate and probabilistic sensitivity analyses were conducted. **RESULTS:** In the base case analysis, GB dominated LAGB and no treatment (cheaper and more effective in terms of life-years (LYs) gained and quality adjusted life-years (QALYs) gained). Univariate and probabilistic sensitivity analyses varying important model parameters such as treatment costs, probability of complications, and utility estimates did not impact this conclusion showing that the economic model is robust in nature. **CONCLUSIONS:** This evaluation showed that gastric bypass is the cheapest and most effective strategy for morbidly obese individuals in terms of cost per LY gained and cost per QALY gained.

PSY31
CLINICAL-ECONOMIC EVALUATION OF AZACITIDINE VERSUS DECITABINE FOR TREATING PATIENTS WITH MYELODYSPLASTIC SYNDROMES (MDS)

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OBJECTIVES: Azacitidine and decitabine are used to treat patients with myelodysplastic syndromes (MDS). We sought to determine their cost-effectiveness. **METHODS:** We developed a Markov process model (1-month cycles) to track hypothetical cohorts of MDS patients treated with azacitidine or decitabine over 2 years. Model structure and parameters were derived from published literature, product labels, clinical trial data, and drug and medical services cost databases. Four health states were modeled: 1) MDS with transfusion dependence; 2) MDS with transfusion independence; 3) progression to acute myelogenous leukemia (AML); and 4) death. Cost-effectiveness was measured incrementally as: 1) cost per quality-adjusted life year (QALY); 2) cost per month of transfusion independence; and 3) cost per case of AML progression avoided. The model used a third-party payer perspective with 2009 US costs. One-way sensitivity analyses were performed on key model parameters. **RESULTS:** The total number of QALYs (per 1000 patients) attained by azacitidine-treated patients exceeded those attained by decitabine-treated patients (1041 vs. 870). The total number of patient months with transfusion independence was higher for azacitidine vs. decitabine (8328 vs. 6224). More azacitidine-treated patients avoided progression to AML compared to decitabine-treated patients (509 vs. 285). Total per-patient costs for azacitidine were lower than for decitabine (\$150,322 vs. \$166,212). Overall, treating a patient with azacitidine cost \$15,890 less than treating a patient with decitabine, and confers 0.171 additional QALYs. **CONCLUSIONS:** These findings demonstrate that azacitidine costs less than decitabine and provides greater clinical benefit across key outcomes of interest. These results accentuate the role of azacitidine as a major asset in providing cost-effective care for MDS patients.

PSY32
COST-EFFECT ANALYSIS OF THE USE OF POSACONAZOLE FOR PROPHYLAXIS OF INVASIVE MYCOSES COMPARED TO FLUCONAZOLE AND ITRACONAZOLE IN PATIENTS WITH PRONOUNCED NEUTROPENIA

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OBJECTIVES: It was the clinical economic study comparing posaconazole and fluconazole or itraconazole for primary prophylaxis of invasive mycoses (IM) in patients with pronounced neutropenia in Russian economic circumstances using methods of mathematic modeling **METHODS:** Overall cost was calculated, including the cost of prophylaxis and treatment of IM and number of life-years saved for each group patients. To evaluate the degree of inaccuracy of the results, sensitivity analyses were performed. It was shown that the mean value of IM treatment costs (calculated as the mean of the costs of voriconazole, caspofungine, and lipid amphotericin B) in the posaconazole group was lower compared to the group of fluconazole/itraconazole. **RESULTS:** It was found that the difference was 0.94 with the less cost-requiring tactics of posaconazole use. When the cost structure was studied in details it was shown that the group receiving posaconazole for prophylaxis had higher expenditures than the group taking fluconazole/itraconazole (12.9 times difference), due to higher

posaconazole price. In the treatment of IM overall expenditures in the group of posaconazole were lower compared to those in the group of fluconazole/itraconazole (2.2 times difference), due to decreased risk of IM development in prophylactic use of posaconazole. The analysis of the main scenario demonstrates that the regimen of posaconazole use for prophylaxis was less expensive and more effective (dominating) compared to that with fluconazole/itraconazole. Alternative scenario analysis, where IM and mortality rates were equal in both groups of prevention, showed dominating character of posaconazole prophylaxis strategy. One-sided sensitivity analysis demonstrated that the rate of IM development when posaconazole was used for prophylaxis had more influence on incremental cost-effectiveness ratio, than the changes due to costs for antifungals purchase. **CONCLUSIONS:** Posaconazole prescription was economically beneficial compared to fluconazole/itraconazole for prophylaxis of IM in the studied patient population.

PSY33
OPIOID USE AND COSTS IN PATIENTS WITH PAINFUL DIABETIC PERIPHERAL NEUROPATHY TREATED WITH PREGABALIN OR STANDARD-OF-CARE

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OBJECTIVES: To evaluate opioid use and medical services utilization and associated costs among patients with painful diabetic peripheral neuropathy (pDPN) who initiated treatment with pregabalin (Pgb) versus standard of care (SOC) treatments. **METHODS:** Retrospective cohort analysis using the Thomson MedStat MarketScan commercial and Medicare supplemental insurance database (2005–2007) to identify patients prescribed Pgb or SOC (venlafaxine, duloxetine, gabapentin, tricyclic antidepressants) during 2006 subsequent to a diagnosis of DPN (ICD-9-CM codes 250.6x or 357.2x). Patients initiated on Pgb were propensity-score matched (1:1) with SOC patients on demographics, Charlson comorbidity score, and prior medication, inpatient, and outpatient costs. Time-to-opioid prescription was assessed using a Cox-Proportional hazards model and the proportion of patients dispensed opioids, number of opioid prescriptions, number of days of opioid therapy, and opioid, overall prescription, and total medical service utilization costs in the 12-month post-index period were compared (paired t-tests) between Pgb and SOC. **RESULTS:** A total of 2,000 patients were evaluated (Pgb = 1000, SOC = 1000). 54% were male in both groups, with mean ages of 64.0 \pm 11.2 years (Pgb) and 63.6 \pm 11.9 years (SOC) and no difference in Charlson Comorbidity Index scores (Pgb:3.7 \pm 1.6, SOC:3.7 \pm 1.6). The proportion of patients prescribed opioids during the 1-year post-index period was similar between groups (41% for Pgb vs. 38% for SOC; P = 0.16). The time-to-first opioid prescription was 148.5 \pm 104.4 days versus 143.7 \pm 101.7 days (P = 0.58) in the Pgb and SOC cohorts respectively, among opioid users. Total opioid-related prescription costs per patient were \$21 \pm \$79 versus \$23 \pm \$122 (P = 0.16) and overall prescription costs per patient were \$5471 \pm \$3916 versus \$5271 \pm \$4172 (p = 0.36) for Pgb and SOC, respectively. Total medical service utilization costs were \$18,277 \pm \$33,299 for Pgb versus \$19,639 \pm \$33,657 for SOC (p = 0.40). **CONCLUSIONS:** pDPN patients initiating Pgb experienced similar opioid use, and did not show differences in opioid, overall prescription and total medical resource utilization costs, compared with the SOC cohort.

PSY34
OBESITY AND HEALTH CARE COSTS AND UTILIZATION IN THE VETERAN AFFAIRS POPULATION

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OBJECTIVES: The escalating burden of obesity is of concern to patients, health care professionals, and policy makers. Health care costs and utilization over an eight-year time period was examined in overweight and obese individuals compared to normal weight individuals within the Veterans Affairs (VA) population. **METHODS:** This is a retrospective cohort study of medical and pharmacy records from the VA databases between 2000–2007. Cohorts were stratified based on age and BMI (kg/m²) at baseline. Costs included total, pharmacy, inpatient, and outpatient costs. Utilization included inpatient stays and outpatient records. Repeated measures ANCOVA was used to assess the impact of longitudinal repeated costs over time between groups. Multiple and Poisson regressions were used to analyze total costs and utilization over the entire period. **RESULTS:** A total of 71,675 veterans were included. There were statistically significant differences in all costs between BMI groups (p < 0.0001). Over the entire time period, compared to normal weight individuals, total adjusted costs were significantly less for overweight and obese individuals (p < 0.0001) but no there was no significant difference with severely obese individuals. Average pharmacy and outpatient costs per year for overweight, obese, and severely obese individuals were on higher than normal weight individuals (p < 0.0001). Over the entire time period, adjusted pharmacy costs were \$643.61, \$1110.03, and \$1960.38 higher and outpatient costs were \$1021.91, \$1651.29, and \$2086.46 higher for overweight, obese, and severely obese individuals, respectively, compared to normal weight individuals (p < 0.0001). However, average inpatient costs and stays per year were higher for normal weight individuals compared to other weight groups (p < 0.0001). **CONCLUSIONS:** It is unclear why inpatient costs are higher in normal weight individuals than other weight groups in the Veterans population. However, obesity has a significant impact on medical and pharmacy cost and utilization and more emphasis should be placed in managing weight gain.