use and costs were obtained from 5001 randomized hospital records from the Social Security Mexican Institute(IMSS) and official institutional databases. Costs include outpatient and inpatient services, drug, procedures etc. The model was validated according to international guidelines. Probabilistic sensitivity analyses were performed employing Markov modeling techniques and accounting for curve variability. RESULTS: The highest percentage of patients with no or mild pain during the follow-up period was obtained by pregabalin (44.8%); CSEP95% 42.8%–48.0%); followed by gabapentin (38.1%; CSEP95% 33.2%–43.5%); duloxetine (34.2%; CSEP95% 27.8%–40.6%); and amitriptyline (22.2%; CSEP95% 21.0%–24.0%). The annual expected mean costs per patient were US$1503.2 (US$1472–US$1534.09); US$1742.7 (US$1715.1–US$1770.2); US$2046.6 (US$2018.6–US$2074.7); and US$634.6 (US$615.2– US$673.5), respectively. The ICER of pregabalin vs. amitriptyline (basecase) was US$4089 (US$3336.1–US$4325.9). Other treatments were dominated by pregabalin. Second-order Monte Carlo sensitivity analyses indicated that pregabalin would be a cost-saving strategy in a range of 60%–70% within accepted thresholds(p < 0.05). CONCLUSIONS: In Mexico, pregabalin showed to be a cost-effective and cost-saving therapy when compared with amitriptyline and other usual treatments in the manage of FM.

PSY22
ECONOMIC EVALUATION OF RECOMBINANT FACTOR VIII PRODUCTS IN TREATMENT OF HEMOPHILIA A IN KOREA

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OBJECTIVES: Hemophilia A is a hereditary genetic disorder with a relatively high burden of disease from the perspective of both society and the individual patient. Kogenate FS is a second-generation full-length recombinant factor VIII (FVIII), produced through a fermentation of human alkaline phosphatase. It shows a lower incidence of inhibitors compared with other recombinant factor VIII products, which has an impact on economic evaluation because the hemophilia patients with inhibitors have to be treated with a significantly higher dosage or expensive bypassing agent. The main objective of this study is to conduct economic evaluation of Kogenate FS compared with Recombinate in haemophilia A patients in Korea. METHODS: A cost-minimization analysis was performed under the assumption that Kogenate FS and Recombinate were clinically equivalent for treating bleeding episodes. A decision-tree model was developed to estimate the lifetime costs by reflecting each different treatment strategies for hemophilia A patients with inhibitors or not. If patients had inhibitors, it was ramified according to the inhibitor titres into one of three pathways: <3BU, 3–10BU, >10BU. The analysis was conducted based on the societal perspective, and costs were discounted at 3% annually. Sensitivity analyses were performed on crucial parameters. RESULTS: Incidence of inhibitor for Kogenate FS and Recombinate were 8.113% and 16.9% respectively. Using the base case analysis, the expected FVIII consumption was 107.3). Sensitivity analysis was made on the OLS on raw expenditure was the only model to pass all the specification and cross-validation tests. Based on this model, annual incremental expenditure of obesity was US$1185.0 (95% CI $363.7–$1930.4). Total direct expenditure of obesity was US$72 billion (95% CI $68.2 to $75.8 billion), nearly 3-fold increase compared to 1998 estimates. SF2 physical component score was lower by 1.7 (p < 0.001) while the mental component score was lower by 1.2 (p < 0.001) for those with obesity. These decrements are similar to those observed for diabetes or hypertension. CONCLUSIONS: Obesity exerts an enormous economic and humanistic burden on the U.S. civilian non-institutionalized population.

PSY23
ECONOMIC EVALUATION OF DARBEPOETIN ALFA AND EPOETIN IN HEMODIALYSIS PATIENTS WITH ANEMIA AND CHRONIC KIDNEY DISEASE

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OBJECTIVES: To perform economical evaluation of darbeopetin alfa vs. epoetin alfa in hemodialysis patients with anemia and chronic kidney disease. METHODS: The modeled study was performed. Proportion of patients receiving alternative etropoiesis-stimulating proteins (ESP) dosing regimen, efficacy and safety of drugs were extracted from multicenter randomized study made by Nissen et al.(American Journal of Kidney Diseases 2002; 1:110–8). Cost of treatment with ESPs for 28 weeks and cost-minimization ratio (CMR) were calculated from the Russian reimbursement system point of view. RESULTS: According to selected study, the efficacy and safety profile of darbeopetin alfa was similar to that of epoetin alfa. Mean dose decrease from 6.5 µg/kg/wk to 4.18 µg/kg/wk was observed in darbeopetin alfa group, while mean dose increase from 12.706 to 13.639 was registered in epoetin alfa group during 28 weeks. The costs of used medications were the same for darbeopetin alfa and epoetin alfa (RUB230/1448.1 vs. RUB 229/2427.19 (USD27924 vs. USD7269.56). The cost of medical manipulations were less for darbeopetin alfa due to its reduced dosing fre- quency (RUB22848 vs. RUB6854.8 (US$2724 vs. US$2127.2) accordingly. Cost- minimization analysis showed that cost of treatment with darbeopetin alfa is less than epoetin alfa (CER = RUB33847.7 (US$1073). Sensitivity analysis was made on the basis of model, constructed with data extracted from other study (Molina CA, Pediatrics 2004; 6). It confirmed the results of present work. CONCLUSION: According to the model darbeopetin alfa seems to be as effective and safe as epoetin alfa, but it takes fewer costs for treatment of anemia in hemodialysis patients with chronic kidney disease due to low dosing frequency and dose saving effect.

PSY24
THE IMPACT OF OBESITY ON MEDICAL EXPENDITURE AND HEALTH RELATED QUALITY OF LIFE

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OBJECTIVES: To quantify the effect of obesity on the total direct medical expenditure and health related quality of life in the population of the United States. METHODS: Data from the MEPS Household Component (2006), a nationally representative survey of 22,000 non-institutionalized population, was used. Analysis accounted for the survey's clusters, strata and sampling weights. Obesity was defined as body mass index ≥30. Direct medical expenditure attributable to obesity was esti- mated under diverse econometric models to assess sensitivity to zero-mass, non-nega- tive. Models. Models compared were ordinary least squares (OLS) on raw and log-transformed expenditures (homoscedasticity and heteroscedastic re-transformations), and generalized linear models (GLM) with log-link and Gamma/ Poisson families, including 2-part variants of these 5 models. Box-Cox test and Modi- fied Park's test determined the link and family in the GLM models. LINK, RESET, Hosmer-Lemeshow and Pearson's correlation test determined model fit, while Copas test was employed for over-fitting and cross validation. Incremental expenditure from the method of recycled predictions summed up over population with obesity gave the total expenditure. Impact of obesity on SF12 mental and physical health component was assessed by OLS. Covariates included age, gender, race, ethnicity, income, geographic-location, and morbidity. RESULTS: The 2-part model of OLS on raw expenditure was the only model to pass all the specification and cross-validation tests. Based on this model, annual incremental expenditure of obesity was US$1185.0 (95% CI $363.7–$1930.4). Total direct expenditure of obesity was US$72 billion (95% CI $68.2 to $75.8 billion), nearly 3-fold increase compared to 1998 estimates. SF2 physical component score was lower by 1.7 (p < 0.001) while the mental component score was lower by 1.2 (p < 0.001) for those with obesity. These decrements are similar to those observed for diabetes or hypertension. CONCLUSIONS: Obesity exerts an enormous economic and humanistic burden on the U.S. civilian non-institutionalized population.

PSY25
MEDICAL TREATMENT COSTS ATTRIBUTABLE TO OBESITY IN PATIENTS WITH ASTHMA AMONG U.S. ADULTS

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OBJECTIVES: To estimate the proportion of asthma with obesity and the annual medical costs attributable to obesity. METHODS: The cross-sectional analysis was conducted from adults aged 18–74 who participated in the 2003–2006 Medical Expenditure Panel Survey. Total of 6670 asthma patients were identified based on the self reported diagnosis or ICD-9-CM code of 493 after excluding patients with pregnancy, malignancy, kidney dialysis, immunodeficiency, or body- mass-index(BMI)<18.5. These patients were classified as normal (BMI:18.5–<25) or obese(BMI≥30). Total medical costs included office based physician/outpatient visits, emergency room visit, or hospitalization except dental problems and injuries. Costs related to respiratory system diseases were associated with ICD-9-CM codes 493.1188.50 (95% CI S36.2–$75.8 billion), nearly 3-fold increase compared to 1998 estimates. SF2 physical component score was lower by 1.7 (p < 0.001) while the mental component score was lower by 1.2 (p < 0.001) for those with obesity. These decrements are similar to those observed for diabetes or hypertension. CONCLUSIONS: Obesity is prevalent in general population as well as asthma patients. The average medical cost attributable to obesity was significantly higher than normal weight asthma patients. Effective public programs aiming at reducing the importance of controlling weight are strongly recommended to diminish the economic burden of obesity.

PSY26
COST OF OPIOID USE IN A COMMERCIALLY INSURED POPULATION OF FIBROMYALGIA PATIENTS

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OBJECTIVES: Although opioids have not demonstrated efficacy in treating fibromy- algia (FM) and pose a risk for addiction, they are commonly used to treat FM patients. This study assesses the mean annual per patient cost of FM-related opioid use in commercially insured FM patients. METHODS: Using the Thomson/Medstat Mar- ketScan Commercial Claims Database, we identified all patients aged 18+ years with consistent health plan eligibility in 2006 and 21 inpatient or 22 outpatient paid medical claims in calendar year 2006 with ICD-9-CM diagnosis code 729.1 (“FM patients”). Rx medications designated as possibly related to FM treatment (“FM-
Abstracts

related) included opioids, anticonvulsants, nonsteroidal anti-inflammatory drugs (NSAIDs), salicylate analogs, antineuritic agents, muscle relaxants, corticosteroids, benzodiazepines, sedatives/hypnotics, tricyclic antidepressants, serotonin-norepinephrine reuptake inhibitors (SNRIs), and selective serotonin reuptake inhibitors (SSRIs). Mean annual costs per patient were calculated using third-party payments for Rx drug claims. RESULTS: A total of 77,124 patients met all study entry criteria. Of these FM patients, 40,951 (53.1%) had evidence of receipt of opioids in 2006. Total mean annual Rx drug costs per patient were $2225.92. FM-related Rx drugs represented $910.28 (41%) of those costs. Opioids were the most costly drug class, accounting for $272.79 (29.9%) of FM-related Rx drug costs. The next most costly drug class was anticonvulsants at $112.90 (12.4%), followed by SNRIs at $105.14 (11.5%) and SSRIs at $78.35 (8.6%). CONCLUSIONS: Given the widespread use of opioids, their lack of efficacy, and their potential for addiction, reducing opioid use may benefit patients and reduce costs. New disease management methods and more effective medications to treat FM may assist in achieving this goal.

THE LONG-TERM COST OF ORTHOPAEDIC SURGERY WITH RECOMBINANT ACTIVATED FACTOR VII (rFVIIa) IN HAEMOPHILIA INHIBITOR PATIENTS

OBJECTIVES: To measure the long-term cost consequences of using recombinant activated factor VII (rFVIIa) in total hip replacement in haemophilia patients with inhibitors in a Swedish setting. Severe haemarthropic arthropathy has a negative impact on health-related quality of life due to recurrent bleeds, chronic pain and significantly reduced mobility. Successful Elective Orthopaedic Surgery (EOS) of an affected joint can lead to decreased bleed frequency into the new joint, less time spent in hospital, relief of chronic pain, and increased mobility and health-related quality of life. METHODS: A decision-analytic model was designed to assess cost implications of using rFVIIa in haemophilia patients with inhibitors who are candidates for surgery. It is based on a consensus protocol from an “Elective Orthopaedic Surgery (EOS) Expert Group” convened in London in 2006. The model calculates costs of surgery in a five-year perspective, based on data of bleed reduction of 80–89% in the joint during the years after surgery. One-way sensitivity analyses were made, varying patient weight (55–95 kg), length of stay in hospital (8–16 days), number of physiotherapy sessions (6–24), number of bleeds in the affected joint over the past 12 months (6–14), and the associated cost of SEK5222 per bleed for BeneFix was used (USD 1 = SEK 7.86). RESULTS: Total hip replacement was cost-saving in the fourth year after surgery, and in a five-year perspective, savings were SEK1,315,749. In the sensitivity analyses, surgery was cost-saving within three to five years. The only exception was seen in patients who had more than six bleedings in the affected joint during the previous year prior to surgery. CONCLUSIONS: In a five-year prospective, total hip replacement using rFVIIa is cost-saving for haemophilia patients with inhibitors who had more than six bleedings in the affected joint during the previous year prior to surgery.

ESTIMATE COSTS OF COMORBIDITIES IN OVERWEIGHT AND OBSESE MEXICAN CHILDREN Aged BETWEEN FIVE AND ELEVEN YEARS UNTIL DEATH

OBJECTIVES: To estimate the economic burden of diabetes, hypercholesterolemia and hypertension related to overweight and obesity in Mexican children aged between five and eleven years during their life-time. METHODS: A Discrete Event Model was designed to calculate prevalence and yearly incidence of diabetes, hypercholesterolemia, and hypertension and its related costs during the life-time of a children cohort aged between five and eleven at the start of the simulation. The size of the cohort is one of one thousand of the total population reported by the Mexican Population Council for that age range. Data of risk of dying at each age was obtained from the same source and 0.2% was added for each comorbidity. Costs were obtained from the Popular Insurance report of 2001. Due to the absence of data related to incidence of comorbidities in overweight and obese children, adult data was used but smoothed by an exponential curve. Probability of becoming overweight and obese was obtained from the National Health and Nutrition Survey of 2006. A 3% discount rate was used for all costs. Results are presented in US dollars with an exchange rate of 13.5 MXN pesos for 1 US dollar. RESULTS: Total expenditure in comorbidities for children that became obese at any time during simulation was $96,632,485,372, for those who became overweight was $96,513,280,690 and for those that remain in normal weight was $55,650,304,284. CONCLUSIONS: From the results of the model it can be said that for the group of children currently aged between 5 and 11 years an extra $4.1 billion will be spend in comorbidities of those that will become obese and an extra $0.35 billion for those that will become overweight compared to those that will remain in a normal weight.

PSY27

VARIABILITY OF FEES IN THE FIELD OF HAEMOGAMS IN THE AUSTRIAN CONTRACT PHYSICIANS’ AND INSTITUTES’ SECTOR

OBJECTIVES: Contracts with physicians or institutes that perform health care services can provide price advantages due to competition. The sickness funds of the Austrian Social Security signed different contracts concerning haemograms with physicians or institutes. Claims data, respectively rendered fees suggest a possible savings potential in the fee for service system without reducing the scope of the procedures or the frequencies. We analyzed the variety of prices in the field of haemograms including contracted physicians and institutes. This shows variability among the cost of reimbursement in the Austrian outpatient clinics and costs of contracted physicians, institutes, and outpatient clinics of hospitals and ambulatories. The outpatient sector is supplied with services by contracted physicians. Approximately 30% of the Austrian outpatient sector cannot be displayed since no data is available from outpatient clinics of hospitals. METHODS: Price differences for the same or similar procedures performed by different contracted physicians or institutes are evaluated. Different financial impacts (e.g., focusing on average or lowest value) are simulated. Values were rounded to two decimal points, however, calculated by 15 decimal points. The fee equals the division of turnover and frequency. RESULTS: Services in haemograms were brought into account 103,468,542 times in the year 2006. Calculating all frequencies with the lowest paid fee (turnover/frequency) for each service would lead to a lower financial effort of 82% compared to the current turnover. Calculating all frequencies with the highest fee for service would lead to a higher financial effort of 117% compared to the current turnover. CONCLUSIONS: A current savings potential of 117%, contrasting the current fee with the most expensive one, indicates a well established fee negotiation. However, a savings potential of 82% is worth being considered for further evaluation and, if necessary, the adjustment of fees is advisable.

ECOLOGIC BURDEN OF FIBROMyalgia COMPARED TO OTHER CHRONIC CONDITIONS

OBJECTIVES: Fibromyalgia is a chronic condition characterized by widespread pain and decreased physical function. This study compares the economic burden in patients diagnosed with Fibromyalgia (FM) with that of patients diagnosed with Chronic Fatigue Syndrome (CFS) and patients with Major Depressive Disorder (MDD), and other Depressive Disorders (ADD). METHODS: Claims data from the Thomson/Medstat MarketScan Commercial Claims Database, Study subjects aged 18+ with continuous eligibility were required to have ≥1 inpatient claim or ≥2 outpatient claims during 2006 with ICD-9-CM codes for one of the disease conditions. Patient groups were not mutually exclusive (1.0% of FM patients had CFS and 10.8% had MDD). Mean annual third-party payer costs/patient were calculated based on paid claims. Incremental costs relative to FM were generated using generalized linear models (family = gamma, link = log), adjusting for age, gender, beneficiary status, employment status, insurance plan type, comorbid prevalence of FM, CFS, and other comorbidities. RESULTS: A total of 77,124 FM, 11,672 CFS, and 215,380 ADD patients met all study entry criteria. Total unadjusted costs for FM patients ($10,187) were similar to that of ADD patients ($10,416) and greater than CFS patients ($8,318). The highest unadjusted cost category for all patients was outpatient Rx (FM $5,594; CFS $4,972; CFS $4,603), followed by inpatient Rx costs (FM $2,367; CFS $3,116; CFS $2,067). Prescription costs (FM $2,226; CFS $2,308, CFS $1614) were the lowest cost category. After adjusting for covariates, third-party payer costs for FM patients were not significantly different than costs for CFS patients and were 9% ($984) lower costs for ADD patients. CONCLUSIONS: The costs to treat FM patients are high and comparable to that for CFS and ADD, other chronic diseases with similar symptoms and/or often covered by third-party payers. Early diagnosis and use effective treatments for FM could reduce the economic burden on third-party payers.

REAL-WORLD USE OF DULOXETINE FOR LOW BACK PAIN

OBJECTIVES: Duloxetine, a serotonin-norepinephrine reuptake inhibitor (SNRI) with potential efficacy for patients with low back pain (LBP), was approved by the FDA in 2004. Duloxetine-naïve patients were matched to 500 LBP patients (controls) who initiated another pharmacological or non-invasive LBP treatment in the same month from LBP diagnosis as duloxetine was initiated in duloxetine-treated patients. Controls were also matched using baseline propensity scores of duloxetine treatment, specific comorbidities, LBP diagnostic categories and baseline LBP treatments. Patients with back surgery prior to index date were excluded. McNemar tests were used to compare study period.