Urinary Incontinence (MUI) and Urge Urinary Incontinence (UUI) were used. METHODS: PURE is an ongoing six-month, pan-European, prospective observational study to determine direct treatment costs for women with UI. Analysis includes 2175 German patients (mean age 65.1 years) with SUI (n = 487), MUI (n = 1457) or UUI (n = 231) symptoms. Participating investigators are office based primary care physicians (n = 110), urologists (n = 185), gynaecologists (n = 100) and other (n = 4). Resource use data for cost estimation was collected retrospectively including medication, conservative treatment, diagnostic and surgical procedures, incontinence products and visits to health care providers for 12 months preceding baseline. Unit costs for 2004 from the perspective of statutory health insurance (SHI) were used. RESULTS: Average total annual costs for women with UI ranged from €413.00 for UUI, €348.00 for MUI and €585.20 for SUI. Costs were primarily attributable to pad costs for SUI (223.5 €), MUI (300.3 €) and UUI (235.0 €). A total of 52.4% of pad costs were incurred by SHI, with remaining costs being paid out-of-pocket. Average drug costs were 47.4 € for SUI, 86.1 € for MUI and 107.2 € for UUI. Patients receiving UI surgery had average surgical costs of 3326.9 €. On average, 26.9% of patients with SUI, 44.0% with MUI and 52.8% with UUI were treated with UI medication, while 10.3% of patients with SUI, 16.8% with MUI and 17.5% with UUI were ever treated with surgery. Pad use ranged from 85%, 87.2% to 89.2% in SUI, MUI and UUI patients, respectively. CONCLUSION: Patients with MUI were found to incur the highest costs compared to patients with other UI subtypes. Patients with SUI were treated with UI medication not indicated for use in SUI. Incidence of previous UI surgery was considerable in this treatment seeking population.

TREATMENT OF INSTITUTIONALIZED PATIENTS WITH ALZHEIMER'S DISEASE WITH QUETIAPINE: A COST-EFFECTIVENESS EVALUATION

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OBJECTIVE: Over 75% of individuals with Alzheimer’s disease (AD) residing in nursing homes have behavioral and psychological signs of dementia (BPSD). Quetiapine is an atypical antipsychotic that has demonstrated effectiveness in the treatment of BPSD. This analysis examines the health economic implications of treating patients with AD and BPDS with quetiapine at a dose of 200 mg per day. METHODS: A discrete event simulation was developed to compare treatment of institutionalized AD patients in the US with quetiapine relative to no pharmacological treatment. The model follows individuals over one year, tracking changes in BPSD and the resulting influence on costs. Effectiveness and treatment persistence estimates are based on a randomized, double-blind trial comparing quetiapine to placebo, while BPSD related nursing home costs are derived from the Minnesota Case Mix Research Database and published information. Costs in the simulation, which are reported in 2004 US dollars, include nursing home per diems, physician visits, psychiatric and behavioral services, and treatment with quetiapine. The primary effectiveness outcome is time without clinically significant BPSD. RESULTS: Unchanged patients incur costs averaging $49,350 per year, clinically significant BPSD apparent 87% of the time. Treatment with quetiapine costs $1142 per year, but this is entirely offset in savings from other areas, resulting in net savings of $44 per year. At the same time, patients spend seven fewer weeks with clinically significant BPSD. In repeated simulations, quetiapine dominated no treatment in almost 60% of replications. In 94% of replications, quetiapine was either dominant or led to incremental costs per BPSD year avoided of under $5000. Sensitivity analyses showed that variations in BPSD-specific nursing home costs had the strongest impact on outcomes. CONCLUSIONS: These analyses indicate that quetiapine in patients with AD and BPSD is cost-effective and may even lead to overall health care system savings.

OVERCOMING SAMPLE-SELECTION CHALLENGES IN ECONOMIC COMPARISONS OF DRUG AND NON-DRUG THERAPY: THE CASE OF OVERACTIVE BLADDER

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OBJECTIVE: To assess whether comparable populations can be created to assess the economic impact of different treatment strategies for overactive bladder (OAB). METHODS: Data were obtained from the PharMetrics Patient-Centric Database on patients diagnosed with OAB between January, 2001 and December, 2002. Patients were stratified into those receiving a pharmacological therapy for OAB (ie, long-acting tolterodine, immediate- or extended-release oxybutynin) versus medical management alone. Patients were matched 1:1 by the estimated propensity score for OAB pharmacotherapy. A logistic regression model included selected demographic and clinical characteristics. A fitted probability of receipt of OAB medication was generated for all patients, and matching was performed based on a difference of ± 0.01 in this probability. Differences in patient characteristics as well as outcomes and costs during follow-up were assessed using descriptive statistics (chi-squares for proportions, Wilcoxon rank-sum tests for continuous variables). RESULTS: A total of 29,992 matched pairs were identified. Patients averaged 50 years of age, and 75% were women. After matching, differences in all patient characteristics were nonsignificant, with the exception of physician specialty. Both groups had a pre-index Charlson Comorbidity Index of 0.70. The incidence of urinary tract infection was higher in the group receiving medical management alone (27.4% vs. 20.2%, p < 0.0001). Mean (± SD) OAB-related costs were also significantly higher in the medical management group ($454 ± $2559 vs. $253 ± $1985, p < 0.0001). Pharmacy costs were higher in the drug-treated group, but total costs (OAB-related and unrelated) were numerically similar ($8666 ± $22,757 vs. $8674 ± $20,496), suggesting that high pharmacological costs of treatment are offset by reduction in other OAB- and infection-related costs. CONCLUSIONS: Creation of comparable cohorts is feasible, even when treatment interventions differ substantially. Furthermore, OAB pharmacotherapy appears to be cost-neutral in the management of the condition, and may impart selected clinical benefits.

ECONOMIC EVALUATION OF ONDANSETRON VERSUS DIMENHYDRINATE FOR PREVENTION OF POSTOPERATIVE VOMITING IN CHILDREN

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OBJECTIVE: Postoperative vomiting (POV) is a distressing complication and its incidence ranges from 34%–90% in children undergoing strabismus surgery when antiemetics are not administered prophylactically. This study compares the economic benefit of ondansetron versus dimenhydrinate as antiemetics administered prophylactically in children undergoing strabismus surgery. METHODS: This study, conducted at Toronto’s Hospi-
tal for Sick Children, reviews 70 charts representing healthy children who had strabismus surgery and were given ondansetron or dimenhydrinate prophylactically. Cost-consequence analysis is used to compare costs and outcomes. Cost information was obtained from the finance department and the hospital pharmacy. Cost items include the acquisition cost of the antiemetics, the cost of administering the agents, the cost length of stay in the post anesthetic care unit (PACU) and the cost of an episode of emesis, including laundry expense, materials, nursing time, housekeeping time and rescue treatment. The outcome measure used to determine the effectiveness of the antiemetics is the number of POV-free patients. This represents patients that did not experience POV that would have otherwise done so without the prophylactic administration of an antiemetic. RESULTS: In an adjusted cohort of 100, the number of POV-free patients was 45.3 for ondansetron and 38.2 for dimenhydrinate. The costs per patient were CAD$$185.34 for ondansetron and CAD$$32.34 for dimenhydrinate. The length of stay in the PACU represented over 97% of total costs, and the mean lengths of stay in the PACU for ondansetron and dimenhydrinate were significantly different, 3.43 and 4.41 hours, respectively. CONCLUSION: Ondansetron is more effective in reducing POV and less expensive than dimenhydrinate. However, the dominance ondansetron offers over dimenhydrinate is dependent on the length of stay in the PACU. This study should serve as a pilot for a larger scale investigation on the correlation between the length of stay in the PACU and the antiemetic agent used.

Diabetes/Obesity II

**DB5**

**BODY MASS INDEX (BMI) AND TRENDS IN GP CONSULTATIONS AND PRESCRIBING: A UK NHS PERSPECTIVE**

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OBJECTIVE: To assess trends in UK GP consultations and prescribing according to BMI classification. METHODS: The DIN-LINK longitudinal patient database comprises 1.5 million anonymised medical records from GP practices across Great Britain. This analysis was based on a cohort of 75,738 DIN-LINK patients, with BMI status recorded, who had seen their GP in the year ending August 2004. Patients were grouped according to three BMI classifications: normal (BMI < 25), overweight (25–30) and obese (>30). We examined the mean number of consultations per patient and the lengths of these consultations in the three groups. The number and type of prescriptions issued were also measured. RESULTS: The mean number of consultations per patient increased as patients’ BMI increased from normal to obese. Patients with a BMI below 25 saw their GP a mean 6.4 times [SD 36.5] during the year, this was significantly lower than patients who were overweight (7.5 [35.5]). Patients classified as obese had the highest mean number of consultations at 8.7 [35.3]. This trend was repeated when the number of prescriptions issued per consultation was investigated. In the normal BMI group a mean 0.87 prescriptions were issued per consultation, increasing to 0.99 for the overweight individuals; this rose again to 1.17 in the obese group. Over the course of the year, obese patients were issued with a mean 10.3 prescriptions, almost twice as many as normal BMI patients (mean 5.6). There appeared to be only slight increases in the lengths of consultations as BMI classification increased from normal to obese. CONCLUSION: Our preliminary analysis shows that patients with a higher BMI are likely to visit their GP more frequently, and be issued with more prescriptions, than those of normal weight. The length of a consultation, however, does not appear to be influenced greatly by BMI status.

**DB6**

**COMPARISON OF THE COST-EFFECTIVENESS FOR BASAL-BOLUS THERAPY OF TYPE-1 DIABETES USING INSULIN DETEMIR + INSULIN ASPART OR HUMAN INSULIN-BASED REGIMENS IN THE NETHERLANDS**

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OBJECTIVES: In patients with type-1 diabetes, poor glycemic control is associated with increased risk of complications. A recent clinical study provided evidence that basal/bolus treatment with insulin detemir+insulin aspart (IDet/IAsp) improved HbA1c (0.22%-points lower after 18 weeks), reduced risk of hypoglycemic events (by 21%), and decreased body mass index (BMI) (–0.3 kg m⁻²) in comparison to neutral protamine Hagedorn insulin-human soluble insulin (NPH/HSI). The aim of this study was to evaluate the long-term impact of these short-term clinical benefits in patients with type-1 diabetes in the Dutch setting. METHODS: We used a validated computer simulation model (CORE Diabetes Model) to project long-term clinical and cost outcomes in patients receiving IDet/IAsp or NPH/HSI based on the clinical study findings. Standard Markov sub-models were combined to simulate the incidence and progression of complications (cardiovascular disease, neuropathy, renal and eye disease). Transition probabilities and HbA1c-dependent adjustments were derived from published sources. Baseline cohort characteristics and treatment effect data were based on the clinical study. Direct costs were retrieved from published sources and projected over patient lifetimes from a Dutch National Health Care perspective. Costs and clinical benefits were discounted at 4% per annum. RESULTS: IDet/IAsp treatment was associated with fewer diabetes-related complications, improved life expectancy (0.15 life years gained) and quality-adjusted life expectancy (0.10 QALYs gained) compared to NPH/HSI. The mean total lifetime cost was €872 per patient higher with IDet/IAsp, leading to incremental cost-effectiveness ratios (ICERs) of €5813 per life year and €7206 per QALY gained. CONCLUSION: Short-term clinical benefits in glycemic control, hypoglycemic event rates and BMI associated with IDet/IAsp basal/bolus therapy were projected to lead to fewer complications, and improved life expectancy and quality-adjusted life expectancy over patient lifetimes compared to NPH/HSI. This resulted in ICERs for IDet/IAsp versus NPH/HSI in the range considered to represent excellent value for money.

**DB7**

**THE EFFECT OF OBESITY ADJUSTMENTS ON COST-EFFECTIVENESS MODELS OF DIABETES PREVENTION**

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OBJECTIVES: Obesity adjustments may have a substantial effect on models of long-term cost-effectiveness of intensive lifestyle intervention to prevent type-2 diabetes (T2DM). The objectives of this study were to: 1) design a long-term cost-effectiveness model to evaluate the use of lifestyle intervention to prevent progression from impaired glucose tolerance (IGT) to T2DM; and 2) to analyze the effect of obesity adjustments for mortality and costs on the model. METHODS: Markov models were developed based on the DPP results incorporating the states of normal glucose tolerance (NGT), IGT, T2DM and death. Transition probabilities were derived from DPP and current lit-