**OBJECTIVES:** To compare medication treatment patterns for patients who initiated on olanzapine (OLZ) versus risperidone (RIS).
**METHODS:** Retrospective analysis of a large, geographically diverse claims database of insured individuals identified 670 enrollees who: (1) were diagnosed with schizophrenia; (2) initiated on OLZ (n = 423) or RIS (n = 247) monotherapy, and (3) had no use of OLZ or RIS in one year prior-initiation. Multivariate analyses were used to compare the OLZ and RIS groups with respect to treatment duration and likelihood of receiving medication for at least 80% of days during the one-year post-initiation, likelihood of switching between study drugs, and likelihood of receiving concomitant treatment for Parkinsonian symptoms. Regressions controlled for demographics, comorbidities, and previous medication use patterns.
**RESULTS:** Compared to RIS (mean dose = 3.32 mg/day), patients treated with OLZ (mean dose = 10.45 mg/day) experienced a 29.4% increase in treatment duration (162 days vs. 213 days; $p < 0.0001$), a higher probability of receiving medication for at least 80% of days (Odds Ratio = 2.057, $p = 0.0002$), a decrease in the probability of concomitant use of anti-Parkinsonian medications (Odds Ratio = 0.639; $p = 0.0284$). Patients who initiated on OLZ were less likely to switch to RIS than vice versa (Odds Ratio = 0.275; $p < 0.0001$).
**CONCLUSIONS:** Compared to RIS, patients treated with OLZ experienced a longer duration of therapy, an increased likelihood of receiving 80% of days of therapy, a decreased likelihood of concomitant use of anti-Parkinsonian agents, and a lower probability of switching among medications of interest.

## EAR, EYE & SKIN DISEASES/DISORDERS—*Clinical Outcomes Presentations*

**PES1**

### QUANTIFYING POTENTIALLY INAPPROPRIATE OPHTHALMIC BETA-BLOCKER USE IN THE MANAGEMENT OF GLAUCOMA

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Studies have shown that systemic absorption of ophthalmic beta-blockers (OBBs) can potentially cause severe systemic side effects.
**OBJECTIVES:** To evaluate the use of OBBs among patients with a contraindication or precaution against its use.
**METHODS:** We conducted a retrospective analysis of pharmacy and medical claims data from a West Coast health plan. Patients receiving a prescription for ophthalmic betaxolol, carteolol, levobunolol, metipranolol, or timolol between 7/1/98 and 6/30/00 were included in this study. Study cohorts were identified based upon the first OBB agent received and were followed for 180 days. Patients receiving prescriptions for different OBBs that were more than 180 days apart were categorized as having two episodes of care. OBBs are contraindicated in patients with sinus bradycardia/persistent severe bradycardia, asthma, COPD, and greater than first degree heart block. OBBs have precautions against use in patients having diabetes mellitus, congestive heart failure, Raynaud's phenomenon, or using oral beta-blockers. OBB use was defined as inappropriate if used simultaneously with oral beta-blockers, within 15 days of heart block diagnosis, or within 6 months of the other conditions.
**RESULTS:** A total of 9,094 unique patients contributed 9,294 episodes of care. The percentage of patients with a contraindication or precaution against OBB use, respectively, was 12.7% and 20.9% (betaxolol: 19.9% with contraindication, 22.7% with precaution; carteolol: 9.7%, 20.9%; levobunolol: 13.0%, 21.5%; metipranolol: 9.2%, 21.5%; timolol: 10.7%, 20.3%). Overall, 29.6% of patients had at least one contraindication or precaution against OBB use, and 7.6% had multiple contraindications and/or precautions.
**CONCLUSION:** Nearly three out of ten patients who received an OBB had a contraindication or precaution against its use. Further research is needed to determine the incidence of clinically significant adverse effects from prescribing OBBs in these patient populations, and to identify alternative glaucoma medications that may be more appropriate for these patients.

## EAR, EYE & SKIN DISEASES/DISORDERS—*Economic Outcomes Presentations*

**PES2**

### A DECISION-ANALYTIC MODEL TO COMPARE THE COST OF METHYL AMINOLEVULINATE PHOTODYNAMIC THERAPY WITH STANDARD TREATMENTS IN THE UK FOR DIFFICULT-TO-TREAT BASAL CELL CARCINOMA AND ACTINIC KERATOSIS

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**OBJECTIVES:** Current treatments for non-melanoma skin cancer (NMSC) can be problematic when lesions are in cosmetically sensitive sites. Patients may also be unsuitable for standard therapies for other reasons. Cosmetic procedures are therefore common. Methyl aminolevulinate (Metvix) photodynamic therapy (MAL PDT) has comparable lesion response rates and superior cosmetic outcomes in such patients. The aim of this study was to estimate the mean total costs of treatment to the UK

health care system for methyl aminolevulinate (MAL) PDT compared with a set of current treatment options.
**METHODS:** A decision-analytic approach was adopted in which treatment pathways were defined for both MAL PDT and the current treatment options. The model follows patients presenting with basal cell carcinoma (BCC) or actinic keratosis (AK) through up to three lines of treatment, accounting for the associated health care costs. Epidemiological and GP referral/treatment parameters were determined from a survey of GPs. Treatment modality and reconstructive surgery parameters were determined from a survey of UK specialists familiar with the treatment of NMSC. Further model parameters were determined from an extensive literature review of the clinical data.
**RESULTS:** The surveys indicated that simple lesion excision is currently the favoured treatment modality for difficult-to-treat BCC. For patients with difficult-to-treat AK, 5-fluorouracil is currently the favoured treatment. In addition, the surveys showed that a large number of patients undergoing lesion excision require costly reconstructive surgery. The decision-analytic model found MAL PDT had higher initial costs, but had cost-offsets due to reduced requirement for reconstructive surgery.
**CONCLUSIONS**: Higher initial costs associated with MAL PDT are offset by savings from reduced reconstructive surgery. Improved cosmetic outcome and reduced need for surgery are also likely to impact on patients' treatment preferences and on quality of life.

**PES3**

## TOPICAL CORITCOSTEROID AND PHYSICIAN VISIT UTILIZATION AND COSTS IN PATIENTS WITH ATOPIC DERMATITIS

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**OBJECTIVE**: Describe the utilization and costs of topical corticosteroids (TCS) and physician visits in patients with atopic dermatitis (AD) from the third party payer perspective.
**METHODS:** Data were extracted from Medstat's MarketScan, a proprietary claims database, which includes people who received pharmacy and medical benefits from various managed care organizations (MCOs). We identified patients with continuous pharmacy coverage throughout 1999 with at least one ICD-9 code for AD (691.8 or 692.9). TCS utilization was assessed as the average number of prescriptions, average number of prescriptions per patient, and average quantity dispensed. Drug costs are reported as the average AWP and average MCO payment. All drug information was stratified by brand/generic status. Physician visits were identified as either generalist or specialist. Costs for physician visits were identified from the 1999 PMIC physician fee schedule.
**RESULTS:** 71,025 people were identified with AD, and the estimated overall prevalence was 3.22%, and 3.93% for patients 18 years of age or younger. Of these patients, 12.9% were treated with brand name TCS, at 1.5 prescriptions (42 grams each) per patient per year (pppy), and 12.9% were treated with generic TCS, at 1.5 prescriptions (64 grams each) pppy. Brand name TCS prescribed to those ≤18 had an average AWP of $34.46 and an average MCO payment of $21.36. The corresponding figures for generic TCS were $17.62 and $10.09. Total MCO payments for TCS were $3.65 per AD patient for 1999. Patients ≤18 years visited a generalist approximately 1.2 times per year and specialist 1.4 times per year. Total physician visit costs were estimated to be $172.60 per patient in 1999.
**CONCLUSIONS:** Despite the availability of generic TCS, 50% of prescriptions were for brand name products. However, overall, TCS costs are small relative to the costs for physician visits.

**PES4**

## INFORMAL CAREGIVERS COSTS IN THE ELDERLY US POPULATION: A MULTIVARIATE REGRESSION MODEL OF THE VISUALLY IMPAIRED VERSUS UNIMPAIRED

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Informal caregivers are individuals who provided uncompensated care for their families and/or friends.
**OBJECTIVES:** To examine the impacts of visual impairment (VI) on costs associated with informal caregivers in the U.S. elderly population.
**METHODS:** We used data from the "Helper" file in the Asset and Health Dynamics Among the Oldest Old (AHEAD) Wave I, a biennial prospective panel data collected for noninstitutionalized persons aged 70 years old and over between 1993 and 1994. Time spent by the informal caregivers (e.g., frequency of care per week, hours spent per day) was combined with hourly wage rates to calculate costs associated with informal care. VI was approximated by those who reported poor eyesight or legally blind in a self-reported health condition question. Multivariate regression models were used to evaluate the impacts of VI on informal care-givers' costs while accounting for confounding factors such as demographics and comorbidities.
**RESULTS:** Use of informal caregivers was found in 64.2% of the visually impaired group, almost three times that of the visually unimpaired group (22.88%). On average, the visually impaired group received 20.5 hours of care weekly from informal caregivers, compared with a weekly average of 5.3 hours in the visually unimpaired group. The estimated monthly cost associated with informal caregivers was $980 for the visually impaired and $253 for the visually unimpaired. Using the logarithm of monthly costs as the dependent variable, the