mean fall-related hospital reimbursement of $14,769. LTCF costs were estimated from RUG classifications and associated payment rates. Total reimbursement per resident per year (PRPY) was calculated as the sum of annualized LTCF and hospital reimbursement. Fall-related costs were estimated as the difference in changes in reimbursement between groups from pre- to post-periods. **RESULTS:** The matched sample included 1130 fallers and 1130 non-fallers. Fallers had substantially more fractures and hospitalizations in the post-period than non-fallers. The sum of LTCF and hospital costs increased $4722 PRPY for fallers from pre- to post-periods; non-fallers' costs decreased by $1,537 PRPY. The difference in changes—$6,259 (95% CI = $2,034 to $10,484) PRPY—represents fall-related costs. About 60% of the difference was attributable to higher hospitalization costs for fallers. In, addition fallers were more likely to be discharged to hospitals or to die. **CONCLUSION:** Falls in LTCFs result in substantial costs, primarily due to higher rates of fractures and hospitalizations.

OSTEOPOROSIS—Health Care Use & Policy Studies

POS12

USE OF OSTEOPOROSIS MEDICATIONS FOLLOWING A FRACTURE

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OBJECTIVES: To estimate the proportion of patients who receive pharmacologic treatment for osteoporosis following an osteoporotic fracture and to identify factors that determine which patients receive treatment. **METHODS:** Data were taken from the Medical Expenditures Panel Survey (MEPS) for 2001–2003. Women who reported a wrist, vertebral, or hip fracture after the age of 50 years were identified. Prescription data were assessed for these subjects and two groups were identified: those who received pharmacologic treatment following a fracture and those who did not. Using Andersen's Behavioral Model of Health Services Utilization, two categories of variables were examined to determine factors related to treatment: characteristics of the health delivery system and characteristics of the population at risk. **RESULTS:** The final sample consisted of 129 subjects. This represented an estimated 1,238,086 women with a history of osteoporotic fracture during 2001 to 2003 in the civilian, female, non-institutionalized U.S. population. Of these, 38% received treatment. Those treated were most likely to receive either hormone therapy or bisphosphonates. The only variable that was significantly different ($p < 0.05$) between those treated and not treated was type of insurance coverage; patients covered by a private HMO were more likely to receive pharmacologic treatment. **CONCLUSION:** Most women do not receive pharmacologic treatment for osteoporosis following a fracture. Substantial efforts should be made to close the gap between guideline recommendations and clinical practice. We were unable to identify variables other than insurance coverage that were related to treatment.

OSTEOPOROSIS—Methods and Concepts

POS13

IMPACT OF THE ALLOWABLE GAP ON PERSISTENCE IN THE BISPHOSPHONATE MARKET

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OBJECTIVES: Determination of medication persistence, using administrative pharmacy data, relies on the pharmacist-reported days supply and an allowable gap between prescriptions. This concept is used consistently in secondary research, but there are no standards on the appropriate gap to allow between the run-out of the days supply of one prescription and the dispensed date of the patient's subsequent prescription. The purpose of this research is to evaluate the impact of varying the allowable gap when assessing persistence in a market with variable dosing frequencies. **METHODS:** The osteoporosis market includes competing bisphosphonate products with different dosing regimens—weekly or monthly doses. We assessed the impact of expanding the allowable gap on persistence and evaluated the impact of allowing different gaps for each product because differences in dosing frequencies may impact patients' refill patterns. Finally, we examined the refill patterns of patients on each product and the potential impact of those patterns on the determination of persistence. Cox proportional hazards models, adjusted for patient characteristics, were used to compare persistence between products. We used the IMS Longitudinal Prescription (LRx) database, consisting of anonymized patient retail prescription records in the U.S. The study cohort included 165,955 women aged 50 years or older who initiated therapy between September and November 2005. **RESULTS:** As the allowable gap increased, the average persistence of newly treated bisphosphonate patients also increased (112 days using 30-day gap, 125 days using 45-day gap), but relative differences between products were similar, with monthly patients less persistent than weekly (HR = 1.09 95%CI = (1.08,1.10) using 30-day gap; HR = 1.05 95%CI = (1.03,1.06) using 45-day gap). When the gap was allowed to differ across products (45-day gap for monthly vs. 30-day gap for weekly), a different relationship between products was found (HR = 0.97 95%CI = (0.96,0.98)) **CONCLUSION:** It is important to consider the allowable gap, in relation to dosing frequencies, when interpreting results from persistence measures.

OSTEOPOROSIS—Patient Reported Outcomes

POS14

COMPARISON OF SF-6D AND EQ-5D UTILITIES IN OSTEOPOROTIC HIP FRACTURE PATIENTS

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OBJECTIVES: To compare SF-6D and EQ-5D in both, absolute values and sensitivity to change over time, in osteoporotic hip fracture patients in Poland. **METHODS:** Data were extracted from prospective study on outcomes of osteoporotic hip fractures in Poland (PolHipQol study). Eligible patients had to be 60 years or more, have low energy femoral neck fracture or pertrochanteric fracture of the femur, absence of severe cognitive dysfunction (measured by Hodkinson's Abbreviated Mental Test Score) and both SF-36 and EQ-5D post fracture measurements avaiable. SF-36 scores were translated into SF-6D utilities using the algorithm developed by Brazier et al. The EQ-5D utilities were based on the European VAS value set. The correlations between preference measures were assessed using Spearman's rank correlation coefficient. Sensitivity to change over one year was evaluated with the standardized response mean (SRM). **RESULTS:** Post fracture data of 65 patients (mean age 77.8; 54 women) and one year follow-up data of 51 patients were avaiable (9 patients were ceased and 5 lost to follow-up). Mean SF-6D utility decreased from 0.65 (SD 0.13) before fracture (recall method) to 0.49 (0.10) after fracture, and then increased to 0.55 (0.12) at the final follow-up. Mean EQ-5D utility decreased from 0.73 (0.22) before fracture to 0.24 (0.17) after fracture, and then increased to 0.47 (0.23) at the final follow-up. SF-6D and EQ-5D utilities

correlated strongly: 0.75 ($p < 0.001$). The responsiveness was moderate for SF-6D (SRM = 0.40) and high for EQ-5D (SRM = 0.83). **CONCLUSION:** Both SF-6D and EQ-5D captured worsening and improvements in health over time. However, the use of EQ-5D resulted in larger utility losses and gains and in consequence may result in lower cost-utility ratios. The study showed high responsiveness for EQ-5D and moderate for SF-6D, indicating that EQ-5D is more suitable for use as utility measure in clinical trials in elderly hip fracture patients.

POSTER SESSION III

ALLERGY/ASTHMA—Clinical Outcomes Studies

PAA1

SUB-ACUTE LACK OF ASTHMA CONTROL AND SUBSEQUENT ACUTE ASTHMA EXACERBATIONS: EVIDENCE FROM MANAGED CARE DATA

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OBJECTIVES: To determine whether sub-acute lack of asthma control (SALAC), independent of current exacerbations, is associated with subsequent acute asthma exacerbations. **METHODS:** Patients who were aged ≥12 years as of 2001, continuously enrolled throughout 2001–2004, and had ≥1 claims for asthma (ICD-9-CM code 493.x), no claims for COPD or cystic fibrosis, *and* ≥1 prescriptions for an asthma medication anytime during 2001–2004 were identified using administrative claims data from PharMetrics/IMS Health. SALAC was defined as >4 physician visits for asthma per year (or ≥2 per quarter) *or* >5 SABA prescriptions per year. The impact of asthma control category during 2001 (exacerbation only, SALAC only, both exacerbation and SALAC, or neither exacerbation nor SALAC) on having ≥1 acute asthma exacerbations (hospital admissions, ED visits, or short-term courses of oral corticosteroid therapy within 7 days of a physician office visit) anytime during 2002–2004 was assessed using logistic regression. Covariates included gender, age, insurance type, and region. **RESULTS:** Among 11,779 asthma patients in 2001, 8% experienced an exacerbation only (EO), 26% experienced SALAC only (SO), 12% had both an exacerbation and SALAC (Both), and 54% had neither an exacerbation nor SALAC (Neither). The 2002–2004 exacerbation rate was higher in the Both group vs. the EO group (61.8% vs. 55.0%) and in the SO group vs. the Neither group (37.3% vs. 31.9%). Controlling for the covariates and compared with the Neither group, the Both group had a larger impact on the odds of an exacerbation in 2002–2004 than did the EO group (3.394 [95% CI: 3.009, 3.827] vs. 2.503 [2.176, 2.879], and the SO group had a significant and positive effect (1.277 [1.166, 1.399]). **CONCLUSION:** SALAC identifies an additional 26% of asthma patients who have a higher likelihood of a subsequent exacerbation in addition to the 20% who experienced an exacerbation in 2001.

PAA2

PREVALENCE OF UNCONTROLLED SEVERE PERSISTENT ASTHMA PATIENTS IN PNEUMOLOGY AND ALLERGY HOSPITAL UNITS IN SPAIN

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OBJECTIVES: Severe persistent asthma is not always adequately controlled and its prevalence is unknown among pneumology and allergy hospital units. The aim of this study is to determine uncontrolled severe persistent asthma prevalence among asthmatic patients attended in hospital units, to describe their clinical characteristics and to determine the prevalence of sensibility to common aeroallergens. **METHODS:** Cross-sectional epidemiologic study conducted in 201 hospital pneumology and allergology units in Spain. Asthmatic patients attending these services (in and out-patients) during a 6-month period were registered. Demographic data, clinical characteristics, skin-prick test, total serum IgE, asthma control test (ACQ) and quality of life (AQLQ) assessments were collected among a sample of asthmatics patients. **RESULTS:** A total of 1,423 (3.9% [CI 95%: 3.7–4.1%]) out of 36,649 asthma patients attending hospital units, had uncontrolled severe disease, data from 330 was collected. They showed a poor asthma control (a mean (SD) ACQ score 4.17 [0.96]). 55.9% of the sample had a positive skin-prick test to common aeroallergens and 53.6% showed high levels of total serum IgE. The percentage agreement between control assessment by the investigator and by GINA guidelines was moderate (65.3%, Kappa = 0.365), this discrepancy is basically explained by an overestimation of control by specialists. **CONCLUSION:** 1) Uncontrolled severe persistent asthma shows a limited prevalence among hospital asthma patients in Spain; 2) The level of the asthma control is overestimated by physicians; and 3) A half of the sample fulfilled criteria of the allergic disease.

ALLERGY/ASTHMA—Cost Studies

PAA3

A BUDGET IMPACT MODEL FOR DETERMINING THE COSTS OF INTRODUCING A NEW EXTRAFINE COMBINATION (BECLOMETHASONE/FORMOTEROL) FOR THE TREATMENT OF MODERATE TO SEVERE PERSISTENT ASTHMA IN SPAIN

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OBJECTIVES: A budget impact model was developed to estimate the economic impact of introducing beclomethasone/formoterol extrafine for the treatment of moderate to severe persistent asthma in Spain. **METHODS:** The analytic model is based on data from disease prevalence, population growth, drug consumption, ex-factory prices and market shares forecasting for Spain. It takes the perspective of the Spanish National Pharmaceutical budget and time horizon considered is 5 years. Annual discount rate was set at 5%. Drugs considered in the study were fluticasone/salmeterol, budesonide/formoterol and beclomethasone/formoterol extrafine. The model estimates the annual cost to treat patients with moderate to severe persistent asthma before and after the introduction of beclomethasone/formoterol extrafine in Spain. Annual costs consist of pharmacologic treatment costs, laboratory and diagnostic tests costs, specialist consultation costs and hospitalization costs. All costs are referred to 2007. **RESULTS:** It has been estimated that target population with moderate to severe persistent asthma in Spain would be around 284,365 in year 2007, arriving at 498,385 in 2012 due to increase in Spanish population and the increase of asthma prevalence. Total cost for the next 5 years for the treatment of moderate to severe persistent asthma in Spain was estimated at 1700€ millions before the introduction of beclomethasone/formoterol extrafine and at 1689€ millions after its introduction. Mean cost per patient was estimated at 642€ before the introduction of beclomethasone/formoterol extrafine and at 637€ after its introduction. **CONCLUSION:** This budget impact model estimates that the introduction of beclomethasone/formoterol extrafine for the treatment of moderate to severe