MA3 COMPARATIVE OUTCOMES OF FIBROMYALGIA PATIENTS WHO INITIATED DULOXETINE OR PREGABALIN: MEDICATION ADHERENCE AND DIRECT COSTS
Sun P1, Feng X2, Sun S3, Novick D4, Faries D5, Andrews J6, Wu A1, Wohleb E6
1Kailo Research Group, Fishers, IN, USA, 2Elly Lilly and Company, Inc., Indianapolis, IN, USA, 3Elly Lilly and Company, Inc., Fremont, CA, USA, 4Elly Lilly and Company, Inc., Windlesham, Surrey, UK, 5Kailo Research Group, Los Angeles, CA, USA

OBJECTIVES: To compare medication adherence and direct medical costs between duloxetine and pregabalin among fibromyalgia patients. METHODS: A retrospective cohort study design was used along with a large US national commercial claims database (2006–2009). Fibromyalgia patients who initiated duloxetine or pregabalin in 2008 at age between 18 and 64, and with continuous health insurance 1 year prior to index date were included. Duloxetine initiation was defined as a duloxetine or pregabalin initiation cohort or a pregabalin initiator cohort based on their initiated agent. Medication adherence of duloxetine or pregabalin, measured by total supply days, medication possession ratio (MPR) and proportion of patients with MPR > 80%, and direct medical costs, measured by annual costs per patient, were assessed and compared between the cohorts in the year following the initiation. Bootstrapping and propensity score stratification methods were used to adjust for distribution bias, as well as cross-cohort differences in demographics, clinical and economic characteristics, and medication history prior to the initiation.

RESULTS: Both the duloxetine and pregabalin initiation cohorts included 49,822 patients, 89% were female. In the post-initiation year, compared to the pregabalin cohort, the duloxetine cohort had higher total annually supply days (273.5 vs 176.6, p < 0.05), higher MPR (0.7 vs 0.5, p < 0.05) and more patients with MPR > 0.8 (45.1% vs 29.4%, p < 0.05). Relative to pregabalin initiators, duloxetine initiators had lower inpatient costs ($2,994.9 vs $4,949.6, p < 0.05), in the post-initiation year.

CONCLUSIONS: In a real-world setting, fibromyalgia patients who initiated duloxetine were more adherent, had lower inpatient and outpatient and total medical costs than those who initiated pregabalin.

MA4 DOES PEN HELP WHEN ELDERLY PATIENTS WITH TYPE-2 DIABETES INITIATE INSULIN? A REAL-WORLD RETROSPECTIVE STUDY OF INITIATING INSULIN GLARGINE VIA DISPOSABLE PEN VERSUS VIAL
Miao W1, Wang W2, Xie Y2, Li Q2
1SunA, Aventis, Bridgewater, NJ, USA, 2STATINMED Research/The University of Michigan, Ann Arbor, MI, USA

OBJECTIVES: To evaluate real-world outcomes among elderly patients (>65 years) with type 2 diabetes mellitus (T2DM) initiating insulin treatment with insulin glargine via disposable pen (IG-Pen) or conventional vial/syringe (IG-Vial).

METHODS: The MarketScan® Medicare database was used to identify T2DM patients >65 years who initiated insulin treatment with IG-Pen or IG-Vial from January 2007 through June 2009. All patients had continuous health care coverage for >6 months before (baseline) and >1 year after the index date (follow-up), and were insulin-naive but had >1 oral anti-diabetes drug (OAD) or glucagon-like peptide-1 (GLP-1) analog during the baseline period. Endpoints included 1-year treatment persistence (continuous study drug use without discontinuation) and adherence (adjusted medication possession ratio: aMPR), hypoglycemia-related events, healthcare utilization and costs. Stringent 1 propensity score matching was applied to remove observed baseline selection bias between the two cohorts.

RESULTS: Total of 5,860 patients were matched and analyzed (n=2,930 in each cohort); 44% women, median baseline age 74 years, number of OADs 2.1, Charlson comorbidity index 1.29). During the 1-year follow-up, those who initiated with IG-Pen were more persistent (58.2% vs 50.8%, P < 0.0001), and adherent (aMPR 0.69 vs 0.64, P < 0.0001), had lower average consumption of insulin (28.6 U/day vs 32.0 U/day, P < 0.0002), were less likely to have hospitalization (all-cause 33.0% vs. 37.5%, P < 0.0001), diabetes-related 16.7% vs. 18.8%, P < 0.037), and had similar total healthcare costs ($22,265 vs $21,669, P = 0.5085), despite higher diabetes drug costs ($2,166 vs $1,907, P < 0.0001). Hypoglycemia-related event rates were 8.6% with IG-Pen and 10.4% with IG-Vial (P = 0.0495).

CONCLUSIONS: This real-world study showed that for elderly T2DM patients initiating insulin treatment, using a pen rather than vial/syringe was associated with better treatment persistence and compliance, without increasing healthcare costs during the first year after initiation. Results will assist with clinical decision making and help optimize T2DM management in elderly patients.

PODIUM SESSION II: OUTCOMES RESEARCH STUDIES USING MODELING

M01 COST-EFFECTIVENESS ANALYSIS OF DIFFERENT STRATEGIES FOR FRAGILITY FRACTURE PREVENTION IN UNITED STATES MALE VETERANS
Lauber J1, Nelson R2, Adler R3, Nebeker J4, Nelson S5, Smith J6, Malone DC
1University of Utah Pharmacotherapy Outcomes Research Center, Salt Lake City, UT, USA, 2University of Utah, Salt Lake City, UT, USA, 3VA Medical Center, Phoenix, AZ, USA, 4Eli Lilly and Company, Indianapolis, IN, USA, 5Sanofi-Aventis, Bridgewater, NJ, USA, 6University of Arizona, Tucson, AZ, USA

OBJECTIVES: Absolute risk assessment (ARA) is promoted for guiding osteoporosis treatment decisions. Competing guidelines lack clarity on how to incorporate ARA into practice. We compared 6 strategies to identify one that minimized cost and optimized quality-adjusted life years (QALYs) in United States (US) veterans.

METHODS: We developed a Markov model comparing 6 strategies in elderly male veterans including (1) ARA alone, (2) ARA in concert with BMD screening, (3) BMD screening alone, (4) waiting for fracture, (5) doing nothing, and (6) an approximation of current care, which included a combination of strategies 2-5. Health states included community, nursing-home, and death. Three models with different assumptions concerning treatment efficacy among high-risk versus osteopenic patients were used. Simulations were conducted from a recent observational study comparing existing PSC- and non-PSC-admitted patients, the NINDS and ECASS III clinical trials, longitudinal cohort studies, and health state preference studies. Annual cost data were based on Medicare reimbursement and other published sources, and did not include start-up costs. The model used a health care payer perspective, and the primary outcomes were incremental life expectancy, quality-adjusted life years (QALYs), and health care costs. Sensitivity and scenario analyses were performed to evaluate uncertainty in the results.

RESULTS: Admission to an existing PSC resulted in a gain of 0.22 years of life (95% credible range [CR], 0.12 - 0.33) and 0.15 QALYs (95% CR, 0.08 - 0.23) per patient, at a cost of $3600 (95% CR, $2400 - $5000) per patient, compared with admission to a non-PSC hospital. The incremental cost per QALY gained was $34,833/QALY, but ARA alone dominated all other strategies. The total QALYs realized ranged from 10.87 for doing nothing to 10.90 for ARA alone. The total costs incurred under the assumption of equivalence ranged from $86,049 for ARA alone to $88,360 for BMD screening alone compared to ARA alone, which dominated all other strategies.

RESULTS: The total costs incurred under the assumption of equivalence ranged from $86,049 for ARA alone to $88,360 for BMD screening alone compared to ARA alone, which dominated all other strategies.

CONCLUSIONS: ARA may represent an important tool for minimizing cost and optimizing fracture prevention outcomes in US veterans.