(TD50 = 30); insulins (TD50 = 45); antidepressants (TD50 = 67); bisphosphonates (TD50 = 82); cardiovascular agents (TD50 = 85); statins (TD50 = 90); oral antidiabetic agents (TD50 = 90); and glaucoma medications (TD50 = 120). Rates of medication discontinuation among patients who had filled a prescription for an in-class medication in the prior 180 days were: inhaled steroids (TD50 = 60); insulins (TD50 = 130); glaucoma medications (TD50 = 180); antidepressants (TD50 = 187); cardiovascular agents (TD50 = 240); oral antidiabetic agents (TD50 = 270); bisphosphonates (TD50 = 272); and statins (TD50 = 308).

CONCLUSIONS: Patients new to therapy faced a far higher likelihood of medication discontinuation compared to those with prior in-class medication experience among all the medication classes studied. Providers and health care systems may want to re-engineer care to provide more frequent follow-up and education to this commonly treated, high-risk group.

systematic review of fixed-dose combinations and unit-of-use packaging in patients with hypertension, dyslipidemia, AIDS, asthma and diabetes type 2

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OBJECTIVES: Poor compliance is the primary reason for sub-optimal clinical benefit, especially in patients with chronic diseases. Fixed-dose combinations (FDC) and unit-of-use packaging (UUP) are strategies designed to simplify medication regimen and potentially improve compliance. The aim of our study is to systematically analyze the effect of FDC and UUP on compliance and effectiveness in patients with hypertension (HTA), dyslipidemia, AIDS, asthma and diabetes type 2 (DMII). METHODS: Systematic review (SR) of studies that compare medications combined in a single pill or within a UUP with the same free-drug combinations in HTA, AIDS, asthma and DMII. Bibliographic databases were searched from inception to February 2008 with no date limits. Two reviewers scrutinized retrieved references and full publications sought of potentially relevant studies were identified on the basis of title and/or abstract. Additional relevant studies were identified from manual searches. Only studies published in English or Spanish were included. Quality of studies was assessed using specific instruments according to their design. RESULTS: A total of 11 original studies (HTA 5; DMII 3; AIDS 2; dyslipidemia 1), 1 SR and 1 meta-analysis of varying quality were included in the SR. Most originals were retrospective (72%), based on medical claims (72%) and used medication possession ratio (RPM) as a proxy of compliance (54%). Some studies also included self-reported compliance (27%) and measures of persistence (18%). Only 3 studies reported comparative effectiveness. Follow-up periods ranged from 16 weeks to 1 year. Overall, results show a tendency for better compliance and less missed doses in the FDC and UUP groups compared to free-drug combination groups. Limited data support non-inferiority of FDC and UUP in terms of effectiveness. CONCLUSIONS: FDC and UUP seem to improve compliance with no major effects on effectiveness in patients with chronic diseases. However, evidence is weak and large randomized controlled trials should be carried out.

can asthma quality of life questionnaire (AQLQ) data from different countries be combined for analyses?

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OBJECTIVES: Health-related quality of life data are frequently collected in clinical trials from different countries and combined in analyses. This analysis compared AQLQ data across 16 countries (17 languages) to evaluate suitability to combine data in subsequent analyses. METHODS: AQLQ data from the Gaining Optimal Asthma control (GOAL) study was used for the analyses. Of 3416 patients treated, 1973 had an overall AQLQ score at baseline, 1850 at week 12 and 1832 at both. The original language (North American English) was considered the reference language (RL). Values within 0.5 of the RL were considered comparable given that 0.5 is considered a clinically meaningful difference. RESULTS: Number of patients completing each AQLQ language varied from 27 (Canadian French) to 256 (Mandarin Chinese). Mean age ranged from 31.7 years (Spain) to 52.9 years (Norway) and percent of males ranged from 30.3% (Brazil) to 74.4% (Norway). Mean overall AQLQ score [s.d.] at baseline in the RL was 4.59 [0.94]. Of the 16 languages all but three, Chile (3.58 [1.05]), Denmark (5.10 [0.82]) and Spain (5.19 [0.93]), reported mean baseline AQLQ overall scores within 0.5 of the RL. Similar findings were reported for AQLQ domain scores, with few countries reporting baseline values outside 0.5 of the RL. Mean change from baseline in the overall AQLQ score in the RL was 0.89 [1.06], with all translations reporting values within 0.5 of the RL indicating similar results in all languages. For the AQLQ domains, only the emotional function domain of the Norwegian, Canadian French and French for France translations were outside 0.5 of the RL. CONCLUSIONS: The consistency of baseline and change from baseline scores comparing 16 translations with the original language version supports the validity of translations used in this study and the combining of data across countries for analyses.
(Norway). Cronbach’s alpha (baseline overall score) ranged 0.93 to 0.97 (RL 0.94). Correlation with baseline Asthma Control Questionnaire (ACQ) and with FEV1 were as expected ranging from −0.76 to −0.58 (RL −0.69) and −0.02 to 0.41 (RL 0.08) respectively. Similarly, correlations with change from baseline for ACQ and FEV1 ranged from −0.83 to −0.61 (RL −0.78) and −0.11 to 0.56 (RL 0.03). The AQLQ showed ability to detect changes in ACQ over time in all languages except Danish. CONCLUSIONS: The finding that internal consistency, construct validity and responsiveness were consistent across languages and similar to the RL provides evidence of the quality of these translations and supports the combining of data for analyses.

**PRS23**

**IS THE EQ-5D RESPONSIVE TO RECOVERY FROM A MODERATE COPD EXACERBATION?**

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OBJECTIVES: To appreciate the effectiveness of treatments that reduce the frequency or severity of chronic obstructive pulmonary disease (COPD) exacerbations, the quality of life gains that result from this reduction should be adequately included. In the current study we evaluated the ability of the EQ-5D to reflect the course of a moderate exacerbation. METHODS: The study was designed as a prospective cohort study in which the change in EQ-5D scores over a period of 6 weeks was studied. 59 US patients, 40 year or older visiting the clinic with a moderate exacerbation were seen 4 times, i.e. during the screening visit and approximately 8, 14 and 43 days thereafter. Patients completed the EQ-5D at each visit. ‘Baseline’ EQ-5D was defined as the lowest of EQ-5D scores at visits 1 and 2, to capture the point at which the impact of the exacerbation is most severe. Standardized Response Mean (SRM) was calculated as the change divided by the standard deviation of change. RESULTS: The mean EQ-5D VAS and utility scores at baseline were 37 (SD 25; range 1–85) and 0.68 (SD: 0.21; range 0.17 to 1.00), respectively. Estimated improvements in VAS scores at visit 3 and 4 were 11.8 (p = 0.0012) and 13.9 (p < 0.0001), respectively. Estimated changes in utility scores were 0.1607 (p < 0.0001) and 0.1534 (p < 0.0001), respectively. SRM for EQ-5D utilities was 0.65, which was comparable with SRMs for symptoms (cough: 0.587, dyspnea 0.638). Patients with improvement in peak flow above the median had a larger improvement in utility (p = 0.030) and VAS (p = 0.012) than patients with improvement below the median. Based on curve estimation, an exacerbation results in average loss of 0.00188 QALY, compared to the same period with no exacerbation and 0.0286 compared to perfect health. CONCLUSIONS: EQ-5D VAS and utility are responsive to recovery from a moderate exacerbation, but changes are small.

**PRS24**

**QUALITY OF LIFE RESULTS USING THE EUROQOL QUESTIONNAIRES AND DIRECT MEDICAL COSTS IN ASTHMATIC PATIENTS. CHAS STUDY**

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OBJECTIVES: To assess the association between the degree of asthma control and quality of life and to estimate the direct medical costs associated with asthma in real life practice. METHODS: An analytical, cross-sectional study. Study units are primary care users diagnosed of asthma from all over Spain, aged 18 years or older. A multistage cluster sampling has been used for sample selection: 230 participating primary care physicians. The Asthma Control Questionnaire (ACQ) was used to measure asthma control and EQ-5D / EQ-VAS were used to measure quality of life in asthmatic patients. The Spearman rank correlation coefficient was calculated in order to assess the relationship between asthma control and quality of life. Information regarding health care resources (hospitalization days, emergency room visits, primary care visits and absenteeism days) during the 12 months prior to the visit was collected, expressed as 2008 euros (according to public tariffs available and inflation rate). RESULTS: Overall, 2159 patients have been evaluated, 42.2% males, mean age 48.5 (95% CI: 47.7–49.2). Of these, 37.4% (95% CI: 35.3–39.4) were uncontrolled (score > 1,5) according to ACQ. EuroQol EQ-5D mean score was 0.82 (95% CI: 0.81–0.83). Spearman rank correlation coefficient between ACQ and EQ-5D scores was −0.48879 (p-value < 0.0001), and between ACQ and EQ-VAS scores was −0.54942 (p-value < 0.0001). Hospitalisations over the last year, resulted in a direct cost of €54.85 per year and patient. In the same way, emergency room visits €271.17, primary care visits €161.31 and absenteeism €322.89. CONCLUSIONS: Better asthma control is associated with better quality of life in asthmatic patients. Poor asthma control leads to a higher use of health care resources and therefore higher direct medical costs in asthmatic patients.

**PRS25**

**THE PUBLIC’S WILLINGNESS TO PAY FOR A QALY IN THAILAND**

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OBJECTIVES: In Thailand, health care resource allocation is increasingly relying on economic analysis though the presentation of incremental cost per Quality Adjusted Life Year (QALY) is still arbitrary given a lack of consensus regarding the appropriate monetary value per QALY gained upon which to base resource allocation decisions. Using the societal perspective this study aims to explore the feasibility of establishing the monetary value per QALY gained for use in health resource allocation in Thailand. It also examined, if available, the differences in monetary value per a QALY gained for different disease severities, and between prevention and curative interventions. METHODS: Between March and June 2008 a random sampling household survey was conducted in eight provinces throughout the country where 1,080 participants aged between 15–65 years were interviewed. Estimated improvements in VAS scores at visit 3 and 4 were 11.8 (p = 0.0012) and 13.9 (p < 0.0001), respectively. Estimated changes in utility scores were 0.1607 (p < 0.0001) and 0.1534 (p < 0.0001), respectively. SRM for EQ-5D utilities was 0.65, which was comparable with SRMs for symptoms (cough: 0.587, dyspnea 0.638). Patients with improvement in peak flow above the median had a larger improvement in utility (p = 0.030) and VAS (p = 0.012) than patients with improvement below the median. Based on curve estimation, an exacerbation results in average loss of 0.00188 QALY, compared to the same period with no exacerbation and 0.0286 compared to perfect health. CONCLUSIONS: EQ-5D VAS and utility are responsive to recovery from a moderate exacerbation, but changes are small.

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Tafalla M. Nuevo J, Cordero L, Hernandez R AstraZeneca, Madrid, Spain

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