EVPI was €1368 at a value of the ceiling ratio of €20,000. EVVPI analysis showed that utilities had the largest contribution to the overall EVPI. The partial EVPI for this subset of input parameters was €517. Incorporating the newly collected data on utilities into the model reduced the overall EVPI to €563 and the partial EVPI for the utility input parameter to approximately €0.

CONCLUSIONS: Collecting additional information on utilities strongly reduced the overall and partial EVPI. At the population level, the value of collecting additional data on utilities outweighed the costs of data collection. Value of information analysis proved to be useful to determine the parameters for which additional data collection is most beneficial.

USING PATIENT DESCRIPTORS TO DEVELOP A PRO MEASUREMENT STRATEGY FOR CLINICAL TRIALS: EVALUATING THE COPD PATIENT’S EXPERIENCE OF DYSPNEA

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OBJECTIVES: There are currently no well-established Patient Reported Outcome (PRO) tools to measure dyspnea in COPD patients that have been accepted for label claims. Guidelines for measuring PROs to support label claims encourage patient input to define endpoints for clinical trials. This study was designed to understand COPD patients’ experience of dyspnea, and inform strategy for measuring PRO endpoints in clinical trials.

METHODS: Seventy-eight individuals (55% male; mean age 58 years) with moderate to severe COPD (MRC grades III-V) across 6 countries participated in interviews/focus groups, describing their breathing difficulties, severity, impacts and fluctuations. Themes were identified from a systematic content review of the transcripts, and further reviewed by an additional 18 patients.

RESULTS: Six distinct sensations of dyspnea were reported, with patients across multiple cultures demonstrating the ability to differentiate between sensations. Patients reported a high level of diurnal and day-to-day variation in both the nature and severity of symptoms. A conceptual model was developed based on this qualitative work and discussion with an expert panel of six clinicians and three psychometric experts. Patients confirmed the multi-sensational nature of dyspnea that is also suggested within the literature—“a subjective experience of breathing discomfort that consists of qualitatively distinctive sensations that vary in intensity”. However, existing measures evaluate dyspnea as a one-dimensional symptom (a single construct of shortness of breath) with a broad recall period (one to two weeks).

CONCLUSIONS: The model showed that a daily diary (with symptoms differentiated and assessed by patient-generated descriptive language) is more relevant for evaluating patients’ experience of dyspnea in clinical trials. This work demonstrates the value of extensive, multi-cultural patient input during early stages of PRO development to ensure that the endpoint strategy for supporting labelling claims adequately fits the conceptual model for the patient experience of that condition.

PERSISTENCE WITH TIOTRUPIUM: A COMPARISON WITH ESTABLISHED MEDICATIONS FOR COPD

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OBJECTIVES: Tiotropium is a once-daily inhaled anticholinergic maintenance treatment with demonstrated effectiveness in chronic obstructive pulmonary disease (COPD). We aimed to compare persistence of tiotropium-use with other respiratory drugs in COPD in current clinical practice.

METHODS: The PHARMO database includes, among others, drug-dispensing and hospital discharge records for >2 million subjects in The Netherlands. All probable COPD-patients were identified by new respiratory drug use (age >54 yrs) or COPD-hospitalizations.

RESULTS: New users of tiotropium, ipratropium, long-acting beta-agonists (LABAs), or fixed combination of inhaled corticosteroids and LABA (ICS&LABA), in 1998–2003, were included in the study.

CONCLUSIONS: Persistence was assessed quarterly during the first year of follow-up. Patients with a proportion of days covered (PDC) > 60% were considered persistent. Persistence was analysed using generalised estimating equations model. RESULTS: About 37% of new users of tiotropium continued treatment for one year, compared with 14% for ipratropium, 13% for LABA, and 17% for ICS&LABA. Multivariate analyses showed that tiotropium-users were 2–3 times more persistent with their therapy than patients using ipratropium (relative risk [RR]: 2.0; 95% confidence interval [CI]: 1.8–2.3), LABA (RR: 2.9; 95%CI: 2.4–3.6), or ICS&LABA (RR: 2.4; 95%CI: 2.1–2.8), respectively. Male gender, age >70 years, pulmonologist as first prescriber, prior use of other respiratory drugs, and previous hospitalization for COPD were all associated with enhanced persistence with the initial drug-therapy.

IMPROVING THE PERSISTENCE OF PATIENTS UNDERGOING SUBLINGUAL IMMUNOTHERAPY: SCORING AND VALIDATION OF A PATIENT-MANAGEMENT TOOL

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OBJECTIVES: Long-term patient adherence to treatment is the key issue in the efficacy of sublingual immunotherapy (SLIT). To help clinicians to manage SLIT patients and improve their adherence, a specific questionnaire: QUARTIS, has been developed and validated.

METHODS: Relevant concepts were identified through a combination of literature research and clinician and patient interviews. After comprehension tests with patients, two pilot versions, one for patients beginning SLIT (QUARTIS-Start) and one for patients undergoing SLIT (QUARTIS-Follow-up), were drawn up and pilot tested in clinical practice. A cross-sectional observational study including 191 adult patients with allergic rhinitis beginning SLIT and 381 undergoing SLIT was conducted to reduce the questionnaires, create their scoring and assess their psychometric properties. The ability of the QUARTIS-Follow-up to predict patients’ intentions to complete SLIT, motivations to continue the course of SLIT, and adherence...
assessed by the clinician was evaluated using areas under the ROC curve. RESULTS: After item reduction and scoring, QUARTIS-Start included 28 items grouped into 6 dimensions: 2 Disease Severity dimensions (Symptoms and Daily Allergy) and 4 Treatment Perception dimensions (Reasons for following Immunotherapy, Advantages, Inconvenience, and Information). QUARTIS-Follow-up included 27 items grouped into 7 dimensions: 2 Disease Severity dimensions and 5 Treatment Perception dimensions (Ease of Intake, Inconvenience, Satisfaction, Side-effects, and Continuation). Internal consistency was good (Cronbach’s alpha coefficients: between 0.66 and 0.78). The predictive values of the QUARTIS-Follow-up score for patients’ intentions, patients’ motivations and patients’ adherence (evaluated by the clinician) were respectively 0.826, 0.770, and 0.653.

CONCLUSION: QUARTIS is the first self-reported questionnaire assessing patients’ perceptions of SLIT, before and during the treatment. It demonstrates good predictive value and appears to be a promising patient-management tool for use in clinical practice. Further psychometric and linguistic validation steps are being conducted.

MEASURING THE IMPACT OF COPD ON PATIENTS’ LIVES IN AN INTERNATIONAL STUDY

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OBJECTIVES: The Chronic Respiratory questionnaire—Self Administered Standardized form (CRQ-SAS), a validated health related quality of life instrument for patients with COPD, was developed in U.S. and Canadian English to assess this impact. Prior to use in an international study our team translated the CRQ-SAS into 11 languages according to a rigorous protocol ensuring conceptual equivalence and cultural relevance across languages. METHODS: A specialist conducted the translation process in each target country following an internationally recognized methodology: 1) two forward translations and their reconciliation by native speakers of the target language and fluent in English; 2) backward translation by a native English speaker; 3) review by a clinician; and 4) comprehension test on five individuals with COPD. RESULTS: The process revealed two challenges: the translation of terms with a large semantic field (e.g. “upset!”) and the translation of idiomatic expressions such as “down in the dumps.” Together with the developers of the instrument we found appropriate language versions to convey the original concepts. CONCLUSION: We established 11 translations of the CRQ-SAS according to rigorous methodology. The availability of the CRQ-SAS in many languages facilitates efforts to collect patient data across countries and enables researchers to compare the impact of COPD on people’s lives internationally.

VALIDATION OF THE COPD SEVERITY SCORE FOR USE IN THE SPANISH PRIMARY HEALTH CARE SYSTEM, THE NEREA STUDY: PRELIMINARY RESULTS

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OBJECTIVES: To validate the Chronic Obstructive Pulmonary Disease Severity Score (COPDSS), a severity screening tool specific to COPD patients, for use in the Spanish primary health care system. METHODS: Cross-sectional, multicenter study, which included clinically stable COPD patients, with a recent spirometry, and a diagnosis of COPD based on a FEV1(<80% predicted. All patients provided signed informed consent to participate. Data on current respiratory symptoms and number of COPD exacerbations in the previous 12 months were collected, and patients were classified using the Medical Research Council (MRC) dyspnea scale. The COPDSS was administered by physicians in face-to-face interviews, and patients’ most recent FEV1 values were recorded. Concurrent validity of the COPDSS was evaluated by examining the association between COPDSS scores and dyspnea status, number of exacerbations in the last 12 months, and FEV1(%). Receiver Operating Characteristics (ROC) curves were used to test the score’s sensitivity and specificity. RESULTS: For this preliminary analysis, data was available from a total of 292 predominantly male (86%) patients (mean age = 67 years) reporting daily cough (71%), expectoration (74%), progressive dyspnea (60%) having 2 exacerbations per year as a mean. A moderate correlation was found between FEV1(%) and COPDSS (r = -0.331, p < 0.001), though COPDSS correlated more strongly with current dyspnea status (r = 0.595, p < 0.001) and number of exacerbations in the past 12 months (r = 0.510, p < 0.001). The instrument discriminated between patients with varying degrees of dyspnea (grades 0, 1 or 2 vs grades 3 or 4 on the MRC scale; area under the ROC curve = 0.867), and between patients defined according to number of exacerbations in the last 12 months (0–2 vs > 3; area under ROC curve = 0.787). CONCLUSIONS: This preliminary analysis indicates that the COPDSS is likely to be a useful tool in primary health care in Spain.

MEASURING DISEASE-SPECIFIC UTILITIES FOR CHRONIC OBSTRUCTIVE PULMONARY DISEASE HEALTH- AND EXACERBATION PROFILES

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OBJECTIVES: Existing pre-scored multi-attribute health status classification systems do not capture well the typical impairments and fluctuating nature of COPD. This study aimed to develop COPD health profiles that describe the health status of these patients over the course of one year and have these profiles valued by the general population. METHODS: We developed 16 COPD health profiles. Each profile combines a description of the severity of COPD during the stable phase (in terms of symptoms, impact on non-strenuous and strenuous activities, ability to work, anxiety and depression, energy and tiredness) with a description of the exacerbation profile (in terms of frequency, duration, severity of increase in respiratory and non-respiratory symptoms, impact on daily activities, and response to treatment). These profiles were valued by a representative sample of the adult Dutch population using a Visual Analogue Scale (VAS) and Time Trade Off (TTO). All respondents valued 10 COPD profiles during group sessions. Subsequently all respondents received a questionnaire to value another 10 COPD profiles at home. Respondents also valued 4 EQ-5D states. RESULTS: A total of 238 respondents attended the group sessions; 235 completed the questionnaire. Both VAS and TTO values consistently decreased as severity of COPD increased. When including all available responses, mean VAS scores ranged from 0.84 (SD 0.12) for mild COPD without exacerbations to 0.18 (SD 0.12) for very severe COPD with one non-severe and one severe exacerbation per year. Mean TTO values were significantly higher and ranged from 0.98 (SD 0.09) to 0.43 (SD 0.27), respectively. Overall, within each COPD severity stage, the utility decrement for exacerba-