respectively) and higher incremental QALY benefits (0.18 versus 0.15 respectively). **CONCLUSIONS:** The identification of patient characteristics associated with greater potential for health gain and reduced cost is an important goal. The analysis of FLD alongside simulation model output provides an additional mechanism for informing health care decision-making.

**PRM5**

**THIRD PARTY MODEL VALIDITY: A REVIEW AND SURVEY OF FACE AND INTERNAL VALIDITY OF HEALTH ECONOMIC MODELS**

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**OBJECTIVES:** Performing face validation and internal validation of health economic models is recommended by various guidelines, including ISPOR, in model development and is essential in determining a model’s credibility. Using third parties – individuals outside of the model building process with no stake in model results – is considered a best practice when conducting these validations. Yet the rate at which published models follow this practice is unknown. This study reviews the extent to which third parties were reported used to conduct face and internal validation in published literature. **METHODS:** The study reviewed 100 health economic models chosen randomly from published peer-reviewed health economic literature within the last eight years. Decision analysis, Markov models, and discrete event simulation models were included in the review. Each model was reviewed to determine the extent to which face validation and internal validation were performed. Next, it was noted if these validations were performed by third parties. Surveys were conducted with a subsample of models not reporting validation to determine if face validation was performed; 3) if face validation was performed by a third party; 3) any reason(s) for not performing validation; and 4) reasons for not using third parties. **RESULTS:** Third party face validation and internal validation were each reported in less than one-third of the studies reviewed. Survey results also found that third party validation was seldom performed. Reasons for not performing third party validations included: believing that third party validation was not necessary, time constraints, and budget constraints. **CONCLUSIONS:** While considered a best practice, third party face and internal validations are seldom performed on published economic models. Creating models around conducting this best practice may increase utilization of third parties. Finding ways to perform these validations in a less costly and more timely manner may increase usage as well.

**PRM6**

**DEVELOPMENT OF A CONCEPTUAL MODEL FOR USE IN ECONOMIC MODELLING OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD)**

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**OBJECTIVES:** To develop a conceptual model (CM) of COPD using Delphi methodology and to describe qualitative associations between disease attributes and their impact on progression and outcomes. **METHODS:** An earlier literature review did not identify any comprehensive CM of COPD that could be used in economic modelling. A draft CM was developed based on literature and expert opinion and validated using Delphi methodology. 5 experienced US and European COPD experts were invited to participate and to describe the relationships between COPD disease attributes (measurable aspects of the disease that impact on disease progression or outcome) included in the model using two rounds of questionnaires. Experts were asked 1) whether the attributes included in the draft CM were relevant in explaining disease progression and how these attributes were associated with one another (relationship) with other attributes, 3) assess the strength of attribute-outcome relationships and 4) add additional attributes if required. Delphi results were reviewed by a steering group of health economists, epidemiologists and clinicians to determine the attributes where sufficient evidence exists for use in economic modelling. **RESULTS:** Attributes included in the final CM are exacerbations, lung function, exercise capacity, signs/symptoms (cough, sputum, dyspnea), co-morbidities (CVD and depression), body composition (BMI), biomarkers (BHR), smoking history and demographic characteristics (age, gender). Mortality and quality of life were agreed to be the most relevant (final) outcome measures. Infection, environmental factors, social status and ethnicity were excluded due to lack of available evidence to quantify their impact on disease progression and outcomes. **CONCLUSIONS:** A CM should be developed prior to defining the structure of an economic model. We developed a CM that reflects the heterogeneous nature of the disease by including a wide variety of COPD attributes that have an impact disease progression. Evidence is available to quantify the impact of the selected attributes on economic, humanistic and clinical outcomes.

**PRM7**

**DEVELOPING BASDAI AND BASFI PREDICTIVE EQUATIONS FROM CLINICAL TRIAL DATA OF GOLIMUBA FOR SEVERE, ACTIVE ANKYLOSING SPONDYLITIS IN ADULTS**

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**OBJECTIVES:** GO-RAISE clinical trial has shown Golimumab to be effective in the treatment of severe, active ankylosing spondylitis (AS). A Markov model was developed to predict the outcomes of a cohort of AS patients treated with golimumab 50 mg (Gol) and its comparators over a 20-year time frame based on short-term clinical trial data. We developed predictive equations for BASDAI (Bath Ankylosing Spondylitis Disease Activity Index) and BASFI (Bath Ankylosing Spondylitis Functional Index) in model long-term disease progression. **METHODS:** Multivariable predictive equations of the mean change from baseline in BASDAI and BASFI scores up to 24 weeks, and between 24–108 weeks were developed using a systematic approach to investigate the possible non-linear functional relationships in combination with Frackowak elimination. A goodness of fit testing was employed to find appropriate time parameterization. To account for within-patient correlation, a repeated measures mixed-effect model was used. Baseline score, time and interaction of time and treatment were considered as potential predictors along with treatment group. Goodness of fit was evaluated with statistical and graphical methods. **RESULTS:** 1/Time2 was identified as the best time parameterization for change in BASDAI/BASFI over the first 24 weeks. The models depicted continuous though slight improvement in patients treated with Gol, with a change after the first eight weeks in patient treated with placebo. Log time was identified as the best time parameterization for change in BASDAI/BASFI from week 28 to week 108 in Gol responders group. Being on active treatment, higher score at baseline, and male gender were associated with greater reduction in BASDAI and BASFI score. The fitted models provided a good fit. **CONCLUSIONS:** The predicted equations based on robust statistical methodology can be utilized to model long-term AS disease progression in patients treated with anti-TNFα inhibitors.