hazard models were then constructed for time to stroke and atrial fibrillation (AF) diagnoses through 2010. Hazard ratios (HR) were computed for each value of the predictor variable. **RESULTS:** Among patients with one risk factor, age 75+ was most strongly associated with the occurrence of both stroke and AF (HR 6.87 and 9.16, respectively), followed by HF (HR 4.48 and 4.70). Hypertension (HR 2.06 and 2.64) and diabetes (HR 2.03 and 1.82), along with age, were the risk factors with the highest prevalence. For patients age 75+, the additional presence of HTN or diabetes conferred nearly additive risk for stroke or AF (HR 9.64 and 14.83 with HTN; 9.93 and 11.64 with diabetes). In contrast, the combination of age 75+ and HF on the risk of AF was supra-additive (HR 28.63). **CONCLUSIONS:** Previously established, common risk factors were found to be strongly associated with the subsequent occurrence of stroke and AF in a claims database. Additionally, the proposed methodology, combined with the large sample size of a claims database, provided valuable and easily interpretable insights on the levels of interactions among risk factors. Similar methodology may prove useful for establishing important risk combinations and interactions in the treatment and prevention of other conditions.

**PRM74**

**MODELING THE ECONOMIC IMPLICATIONS OF ALTERNATIVE TREATMENTS AND CARE LOCATIONS FOR ACUTE BACTERIAL SKIN AND SKIN STRUCTURE INFECTIONS: RESULTS FROM A DISCRETE EVENT SIMULATION**

Revankar N[1], Ward A[2], Kongnakorn T[1], Pelligra C[2], Fan W[3], LaPensee KT[3]
[1]*United BioSource Corporation, London, UK,* [2]*United BioSource Corporation, Lexington, MA, USA,* [3]*The Medicines Company, Parsippany, NJ, USA*

**OBJECTIVES:** To evaluate the potential economic implications of alternative treatment strategies for acute bacterial skin and skin structure infections (ABSSSIs) by capturing the impact of the initial empiric antibiotic selection, switches to 2nd line antibiotics, course length, route of administration and location of care. **METHODS:** The treatment pathway of each patient is simulated through various locations (emergency department (ED), inpatient, and outpatient). Patients responding at 72 hours may transfer to the outpatient setting to complete the course, switch antibiotic at discharge or receive 2nd line treatment due to lack of response or relapse. Analysis of US inpatient claims (Premier Hospital Database) provided length of stay information. Results from three scenarios are presented - each cohort was assigned to 1st line vancomycin (VAN). At discharge, one cohort completed the VAN course, one switched to oral linezolid (LIN) and the other to daptomycin (DAP). Costs (2012 USD from the Medicare perspective) and time in each location are accrued throughout the entire treatment course. **RESULTS:** Compared to VAN (10.1), hospital plus outpatient days were greater with LIN (13.4) and DAP (10.8), but total costs were reduced by $2,465 and $252 with LIN and DAP respectively, suggesting avoiding repeated outpatient infusion center visits lowers costs. Outpatient care comprises 32% (LIN) to 50% (VAN) of total costs and will remain important to consider as treatment pathways move further towards the outpatient setting. **CONCLUSIONS:** The choice of antibiotic and location of care have a substantial impact on resource use and costs. The economic implications of new treatment options currently in development such as long-acting lipoglycopeptide IV antibiotics (oritavancin and dalbavancin), which avoid repeated infusions and are anticipated to allow providers to shift more care to the ambulatory setting, can be assessed using the modeling framework presented here.

**PRM75**

**MODELLING DRUG CLASS EFFECTS IN BAYESIAN MULTIPLE TREATMENT COMPARISON META-ANALYSIS: APPLICATIONS IN EARLY AND ADVANCED PARKINSON'S DISEASE**

Thorlund K[1], Kanters S[2], O'Regan C[3], Mills E[1]
[1]*Stanford University, Palo Alto, CA, USA,* [2]*University of British Columbia, Vancouver, BC, Canada,* [3]*Merck Sharp and Dohme Ltd, UK*

**OBJECTIVES:** To compared model fit and impact on key treatment effect estimates from incorporating the assumption of drug class effects in MTCs. **METHODS:** Two MTC data sets on early and advanced Parkinson's disease (PD) comprising of several pharmacotherapies belonging to one of the three drug classes: dopamine receptor agonists (DOAs), monoamine-oxidase B inhibitors (MOAB-I), and adenosine A2 antagonists (A2A). We used three models: 1) a conventional random-effects MTC assuming all drugs were independent (model 1); 2) an MTC assuming all drug belonging to the same class exhibited equal effects (model 2); and 3) an MTC assuming some overall drug class effect for each drug class, but allowing for each drug to differ from their class' overall effect (model 3). We analysed the effect of the included interventions (and drug classes) on improvement on the Unified Parkinson's Disease Rating Scale (UPDRS) part II and III. We compared model fits (DIC) and the impact on treatment effects and 95% credible intervals from using these three models. **RESULTS:** For the early PD data set, the model 3 yielded the smallest DIC. Treatment effects from all models were similar, but 95% credible intervals were generally narrower with model 3 and generally the widest with model 1. For the advanced PD data set, model 2 yielded a slightly smaller DIC than model 3, and both smaller DIC than model 1. However, all treatment effects and 95% credible intervals were highly similar. **CONCLUSIONS:** Incorporating the drug class effect assumption in MTCs may provider better model fits, and thus, more reliable estimates of comparative efficacy and safety.

**PRM76**

**STATED TIME-ALLOCATION, ADHERENCE, AND HEALTH-OUTCOME TRADEOFF PREFERENCES IN CYSTIC FIBROSIS HOUSEHOLDS**

Mohamed AF[1], Johnson FR[1], González JM[1], Balp MM[2]
[1]*RTI Health Solutions, Research Triangle Park, NC, USA,* [2]*Novartis Pharma AG, Basel, Switzerland*

**OBJECTIVES:** To quantify preferences for allocating hypothetical time savings in cystic fibrosis (CF) inhaled antibiotic treatment among health care and non-health care activities. **METHODS:** Adult patients with a self-reported physician diagnosis of CF and parents of juvenile CF patients in the United States who have Pseudomonas aeruginosa in their culture at least twice a year completed a web-enabled, discrete-choice experiment survey. Respondents evaluated treatment-choice and routine-choice alternatives followed by stated adherence for themselves and other people. Questions required evaluating pairs of hypothetical inhalation devices and routine profiles defined by inhalation device features, side effects, time spent on inhaled antibiotic treatment, time spent on hypertonic saline, time spent on other CF-care activities, and lung function measured as forced expiratory volume in one second ($FEV_1$). Respondents also answered a question indicating how they would allocate 80 hypothetical minutes of time savings per day among CF-care and non-CF-care activities (work, sleep, family activities, and social activities). Using a conceptual framework describing optimal time allocations within a health production function, random-parameters logit models were used to quantify trade-off preferences among efficacy, treatment-time adherence, and competing time demands. **RESULTS:** The final sample included 174 adult patients and 130 parents. On average, adult patients would spend 9% of the time saved on additional CF-care activities and the remaining time would be almost evenly split between work, social activities, and sleep. Juvenile patients would spend 11% of the time saved on additional CF-care activities and about 2.5 times more minutes in social activities than in work and 2 times more minutes in social activities than in sleep. **CONCLUSIONS:** Some of the time saved on taking inhaled antibiotics would be reallocated to activities with treatment benefits such as exercise and taking hypertonic saline as well as activities such as sleep that may improve health outcomes.

**PRM77**

**EXAMINING THE IMPACT OF EQ-5D AND LONG-STANDING HEALTH CONDITIONS ON SUBJECTIVE WELL-BEING**

Wu M[1], Brazier J[2]
[1]*University of Sheffield, Sheffield, UK,* [2]*University of Sheffield, Sheffield, South Yorkshire, UK*

**OBJECTIVES:** Generic preference-based measures like EQ-5D and SF-6D have been criticised for being narrowly focused on sub-set of health dimensions. One potential solution to this problem is to use the increasingly promoted subjective well-being approach, which considers the overall impact on a person's well-being and is based on experiences rather than hypothetical preferences. The aim of this study is to explore whether EQ-5D is adequate in reflecting the impact of long-standing health conditions on life satisfaction. **METHODS:** Using data from a UK general population cohort health ($N$ = 13,591) collected between 2010 and 2012 on EQ-5D, long-standing health conditions (self-reported), and life satisfaction using a response scale from 1 (completely dissatisfied) to 6 (completely satisfied), this study employs ordered and generalised logit regression models. The impact of EQ-5D and long-standing health conditions on life satisfaction is assessed by examining the coefficients on dummy variables. **RESULTS:** The EQ-5D alone has coefficients that suggest anxiety/depression has the largest impact on life satisfaction (odds ratios ranging from 0.65 to 0.26). Self-care has less impact (0.78) and pain/discomfort has the least (0.91). The long-standing health conditions alone have coefficients that suggest insomnia has the largest impact on life satisfaction (0.71). The EQ-5D and long-standing health conditions have coefficients that suggest insomnia have a strong impact on life satisfaction (0.86) in the ordered logit model. Diabetes has a stronger impact on life satisfaction (0.72) in the generalised logit model. The largest difference in coefficients between the models is observed for severe anxiety/depression (odd ratio dropped significantly from 0.60 to 0.26). **CONCLUSIONS:** This study provides evidence of statistically significant differences between the models, and the comparison of the coefficients suggests inclusion of the bolt-on extra dimensions for EQ-5D could affect life satisfaction. Therefore, diabetes and insomnia could be newly discovered bolt-on dimensions for EQ-5D.

**PRM78**

**IMPACT OF MULTIPLE TREATMENT COMPARISON META-ANALYSIS ON VALUE OF INFORMATION EVALUATIONS: A CASE STUDY OF PHARMACOTHERAPIES FOR CHRONIC OBSTRUCTIVE PULMONARY DISEASES**

Zafari Z[1], Thorlund K[2], FitzGerald M[1], Lynd L[1], Marra C[1], Sadatsafavi M[1]
[1]*University of British Columbia, Vancouver, BC, Canada,* [2]*McMaster University, Hamilton, ON, Canada*

**OBJECTIVES:** To compare the effect of using PTC or MTC on the results of cost-effectiveness analysis of pharmacotherapies for chronic obstructive pulmonary disease (COPD). **METHODS:** A discrete-time Markov model was developed to reflect the cost and effectiveness of five COPD commonly used interventions including inhaled corticosteroids (ICS), long-acting beta agonists (LABA), ICS+LABA, long-acting muscarinic agents (LAMA), and no treatment (placebo). We pooled rate ratios (RR) of preventing COPD exacerbations using both Bayesian PTC and Bayesian MTC methods. We compared the impact of PTC versus MTC on the outcomes of the expected value of information (EVI) analysis. **RESULTS:** The expected value of perfect information (EVPI) values at willingness-to-pay of $50,000/QALY for all permutations of comparisons were calculated and compared between PTC and MTC analyses. The EVPI when all 5 treatments are compared is $1,281.1 for PTC and $557.3 for MTC analyses. When the future trial is planned to have only two intervention arms, among all ten possible permutations, the RCT that compares Placebo versus ICS+LABA had the highest EVPI when evidence was synthesized using MTC; on the other hand the RCT that compares LABA versus ICS+LABA had the highest EVPI using PTC analysis. Similarly, for RCTs with three and four arms, the strategy with highest EVPI changed across MTC and PTC analyses. **CONCLUSIONS:** The evidence generated using the entire network of comparisons resulted in substantial changes in the