the ordered probit scale was conducted to evaluate the comparative efficacy of the biologics based on the Psoriasis Area and Severity Index (PASI) responder endpoints. The absolute probability of PASI 50, 75 and 90 responses were estimated. **RESULTS:** A total of 20 studies enrolling 10,108 psoriasis patients, including 1 head-to-head trial of etanercept and ustekinumab, were identified and included in the NMA. Thirteen studies evaluated TNF-alpha inhibitors (adalimumab = 3, etanercept = 6, infliximab = 4), 5 studies evaluated T-cell modulators (efalizumab = 5), and 3 studies evaluated ustekinumab. Baseline patient characteristics were comparable across the trials. The estimated mean PASI 75 responses were as follows: infliximab (mean 80%; 95% CI 70–87%), ustekinumab 90 mg (74%; 68–80%), ustekinumab 45 mg (69%; 62–75%), adalimumab (58%; 49–68%), etanercept 50 mg biw (52%; 45–59%), etanercept 25 mg biw (39%; 30–48%), efalizumab (26%; 21–32%), and supportive care/placebo (4%; 3–4%). **CONCLUSIONS:** Based on this analysis, all of the active treatments produced a greater response rate than placebo. Ustekinumab and infliximab had the highest mean response rates followed in order by adalimumab, etanercept and efalizumab. However, there was considerable overlap in the 95% confidence intervals.

PSS2

DISTRIBUTION OF PATHOGENS ASSOCIATED WITH ACUTE OTITIS MEDIA: A SYSTEMATIC REVIEW OF THE LITERATURE

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OBJECTIVES: Acute otitis media (AOM) is a common childhood condition with viral and bacterial causation. Routine immunization programs currently include 7-valent Pneumococcal Conjugate Vaccine (PCV-7), associated with AOM reduction caused by Streptococcus pneumoniae only. The study objective was to conduct a systematic literature review to identify current microbiological picture associated with AOM. **METHODS:** OVID (Medline, Current Content and International Pharmaceutical Abstract databases), EMBASE, Google and Google Scholar engines were searched with the following combination of key-words: "acute otitis media", "bacteria$" and "vir$". Eligible articles were in English, published between 1995 and 2008, and described studies of pediatric AOM patients with cultures for bacterial and viral isolates. **RESULTS:** Of the 398 articles screened, 24 separate studies were included (range = 25–623 subjects). Based on a fixed-effects meta-analysis across all studies, pathogens isolated were more frequently bacterial (74%) than viral (19%). Compared with the 15 international studies, U.S. studies recorded a similar isolation rate for bacterial (73% vs. 74%) and higher isolation rate for viral pathogens (23% vs. 17%). Twenty-three studies included data on the specific bacterial pathogens cultured. Based on a fixed-effects meta-analysis of patients in these studies, S. pneumoniae and Haemophilus influenzae were isolated with similar frequency (35% vs. 36%) and Moraxella catarrhalis at 6%. Slightly higher isolation rates of M. catarrhalis (10%) and lower rates of H. influenzae (31%) were observed in U.S. patients, compared with international patients. **CONCLUSIONS:** Bacterial pathogens are frequently associated with AOM in pediatric populations worldwide and were isolated 3-times more often than viral pathogens. S. pneumoniae and H. influenzae are the bacterial pathogens most commonly isolated in AOM cases, with nearly equal frequency. A vaccine that addresses more than one cause of AOM would be expected to greatly reduce the clinical and economic burden associated with this common condition.

PSS3

USING "NUMBER NEEDED TO TREAT" TO HELP CONCEPTUALIZE THE MAGNITUDE OF BENEFIT AND RISK OF TNFÁ INHIBITORS FOR PATIENTS WITH SEVERE PSORIASIS

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OBJECTIVES: Risks and benefits of TNF-alpha inhibitors are often presented using statistical descriptions that are difficult to directly translate for patients into a clinically-meaningful context. The objective of this study was to illustrate the risks and benefits of TNF-alpha inhibitors in relation to risks that patients understand. **METHODS:** We performed a number needed to treat analysis for psoriasis patients on TNFalpha inhibitors via a Medline and Embase search. We determined the number needed to benefit and the number needed to harm with TNF-alpha inhibitor treatment. We compared the risk of serious adverse events (SAE) from treatment with a TNF-alpha inhibitor to the risk of death from driving a car. The risk analyses were limited to tuberculosis, lymphoma, and demyelinating disease. **RESULTS:** The numbers needed to benefit were 2.1 for etanercept, 1.4 for infliximab, and 1.6 for adalimumab. Depending on adverse event, the numbers needed to harm ranged from 380 to 360,000 treated patients per year. Screening prior to the initiation of TNF-alpha inhibitor therapy reduces risk of tuberculosis. Patients are about as likely to die in a car accident as have a serious adverse event from TNF-alpha inhibitor treatment. **CONCLUSIONS:** All 3 of the TNF-alpha antagonists have remarkable efficacy in patients with severe psoriasis. The risks of serious adverse events are relatively rare and comparable to risks patients take on a regular basis such as driving a car. For severe psoriasis, the benefits of TNF-alpha inhibitors may greatly outweigh the risks for many patients.

SENSORY SYSTEMS DISORDERS – Cost Studies

PSS5

A COST COMPARISON OF ADALIMUMAB AND ETANERCEPT FOR THE TREATMENT OF CHRONIC PLAQUE PSORIASIS IN THE UNITED KINGDOM

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OBJECTIVES: To assess the cost differences between adalimumab and etanercept for chronic plaque psoriasis. **METHODS:** A model was constructed to compare the drug acquisition costs for adalimumab and etanercept for chronic plaque psoriasis for a hypothetical primary care trust. The number of patients eligible for anti-TNF treatment was taken from published sources. Patients were assumed to receive either etanercept intermittently, mixed intermittent and continuous, continuous, or continuous adalimumab. Market research demonstrated that about 36% of patients are likely to receive continuous etanercept. Adalimumab, in contrast can not be used intermittently. Costs were estimated from a UK payer perspective. The time horizon is three years. **RESULTS:** We estimated that the hypothetical PCT would cover 250,000 people, which is approximately the average size of a PCT in the UK. Of these 195,000 would be ≥ 18 years of age. thirty-five patients would meet the criteria for either adalimumab or etanercept. Providing that all patients would receive intermittent etanercept this would cost the NHS GBP 722,190, if 36% receive continuous etanercept and the rest intermittent etanercept it would cost GBP 816,453, whilst if all patients would receive continuous etanercept it would cost GBP 975,975. All patients receiving continuous adalimumab would cost GBP 1,001,000. **CONCLUSIONS:** Our model found potential for cost savings for PCTs from using etanercept instead of adalimumab, within the recommended patient groups for chronic plaque psoriasis. Savings will be increasingly important if the proportion of eligible patients who receive treatment increases from the current level.

PSS6

AN ECONOMIC ANALYSIS TO EVALUATE ANTI-GLAUCOMA PHARMACOTHERAPY

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OBJECTIVES: To compare the use of prostaglandin analogues namely, Bimatoprost, Travoprost and Latanoprost, in the treatment of glaucoma by conducting a cost effectiveness analysis considering medication related adverse event and patient-persistence as indirect costs. **METHODS:** The study was conducted from a third-party payer's (Medicare) perspective with a time-frame of 12 months. Literature review was conducted to estimate medical-visit costs, average reduction in intra-ocular pressure (IOP) in mm Hg, medications related adverse event and patient-persistence to the pharmacotherapy. Average wholesale price (AWP) for the drug considered (obtained from the REDBOOK-2007), mean number of drops per bottle (according to the best instillation method), days per bottle, and annual usage of bottles for these drugs were also obtained from published literature to determine the annual cost associated with prostaglandin pharmacotherapy. DATA (version 3.0) software package was used to perform the decision analysis. Incremental cost-effectiveness ratios (ICER) were calculated using intra-ocular-pressure reduction as efficacy estimate. Sensitivity analyses were conducted by changing the cost information by 25% to account for the variation in drug administration. A discounting rate of 5% was used to project all cost estimates to year 2008. **RESULTS:** The decision-analysis indicated Travoprost to be slightly inexpensive among the three prostaglandins (expected value $616.33), followed by Bimatoprost (expected value $618.73) and Latanoprost (expected value $626.29). Compared with Latanoprost, Travoprost and Bimatoprost provided a higher IOP-reduction with ICER of $(−9.96) and $(−7.56) respectively. Results of sensitivity analyses were robust to the decision analysis performed. **CONCLUSIONS:** Based on our analysis Travoprost and Bimatoprost was more cost-effective than Latanoprost. Health care decision-makers should consider the effect of adverse drug events and persistency profiles on the direct medical costs to prioritize the prostaglandin analogues for long-term treatment of glaucoma. Further, analyses using adherence data for specific patient groups can provide valuable information to decision makers.

PSS7

A PHARMACOECONOMIC APPROACH OF THE USE OF INTRAVENOUS ANTIBIOTIC THERAPY FOR COMPLICATED SKIN AND SKIN-STRUCTURE INFECTIONS IN PUBLIC HEALTH CARE INSTITUTIONS IN MEXICO

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OBJECTIVES: To calculate the cost per clinical success (CS) in the antibiotic treatment for complicated skin and skin-structure infections (CSSI) in Mexican Social Security Institutions in Mexico. **METHODS:** The use of either i.v. Daptomycin (DAP), i.v. Vancomycin (VAN) or i.v. Linezolid (LIN) as first-line and second-line antibiotic therapy was compared in a cost-effectiveness study. Data was collected from a systematic review which included the most recent published articles measuring clinical improvement, length of stay at hospital services and adverse events due to the use of