MA2

ABSTRACT

OBSERVATION OF PERSISTENCE RATES AND POTENTIAL COST SAVINGS ASSOCIATED WITH CERTOLIZUMAB PEGAL TREATMENT FOR RHEUMATOID ARTHRITIS IN ENGLAND, WALES AND NORTHERN IRELAND CLINICAL PRACTICE

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OBJECTIVES: In the UK, access to anti-TNF therapies for the treatment of rheumatoid arthritis (RA) is standardized by National Institute for Clinical Excellence guidance. Certolizumab pegol (CZP) studies in RA demonstrate that patient response to therapy at 12 weeks predicts clinical outcome at 1 year. In the UK, CZP is available via a Patient Access Scheme (PAS), providing CZP free for the first 12 weeks. This analysis examines persistency and potential cost savings realised with a 12 week CZP treatment period vs adalimumab (ADA) with retrospective analysis examining 7,744 patients receiving CZP between March 2010 and March 2012 from Healthcare at Home, a UK home-healthcare service provider. Persistence was defined as patients (%) continuing to receive CZP deliveries, calculated at specific time points. Treatment start was first delivery date and patients were censored according to this. A simple cost analysis was performed.

RESULTS: At 15, 26, 39 and 52 weeks, persistence rates were 93%, 79%, 70% and 65% in (no prior anti-TNF) and 88%, 68%, 56% and 48% in switch (≥1 prior anti-TNF) patients respectively. Analyzing first-line biologic drug costs only, the NHS would save €2,636.14/patient in the first year if CZP were used instead of adalimumab (assuming similar persistency); largely due to the PAS. Stopping treatment for non-responders at Week 12 (CZP) vs Week 24 (adalimumab), could allow the UK NHS to re-invest £245/patient.

CONCLUSIONS: In this UK cohort, CZP persistance was higher in naive pts. Reinforcing a 12 week treatment decision in non-responders.

MA3

PALIPERIDONE PALMITATE LONG-ACTING INJECTION FOR BRAZILIAN NON-ADHERENT SCHIZOPHRENIC PATIENTS: 5-YEAR BUDGET IMPACT ANALYSIS FROM THE PUBLIC PAYER PERSPECTIVE

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OBJECTIVES: To estimate the budget impact of PP-LAI in treating chronic schizophrenia in Brazil from the perspective of the public payer, specifically for patients with adherence issues.

METHODS: The budget impact model (BIM) was used to estimate costs and to project investments for the first 5 years. An approach based on prevalence and adherence rates reported by previous studies was employed to define the eligible population. Two scenarios were simulated: 1) the current setting, in which schizophrenic patients with adherence issues receive atypical drugs already provided by the Brazilian Public Healthcare System (BPHS) (olanzapine, quetiapine and ziprasidone), and 2) the proposed setting, in which schizophrenic patients could receive atypical drugs via the Brazilian Public Healthcare System (PP-LAI) free for the first 12 weeks with a Patient Access Scheme (PAS), providing PP-LAI free for the first 12 weeks. The model was tested using fictitious antipsychotics with the same levels of efficacy, tolerability and drug cost (low, medium, high) from first-line to third-line.

RESULTS: A simple cost analysis examining persistency and potential cost savings realised with a 12 week CZP treatment period vs adalimumab (assuming similar persistency); largely due to the PAS. Stopping treatment for non-responders at Week 12 (CZP) vs Week 24 (adalimumab), could allow the UK NHS to re-invest £245/patient.

CONCLUSIONS: In this UK cohort, CZP persistance was higher in naive pts. Reinforcing a 12 week treatment decision in non-responders.

MA4

ADEQUATE ADHERENCE TO INTRANASAL CORTICOTEROSTEROIDS IS ASSOCIATED WITH SIGNIFICANTLY REDUCED NUMBER AND COSTS OF OUTPATIENT VISITS AMONG PATIENTS NEWLY DIAGNOSED WITH ALLERGIC RHINITIS

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OBJECTIVES: To describe the impact of adherence to intranasal corticosteroids among patients newly diagnosed with allergic rhinitis (AR) on costs and claims for outpatient visits.

RESULTS: A discrete event simulation (DES) model was developed with a flexible time horizon. This model simulated short- and long-term clinical events (spatial response, remission, relapse, recovery, recurrence), adverse events, and treatment changes (initiation, switch, addition, discontinuation) in a cohort of MDD patients. Patient characteristics influencing clinical evolution were considered (e.g., residual symptoms). The model was tested using fictitious antidepressants with three levels of efficacy, tolerability and drug cost (low, medium, high) from first-line to third-line. In the base case analysis, a medium-profile antidepressant was used first-line, and profiles of subsequent treatment lines depended on reason for switch (e.g., efficacy or low tolerability). Input data were derived from the literature. Model outputs included time by clinical state, QALYs and costs. Costs were estimated for the UK, from payer and societal perspectives. One-way sensitivity analyses were performed. This model will be provided open source so that all interested researchers can contribute by incorporating new features or adding input data.

CONCLUSIONS: Predicted costs and QALYs from this model are within the range of results from previous economic evaluations. The largest cost components from payer perspective were physician visits and hospitalisations. Key parameters driving the predicted costs and QALYs were utility values, effectiveness and frequency of physician visits. Differences in QALYs and costs between two strategies with different effectiveness increased approximately two-fold when the time horizon increased from 1 to 5 years. Conclusions: This DES model can provide a flexible and user-friendly expensive evaluation of intranasal corticosteroids in MDD, compared to existing Markov models and can be used to compare a wider range of health care technologies in various groups of MDD patients.

MO1

COMPREHENSIVE DISCRETE EVENT SIMULATION MODEL FOR THE EVALUATION OF HEALTH CARE TECHNOLOGIES IN DEPRESSION

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OBJECTIVES: To develop a comprehensive model to evaluate the impact of care technologies in depression (MDD).

RESULTS: A simple cost analysis examining persistency and potential cost savings realised with a 12 week CZP treatment period vs adalimumab (assuming similar persistency); largely due to the PAS. Stopping treatment for non-responders at Week 12 (CZP) vs Week 24 (adalimumab), could allow the UK NHS to re-invest £245/patient.

CONCLUSIONS: In this UK cohort, CZP persistance was higher in naive pts. Reinforcing a 12 week treatment decision in non-responders.

MO2

IMPACT OF STRUCTURAL ASSUMPTIONS ON COST-EFFECTIVENESS OUTCOMES: TOWARDS A STANDARDIZED COST-EFFECTIVENESS MODEL FOR ADJUVANT BREAST CANCER THERAPY

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OBJECTIVES: Markov models developed for cost-effectiveness analysis (CEAs) often contain differences in model structure due to differences in assumptions. Such differences may lead to differences in outcome and can therefore impact decision making. The objective of this analysis was to identify structural assumptions, reported for CEAs comparing the cost-effectiveness of tamoxifen and anastrazole for adjuvant breast cancer therapy, and to subsequently evaluate the impact of these assumptions, both individually as well as combined, on analysis outcome measures.

METHODS: Based on a literature review of available published Markov model based CEAs comparing tamoxifen and anastrazole, structural assumptions were identified. Subsequently, a Markov model was defined and built in R, representing the fundamental structure present in all identified CEAs from literature. Subsequently, different structural model components as identified from the published CEAs, were added to the base model case separate as well as simultaneously. Outcome measures Life Years gained (LYG) and incremental costs were calculated for each of these models.

RESULTS: The case model outcome demonstrated a gain of 0,263 LYG for anastrazole compared to tamoxifen with an ICER of €13,086/LYG. The separate impact of assumptions on LYG, ranging from 0,207 to 0,356, while ICERs ranging from €980/LYG to €1,766/LYG. For the comparison of combined assumptions as present in identified CEAs, LYGs gained ranged even from 0,207 to 0,383 with ICERs ranging from €983/LYG to €
PODIUM SESSION II: PATIENT HEALTH CARE ACCESS

PA1  ASSESSING THE PROGRESS OF THE UK NHS HEALTH CARE REFORMS AND THE IMPACT ON HEALTH CARE DELIVERY

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**OBJECTIVES:** Breast cancer is the most common malignant disease in Western women. In the ONCOTYROL research center, a Breast Cancer Outcomes & Policy (ONCOTYROL) model was developed to evaluate the cost-effectiveness of the new 21-gene assay that supports personalized decisions on adjuvant chemotherapy. The goal of this study was to validate our Oncotyrol-model. METHODS: The 21-gene assay was evaluated by simulation and compared with the clinical breast cancer therapy. Major focus was the comparison of the cross-validation, i.e. the comparison of modeling results between the discrete-event-simulation ONCOTYROL-model and the THETA-model (Toronto Health Economics and Technology Assessment Collaborative) which is a Markov model. Therefore, the Oncotyrol-model has been populated with the Canadian THETA model parameters. Cross validation started with a comparison of the natural history followed by QALYs and costs. RESULTS: The relative differences varied among the model outcomes. The smallest differences were found for costs, the highest for QALYs. All differences were smaller than 2.5%. The comparison of the efficiency frontiers showed that small differences due to the modeling approach can lead to a different set of non-dominated treatment-strategies. The cross model validation involved several challenges: distinguishing between outcomes differences and modeling. Discussion of our results and model differences and comparison techniques (mean estimates, distributions, multivariate outcomes). CONCLUSIONS: Cross-model validation was crucial to identify and correct modeling errors and to explain remaining differences of modeling results. However, small differences can lead to relevant changes in cost-effectiveness results.

**PA2  HOSPITAL-BASED HTA IN ITALY: DIFFUSION AND POTENTIAL IMPACT**

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**OBJECTIVES:** Early development of HTA in Italy has been hospital-based (HB HTA). HB HTA can support administrative procedures increasing transparency and promoting the bottom-up awareness around HTA principles. Whether HTA has an impact on actual hospital expenditure and consumption of health technologies, particularly medical devices (MDs), has not been investigated. This research aimed at exploring potential HB HTA’s impact on purchased MDs, once assessed its diffusion in Italy. METHODS: We run a survey, based on a semi-structured on line questionnaire, on a sample of Italian Healthcare trusts, asking for 2008-2009 data about consumption and unitary costs of a class of MDs (e.g. coronary stents) and HTA activities. HB HTA’s activities have been surveyed in terms of diffusion and structural/organizational characteristics. We assessed in a multivariate analysis whether an association exists between the implementation of HTA activities and MDs diffusion at the local level. RESULTS: Given 46 respondents, located in 15 Italian Regions, 22 (48%) have a commission for MDs. Commissions meet almost monthly and encompass on average 10 members (SD=5.4). On average there is no clear evidence either way to suggest that the reforms were having an impact on frontline health care delivery. CONCLUSIONS: The UK NHS Reforms were always going to be challenging due to their scale and complexity. However there has been a clear lack of direction and consensus of the HTA development in Italy. The progress of hospital-based HTA has been met with considerable challenges. Even while COGs in the first wave were in the process of undergoing assessment, changes to the overall architecture of the reforms were continuous. Key personnel at all levels lacked a clear grasp of what the following 12 months would bring, and various influence and guideline bodies faced uncertain futures or lacked a clear remit. At the stage of writing there was no clear evidence either way to suggest that the reforms were having an impact on frontline health care delivery.

**PA3  LIMITED ACCESS TO CATARACT SURGERY IN POLAND**

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**OBJECTIVES:** Cataract surgery is commonly performed in developed countries. Artificial lens implantation is considered to be one of the most cost-effective medical interventions. The aim of this analysis was to describe the organization of cataract surgery in Poland and compare access and quality of care with other countries. METHODS: Access to cataract surgeries was assessed on the base of statistical reports issued by National Health Fund (NHF) regarding number and structure of cataract surgeries and waiting times. Epidemiological data was used to estimate number of patients qualifying for treatment. Data on reimbursement was obtained from Ministry of Health and NHF. To supplement publicly available data, a number of clinical experts were consulted. RESULTS: Each year 1.7m cataract surgeries are reimbursed in Poland. 30,000 patients are currently in a queue for cataract surgery. Diffusion of cataract surgeries and waiting times. Epidemiological data was used to estimate number of patients qualifying for treatment. Data on reimbursement was obtained from Ministry of Health and NHF. To supplement publicly available data, a number of clinical experts were consulted. RESULTS: Each year 1.7m cataract surgeries are reimbursed in Poland. 30,000 patients are currently in a queue for cataract surgery.