OBJECTIVES: Children have been termed “therapeutic orphans” due to the paucity of age-appropriate therapeutic data. Here we review the extent to which utility data derived from under-18s were used to inform National Institute for Health and Care Excellence (NICE) Technology Appraisals (TAs) providing cost-effectiveness guidance in paediatric indications, in line with the NICE reference case. METHODS: All 35 published TAs released up to 31 July 2014 were reviewed to determine if cost-effectiveness analyses (CEA) were performed. For each CUA, the published TA along with the supplementary submission (single TAs) or the assessment report (multiple TAs) were examined to determine the origin of the utilities used. RESULTS: Of 35 published TAs reviewed, 27 analysed cost-per-QALY and made recommendations for treatment of under-18s. Of these, 17 used adult utilities, 1 of which attempted to adjust the adult values for children, 3 considered child and adult populations as one, with child-derived data used within the overall model inputs for the whole population, 1 of which adjusted both child and adult utilities by age. Only 6 studies used child-centred utilities. Analysis 1 assumed severe treatment differences and the incremental QALYs which ranged from $2,600 for oncologists, $17,040 for oncologists, and $42,600/QALY for payers. CONCLUSIONS: All the estimated ICER values were higher than US, thresholds, although only described in the literature ($20,000–30,000/QALY), with relevant differences among the groups. In both scenarios, payers were less prone to pay for therapeutic improvements compared to the rest of the participants. On the other hand, oncologists were the ones that most valued gains in survival for a new drug that they assessed was the higher value for money to a treatment that enhanced the quality of life.

Q4

REIMBURSEMENT DECISIONS FOR PHARMACEUTICALS IN SWEDEN: THE IMPORTANCE OF COST-EFFECTIVENESS AND DISEASE SEVERITY

Nilsson FO,1 Svensson M,2 Arnegård K3

1Department and Pharmaceutical Benefits Agency, Stockholm, Sweden, 2Orebro University, Orebro, Sweden

OBJECTIVES: The purpose of this study is to evaluate the impact of cost-effectiveness and disease severity on reimbursement decisions made by the reimbursement agency TIV in Sweden. METHODS: Cost-effectiveness is measured through the continuous variable cost per QALY, while disease severity is measured by a dichotomous variable indicating high- or not high disease severity. We estimate the probability of reimbursement is higher than the probability that reimbursement is denied. The median cost per QALY for the drugs that were granted reimbursement was 39,000 euro (95% CI: 0.7–75,500 euro), ranging from a negative cost per QALY (better and cheaper) to 95,700 euro for severe diseases. The probability that reimbursement was granted was 69%, ranging from 78% euro to 100% for severe diseases, the probability that reimbursement is denied. The probability that reimbursement is denied is significantly related to the probability of a drug being granted reimbursement. When the cost per QALY exceeds 56,000 euro for severe non-severe diseases, and 92,000 euro for severe diseases, the probability that reimbursement is denied is significantly related to the probability of a drug being granted reimbursement. CONCLUSIONS: In Sweden, it is sometimes stated as a rule of thumb that 55,000 euro per QALY is a threshold for cost-effectiveness interventions. Our model shows that at this cost-effectiveness ratio, the probability of a new drug becoming reimbursed is 91% or 98%, depending on disease severity.

RESEARCH PAPER PRESENTATIONS – SESSION II

CARDIOVASCULAR DISEASE RESEARCH STUDIES

CV1

THE IMPORTANCE OF TREATMENT CLASSIFICATIONS THAT ACCOUNT FOR CONCOMITANT TREATMENTS IN THE CONTEXT OF A NETWORK META-ANALYSIS COMPARING PHARMACOLOGICAL TREATMENTS FOR CHRONIC HEART FAILURE

Bennett 1,2, Cope S,3 Veizic M,2 Sagristias A,1 Senni M,4 Dechaussac C3

1Magellan, ON, Canada, 2Novartis Pharma, Health Economics and Outcomes Research, USA, 3East Hanover, NJ, USA, 4Novartis Pharma AG, Basel, Switzerland, 5Scompero e Trapianti di Cuore, Bergamo, Italy

OBJECTIVE: The aim of the study was to assess the comparative efficacy of recommended treatment for chronic heart failure with reduced ejection fraction in terms of all-cause mortality based on a network meta-analysis (NMA) of randomized controlled trials (RCTs) and to explore the impact of alternative treatment classification on estimated cost-effectiveness. METHODS: A systematic literature search identified 56 relevant RCTs (1980–2013) that reported mortality data that were synthesised using a Bayesian Poisson regression NMA model. Treatments were classified as angiotensin receptor blockers (ARB), mineralocorticoid receptor antagonists (MRA) and the channel inhibitor (IF) ivabradine. Analysis 1 classified treatments according to the main drugs of interest, whereas Analysis 2 defined treatments – with the manufacturer’s submission (single TA) or the assessment report (multiple TAs) – to analyze all reimbursement decisions from 2005 through 2011 where there is data available on cost per QALY and disease severity. Logistic regressions are used to evaluate the impact of cost-effectiveness and disease severity on the drug reimbursement decisions. RESULTS: There are 102 decisions with the required data available, 86 where reimbursement was granted and 16 where reimbursement was denied. The median cost per QALY for the drugs that were granted reimbursement was 39,000 euro (95% CI: 0.7–75,500 euro), ranging from a negative cost per QALY (better and cheaper) to 95,700 euro for severe diseases. The probability that reimbursement was granted was 69%, ranging from 78% euro to 100% for severe diseases, the probability that reimbursement is denied is significantly related to the probability of a drug being granted reimbursement. When the cost per QALY exceeds 56,000 euro for severe non-severe diseases, and 92,000 euro for severe diseases, the probability that reimbursement is denied is significantly related to the probability of a drug being granted reimbursement. CONCLUSIONS: In Sweden, it is sometimes stated as a rule of thumb that 55,000 euro per QALY is a threshold for cost-effectiveness interventions. Our model shows that at this cost-effectiveness ratio, the probability of a new drug becoming reimbursed is 91% or 98%, depending on disease severity.

CV2

PRODUCTIVITY LOSS AND INDIRECT COSTS ASSOCIATED WITH NEW CARDIOVASCULAR EVENTS IN HIGH-RISK PATIENTS WITH HYPERLIPIDEMIA – ESTIMATES FROM POPULATION-BASED REGISTER DATA IN SWEDEN

Sandblom H,1 Hallberg S2,3,4,5,6,7,8,9,10 Halldén E,1,2,3,4,5,6,7,8,9,10,11 Fox KM,1 Montentin J,1 Pauli CF,1 Johansson OP,1 Levin LA,1 Sobociński P,1 Gandra SR2,10

1Quantify Research, Stockholm, Sweden, 2Strategic Healthcare Solutions, LLC, Mankton, MD, USA, 3Angen, Inc., Thousand Oaks, CA, USA, 4Uppsala University, Uppsala, Sweden, 5Linköping University, Linköping, Sweden, 6KTH Health, Stockholm, Sweden

OBJECTIVES: To analyze oncologists’, patients’, and general population views on the cost and value of new cancer treatments. METHODS: An electronic self-administered questionnaire was developed and randomly distributed, to assess participants’ attitudes towards new cancer treatment outcomes and costs during reimbursement decisions. Among the questions asked were two hypothetical scenarios: Analysis 1 which assumed severe treatment differences and the incremental utility values: £5,000/QALY for patients, £17,040/QALY for oncologists, and £42,600/QALY for payers. CONCLUSIONS: All the estimated ICER values were higher than the thresholds, although only described in the literature ($20,000–30,000/QALY), with relevant differences among the groups. In both scenarios, payers were less prone to pay for therapeutic improvements compared to the rest of the participants. On the other hand, oncologists were the ones that most valued gains in survival for a new drug that they assessed is the higher value for money to a treatment that enhanced the quality of life.