the reliability of the anchor and the estimated MID. METHODS: We performed a simulation study in which the reliability of the anchor used for MID estimation was varied systematically. Features of real-life data (e.g., skewed distribution, discreteness of PRO scale) and anchors were used to generate simulated PRO scales and anchors. MIDs were then estimated on the basis of this simulated data. RESULTS: Compared to the MID value obtained with an anchor with perfect reliability (y = 1), a marked attenuation of the MID was observed when reducing the reliability of the anchor. Thus, an anchor with reliability 0.7 gave rise to a 24% to 35% decrease of the MID estimate and an anchor with reliability 0.5 led to a 45% to 55% reduction. Based on the findings and on theoretical considerations, we suggest a method for bias correction.

CONCLUSIONS: When determining the MID of a PRO scale by an anchor-based method, the reliability of the anchor plays a crucial role. Anchors with poor to moderate reliability may lead to considerable underestimation of the MID. Bias correction is possible provided the reliability of the anchor is known.

PODIUM SESSION III: PRICING AND MARKET ACCESS

PR1

THE APPLICATION OF PHARMACOECONOMIC MODELING TO ESTIMATE A VALUE-BASED PRICE FOR NEW CANCER DRUGS IN A PUBLICLY FUNDED HEALTH-CARE SYSTEM

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OBJECTIVES: Value-based pricing has recently been discussed by international organizations as a means to estimate a drug price that is linked to the benefits it offers patients and society. However, one of the challenges with value-based pricing is determining the optimal threshold for health policy decision-making. The World Health Organization (WHO) has recommended using multiples of a country’s per capita GDP as the value threshold. In this study, pharmacoeconomic modeling was used to estimate a value-based monthly price for a hypothetical new cancer drug that provides a 3-month survival to patients with metastatic colorectal cancer (mCRC).

METHODS: A decision model was developed to simulate progression free and overall survival in mCRC patients receiving standard chemotherapy vs the new drug. Outcomes for cancer control and side effects were abstracted from randomized trials in mCRC. Costs for chemotherapy were obtained from Canadian cancer centers. Utility estimates measured as quality-adjusted life-years (QALYs) were determined by interviewing 24 oncology nurses and physicians using the Time Trade-Off technique. The monthly price of the new drug was then modeled using a threshold of $117,000 per QALY gained, which is three times the Canadian per capita GDP, as recommended by the WHO.

RESULTS: The analysis suggested that a monthly price of $2180 would provide a 3-month survival to patients with metastatic colorectal cancer (mCRC) who were able to improve patient quality of life or survival from 3 to 6 months, the monthly price could increase to $4100 and $3430 and offer the same value.

CONCLUSIONS: This study assesses the impact of this Finnish system-derived “distortion” in cost-effectiveness analyses. METHODS: The cost utilities of new hypothetical treatments were assessed in a setting where the new and old treatments produce different amounts of quality-adjusted life-years (QALYs) and the only cost difference comes from the pharmacoeconomic prices. The treatments are assumed not to differ regarding the real costs of drug delivery and patient survival. The PS-induced computational cost difference was deducted from the total price differences of new and old treatments to estimate the impact of PS on the incremental cost-effectiveness ratios (ICER).

RESULTS: The computational cost differences due to PS ranged from 7.3 to 1951 euros and the QALYs gained ranged from 0.004 to 0.070 in estimated scenarios. The respective ICERs increased by 104 to 487,840 euros/QALY due to the PS.

CONCLUSIONS: The PS significantly worsens the ICERs obtained for more expensive and often innovative pharmaceuticals. The Finnish PS is problematic when the aim is to provide optimal, cost-effective treatments to Finnish patients. In the current form, the PS discourages innovation and may prevent reimbursement of otherwise cost-effective treatments.

PR4

GLOBAL MARKET ACCESS STRATEGY: AN INTEGRATED APPROACH

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OBJECTIVES: To develop a framework for integrating pricing and reimbursement with health economics and outcomes research and health policy to achieve commercially desirable prices and levels of access in 2010 and beyond. METHODS: A review of recent pricing policy and regulatory changes of countries, especially those in the financially troubled Eurozone, was conducted. This was supplemented by a review of P&R decisions for a selection of drug launches between 2005 and 2009 and categorized according to the level of therapeutic innovation and disease type (conventional, rare diseases, oncology); a search was performed on the OHE and NHS EED databases and HTA reports to establish the level of published value evidence in support of these launches, and finally, the components of most importance to a market access strategy were identified and validated through interviews across different stakeholders. RESULTS: The review identified since January 2010, there have been 11 pricing policy and regulatory changes. From the review of recent P&R decisions and stakeholder interviews, the main components identified were: competitive and environmental analysis (market assessment, reimbursement, revenue forecasts, policy trends); analysis of payer’s decision drivers (payer, physician, and other stakeholder qualitative research); value demonstration (value hypotheses, economic modeling, patient-reported outcomes, scientific advice); pricing strategy (price targets, cross-market revenue optimization modeling, country launch sequencing, scenario planning); and local market access tactics (HTA, risk sharing, contracting negotiations with payers). The review of the P&R decisions also demonstrated an increasing trend toward deployment of risk-sharing schemes since 2008. CONCLUSIONS: Development of a successful market access strategy requires an understanding of pricing, health economics and outcomes research, health technology assessment (HTA), and health policy, and continually keeping vigilant and adapting to rapid changes in the policy environment. This research gives direction to health economics, P&R, and government affairs professionals for the development of an integrated framework for the design and implementation of a global market access strategy.

PODIUM SESSION III: HTA IN VACCINE AND EPIDEMICS

VA1

ARE THE BENEFITS OF FLU VACCINATION IN THE ELDERLY CORRECTLY SIMULATED IN ECONOMIC ASSESSMENT MODELS?

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BACKGROUND: In literature, economic models of flu vaccination in elderly (65+) most often consider the target population as one homogeneous age group evaluated during a 1-year time period (~1-year 65+ group cohort model). Because the mortality