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 scores and anchors. MID was then estimated on the basis of the estimated data. RESULTS: Comparison of the MID value obtained with an anchor with perfect reliability ($\gamma = 1$) and 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

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 associated 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 a progression-free 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 pharmacists 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 $2,180 would be considered cost-effective from the Canadian health perspective. If the drug were able to improve patient quality of life or survival from 3 to 6 months, the monthly price could increase to $410 and $3,430 and offer the same value. CONCLUSIONS: The use of the WHO criteria for estimating a value-based price is feasible. However, one should be cautious and should identify an appropriate threshold that would provide a balance between what governments can afford to pay and the commercial viability of the product in the reference country.

DECIDING ON VALUE FOR MONEY: A COMPARISON OF THE DUTCH, BELGIAN, SWEDISH, AND FRENCH DRUG REIMBURSEMENT SYSTEMS

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OBJECTIVES: Many countries are adapting their pharmaceutical reimbursement system, increasingly emphasizing the role of pharmacoeconomics in decision-making. The aim of our study is to analyze European regulatory systems to obtain insight into best practice systems that deliver value for money.

METHODS: A systematic review using standard methodology is 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 pharmacists 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 $2,180 would be considered cost-effective from the Canadian health perspective. If the drug were able to improve patient quality of life or survival from 3 to 6 months, the monthly price could increase to $410 and $3,430 and offer the same value. CONCLUSIONS: The use of the WHO criteria for estimating a value-based price is feasible. However, one should be cautious and should identify an appropriate threshold that would provide a balance between what governments can afford to pay and the commercial viability of the product in the reference country.

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 policies and regulatory changes, a search was performed on the OHE and NHS EED databases. 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

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

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OBJECTIVES: Flu vaccination is recommended to reduce influenza morbidity and mortality in the elderly. However, cost-effectiveness analyses of influenza vaccine in elderly (65+) most often consider the target population as one homogeneous age group evaluated during a 1-year time period (1-1 year 65+ group cohort model). Because the mortality