Each patient was asked whether or not he or she contracted fol-

**PM25**

A MEDIAN MODEL OF US EQ-5D HEALTH STATE PREFERENCES

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**OBJECTIVES:** The US Valuation of the EQ-5D Health States was conducted to predict US societal preferences for the 243 health states described by the EQ-5D. The model used to generate these predictions (i.e., the D1 model) addressed a number of important conceptual and statistical issues. However, it has been criticized for being too complex and for failing to account for the non-normal distribution of health state preferences. Furthermore, the model’s developers have been faulted for applying an arbitrary transformation to the values for worse-than-death health states prior to estimation. This paper describes the development of an improved model for predicting US preferences for EQ-5D health states. **METHODS:** Model parameters were estimated using a probability-weighted least absolute deviations estimator. Variance estimation proceeded using a replication-based jackknife method. The resulting model predictions were contrasted with those of the D1 model. The fit of a median model for data collected in the Measurement and Valuation of Health study was also studied. **RESULTS:** When applying no transformation to the values for states worse than death, the best-fitting model included only fixed effects for moderate or severe problems in each of the 5 EQ-5D dimensions and excluded a constant. This specification yielded a squared rank correlation of 0.991. The predicted median absolute error of 0.025, and a rank correlation between median observed and predicted values of 0.991. The predicted median preferences ranged from 1.00 for full health to −0.80 for the worst possible health state. **CONCLUSION:** The application of a linear model to the US valuation data cannot be justified given the non-normal distribution of health state preferences. A median model of preferences is superior to other available specifications. In applications requiring US societal preferences, it is suggested that the predictions of the model discussed here be used instead of those of the D1 model.

**PM26**

EFFECT OF CHRONIC DISEASES ON HEALTH SERVICES UTILIZATION

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**OBJECTIVES:** Little research concerning to the effect of comorbidity on Health Service Utilization was conducted in field of General Practice. We aim to explore the effect of common chronic diseases on the Health Service Utilization of General Practice. We aim to explore the effect of common chronic diseases on the Health Service Utilization. This study is aim to confirm the hypothesis that the scale-score of the SF-36 is linear relationship with Health Services Utilization, and to quantify its linear relationship after the confirmation of above hypothesis. **METHODS:** Cross-sectional design was conducted. Sample was obtained via three stages of cluster sampling. We use both electronic version (based on QL-Recorder) and paper version of SF-36. Data process was conducted by the structured multiphase regression model. **RESULTS:** Firstly, in terms of monthly consultation rate, the scale-score of the SF-36 separately intercepted 5.1% contribution. Secondly, with respect to annual consultation rate, the scale-score of the SF-36 solely explained 2.7% contribution. Thirdly, referring to annual hospitalization rate, the scale-score of the SF-36 explained 4.7%. Besides, our research induces that there was gender difference of the scale-score of the SF-36 on Health Service Utilization, namely, the female are higher than the male. **CONCLUSION:** Our research proved, for the first time in Mainland China, that the hypothesis on linear relation between the scale-score of the SF-36 and Health Service Utilization. We further calculated in quantification, the separate contribution rate of the scale-score of the SF-36 to Health Service Utilization.
OBJECTIVES: To determine the proportion of published cost-minimization analyses (CMAs) that provided appropriate evidence of equivalence between drug comparators. METHODS: Medline, Embase, and International Pharmaceutical Abstracts (from inception to December 2006) were searched using the words “cost” and “minimization”. Included articles were those that: claimed to be a CMA, compared costs between drugs, reported original research, and were available as full-text (abstracts/reviews/letters were not accepted). Data extraction was performed by two independent reviewers and included: evidence of equivalence, journal type, publication date, and class of drug. To determine adequacy of evidence of equivalence, each article was assessed for source of data as well as strength of effectiveness between comparators, and categorized as: “adequate”, “questionable”, and “inadequate”. All differences in raters’ decisions were resolved through consensus. RESULTS: A total of 67 articles were assessed for evidence of equivalence. Of those, the majority were from the US/Canada, followed by Europe. Only one article was from outside these regions (Australia). CMAs were most published in general medicine journals and in the field of cardiovascular drugs. Of the total accepted studies, 9 (13.4%) were judged “adequate”, 21 studies (31.3%) were categorized as “questionable”, and 37 (55.2%) studies had “inadequate” evidence of equivalence of comparators. The majority of studies failed to prove their comparators’ equivalence because the evidence in the literature supported different outcome results, because some of these studies simply assumed equivalence, or did not provide any evidence at all. No correlation was found between studies that provided “adequate” or “inadequate” equivalence and year of publication. CONCLUSION: The majority of studies failed to provide adequate evidence of the suitability of CMA as an analytic technique. Guidelines should be developed that explicitly specify criteria for the performance of a CMA in future studies.

ICER VS. IECR: THEORETICAL HEALTH ECONOMICS VS. PRACTICAL DECISION MAKER BASED VALUE EVIDENCE

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OBJECTIVES: The incremental cost-effectiveness ratio (ICER) is commonly calculated by health-economic researchers as a method to communicate the relative incremental value among treatments. It is intended as evidence to determine whether a drug is a good value. However, as a single number presented as a value in a local currency it is poorly understood by the average health care decision maker(s). The objective of this project was to re-examine the ICER value and design an economic calculation that would be more readily understood and more easily interpretable by the customers of health economic information, the health care decision makers. METHODS: The components of the ICER were evaluated and rearranged in various possible calculations to yield a value that was comparable across different treatments utilizing the available cost (price) and effectiveness components of medical treatments. RESULTS: The incremental effectiveness per incremental cost ratio (IECR) or “incremental value” is proposed. The incremental difference in effectiveness is expressed as a ratio to the incremental difference in cost, with all factors expressed in percentages. We compared the traditional ICER to the proposed IECR. If a new treatment had an IECR value of 100% it would be considered neutral. If the IECR was less than 100% it could be considered needing alternative value, and any value greater than 100% would generally be considered positive value. Examples: Drug-A: Drug-B Cost $100 : $160. Effectiveness 50% : 80%. ICER : IECR $200 : 100% = EVEN. Cost $100 : $140. Effectiveness 50% : 80%. ICER : IECR $133 150% = GOOD. Cost $100 : $180. Effectiveness 50% : 80%. ICER : IECR $267 : 75% = POOR. CONCLUSION: The results of the IECR calculation are easily interpretable and produce a value that is simple to compare across treatments. The IECR removes The oretical value of the ICER, which is difficult for decision makers to interpret, and replaces it with a value that has an interpretable reference range.

GUIDELINES FOR BUDGET IMPACT ANALYSIS IN CANADA

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OBJECTIVES: Budget Impact Analysis (BIA) addresses the question of whether a new drug is affordable by the health care system in which it is being introduced. In Canada, committees and managers of each public drug plan make reimbursement decisions regarding new drugs. Most drug plan managers now require economic data, including a BIA, as part of the formal decision process on the pricing and reimbursement of drugs. There is currently no standardized method of performing and presenting BIAs for submission. METHODS: A survey of representatives across Canada and a review of 35 previously submitted BIAs were conducted to assess existing needs for BIA guidelines. Based on these findings, previously published guidelines (ISPOR) and input from the project's Steering Committee, BIA guidelines were developed to provide detailed instruction on how BIAs should be performed. An interactive budget impact model template was designed to facilitate BIA model development. RESULTS: Five key problem areas were identified for improvement in BIA models: Lack of transparency, inaccurate or misapplied assumptions, generalized analysis non-specific or inaccurate to jurisdiction and or plan, inappropriate choice of comparators; and overall quality. The guidelines and accompanying template address these problems and cover model design, analytic perspective, time horizon, target population, costing, scenarios to be compared, uncertainty analysis, discounting and validation methods that should be used when preparing a BIA as well as provide detailed guidance on data inputs and data sources. CONCLUSION: The BIA guidelines and accompanying template address the requirements of each of the participating drug plans in Canada. Both have been endorsed by the National Prescription Drug Utilization Information System (NPDUIS) Steering Committee and the PMPRB for the standardization of BIA submissions. The intended audience includes those who develop, submit or use BIA models, and drug plan managers who evaluate BIA submissions.

PROPOSAL FOR A METHODOLOGICAL CHANGE OF PRACTISE: SEPARATING THE PROCESS OF ESTIMATING CLINICAL EFFECTIVENESS FROM ECONOMIC EVALUATIONS

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OBJECTIVES: Any economic evaluation of a health care intervention is only as good as the effectiveness data it is built upon (Drummond 1997). Despite this knowledge, the quality of information on clinical effectiveness is still poor. METHODS: The main reason is that most data, at least on medicinal drugs, is tailored towards obtaining a market authorisation. Competent authorities, in the European Union, the United States and