our view, the effect of income does not only reflect money they lost.

CONCLUSIONS: An assumed income reduction clearly influenced utility scores, however, we found that loss of lost health care professionals to lost income fail to improve utility scores. This suggests that income does not significantly influence utility scores and that the impact of double counting is negligible.

PRM4 SYSTEMATIC REVIEW OF COST-UTILITY ANALYSES IN ASIA
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OBJECTIVES: To review published cost-utility analyses (CUA) targeted towards populations in Asia. METHODS: We examined data from the Tufts Medical Center Cost-Effectiveness Registry (www.cearegistry.org), which contains detailed information on more than 2,900 English-language CUA in peer-reviewed journals. We focused on articles pertaining to Asian countries, summarized study features for articles published from 2000-2010, and compared those with CUA in all other regions. RESULTS: Our search identified 91 studies published during the period 2000-2010, 87 (5.7%) targeted toward Asian populations: Japan (n = 34), Taiwan (n = 18), China (n = 9), Thailand (n = 7), Hong Kong (n = 5), Singapore (n = 5), South Korea (n = 5), India (n = 4), and Bangladesh (n = 1). The CUA contained 243 standardized incremental cost-effectiveness ratios (ICERs), expressed as $US2010 per QALY and 357 utility weights. The most common type of intervention was pharmaceuticals (52.9%), followed by screening (21.8%), diagnostics (11.5%), and surgery (11.5%). 79 CUA (90.8%) mentioned a cost-effectiveness threshold; of these, 60 said “good value for money” reflected a threshold below $50,000/QALY. The median reported ICER was $11,000/QALY, vs. $21,000/QALY for non-Asian studies. 75.7% of the reported ICERs were either dominant (less expensive and more effective) or below $50,000/QALY, compared to 63.9% in non-Asian CUA (p < 0.001). 13.6% of ICERs were either dominated (more expensive and less effective) or greater than $100,000/QALY, compared to 22.4% in non-Asian CUA (p < 0.001). CUA targeted towards Asian populations generally adhered to good methodological practices, though the average quality score was modestly lower than the overall mean (4.08 vs 4.43; p < 0.001) and significantly more studies did not report funding sources (40.2% vs. 22.2%; p < 0.001), compared with non-Asian CUA.

CONCLUSIONS: The number of CUA in Asia has grown steadily with over half focused on pharmaceuticals. Compared to CUA in all other countries, significantly more studies in Asia suggest efficient health interventions. These CUA generally follow good methodological practices though reporting of funding sources could improve.

PRM5 TRANSFERABILITY OF INDIRECT COST OF CHRONIC DISEASE: A SYSTEMATIC REVIEW AND META-ANALYSIS
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OBJECTIVES: Indirect cost is an important component in cost-of-illness assessment. This study explored the factors involved in the variation of reported indirect cost and investigated the feasibility of transferring indirect costs across settings. METHODS: A systematic literature review was conducted to identify studies estimating indirect costs for four selected chronic diseases, namely, asthma (AS), diabetes (D1), rheumatoid arthritis (RA), and schizophrenia (SC). Multiple linear regression was run to identify the factors that potentially explain the variation of reported indirect cost. Meta-analysis (fixed and random-effect model) and systematic (bootstrapping method) meta-analyses were applied to local gross domestic product (GDP) per capita adjusted indirect costs for each disease. RESULTS: Systematic literature review identified 77 articles that reported indirect costs of AS (18), D1 (20), RA (25), and SC (14) for literature synthesis. Substantial inter- and intra-disease variations among the indirect cost studies were observed, regarding the geographic distribution, methodology and magnitude of cost estimation. Regression analysis showed disease categories and local GDP per capita significantly (p < 0.001) contributed to the variance of indirect cost. The range of intra-disease variation in indirect cost was substantially reduced after adjusting by and expressing as local GDP/capita. A GDP adjusted indirect cost in terms of percentage of local GDP/capita of AS was the lowest and that of SC was the highest. Bootstrapping estimation was relatively conservative with slightly larger confidence intervals than the parametric method with the mean (95% CI) of 2.12% (1.4089, 2.9332) on AS, 10.65% (7.215, 14.7438) on D1, 21.98% (17.4360, 27.0631) on RA, and 79.19% (52.4243, 117.833) on SC. CONCLUSIONS: It would be convenient and feasible to construct a universal reference range of indirect cost for a specific disease based on existing data and a presentation of the percentage of local GDP that can be used to aid decision making in jurisdictions where indirect cost data are not available.

PRM8 COSTING ISSUE IN PHARMACOECONOMIC STUDIES FROM THE PERSPECTIVE OF SINGAPORE PUBLIC HEALTH CARE PROVIDER
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OBJECTIVES: Singapore has a modified universal health care system in which subsidy rates are pegged to household incomes and other socioeconomic attributes. Out-of-pocket charges vary considerably for each service and level of subsidy. Hence, costing issue needs to be carefully considered in cost utility study in the context of Singapore, depending on the perspective from which the analyses are performed. This research was to explore the costing consideration for different possible scenarios through an illustrative cost utility analysis. METHODS: Using the incremental cost and QALY gained data presented in a published cost utility analysis of a treatment for breast cancer in the context of Singapore, hypothetical scenarios were assumed for different levels of subsidy (50%, 75% and 100%) covered by the public health care provider that a patient might receive at a government restructured hospital. Assuming the QALY gained remains the same, incremental cost per QALY gained (ICER) was computed for each scenario from the perspective of the public health care provider. RESULTS: For a fully subsidy scenario (100%), the total incremental cost was $833,385 and $467,077, respectively. For the expected value of 1.70 QALYs, the resulting ICERs were $18,462 and $27,692 and $36,924 for scenarios of 50%, 75% and 100% subsidy rates, respectively. CONCLUSIONS: Due to the possible different subsidy rates, it is necessary to consider in a pharmacoeconomic study from the perspective of the public health care provider of Singapore.

PRM9 DATA REQUIREMENTS FOR COST EFFECTIVENESS ANALYSIS IN KOREA AND AUSTRALIA: A COMPARISON
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OBJECTIVES: Both Korea and Australia have stringent pharmaco-economic (PE) guidelines outlining the data requirements for cost effectiveness analysis (CEA). The requirements for regulatory approval in both countries are clear and mainly rely on multinational clinical trials with the addition of relative small bridging studies in Korea. It seems, however, to be different for reimbursement submission when compared to Australia. The purpose of this study is to uncover the data requirements for CEA from an industry perspective. METHODS: Firstly a literature search was performed to find any relevant publications. Moreover website of decision maker’s were searched for past reimbursement decisions. Finally a qualitative comparison was made of the PE guidelines for Korea and Australia. RESULTS: The literature search revealed very little published literature on CEA’s as part of drug reimbursement submissions in Korea and Australia. Decision makers in both countries publish reimbursement decisions on their respective website. However the information disclosed rarely reveals what input data was used for CEA’s. The PE guidelines for the respective countries showed remarkable similar data requirements. The main difference is surrounding local resource data. In Korea this usually retrieved through information gathering exercises like cost and utilisation studies. It is quite different in Australia where most information is available either through a government website or as IMS data. CONCLUSIONS: Both Korea and Australia has specific requirements for CEA’s however the local data needed for each country differs significantly. Acquiring cost and utilisation data in Australia seems straightforward in most cases, whereas the situation is different in Korea. Furthermore if data is not available then the situation is different in Korea.

RESEARCH ON METHODS - Databases & Management Methods
PRM10 OVERVIEW OF THE PROLABELS DATABASE SIX YEARS AFTER ITS IMPLEMENTATION
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OBJECTIVES: The PROLabels database (www.mapi-prolabels.org) is a unique online tool collecting information on the medical and biological products for which the Food and Drug Administration (FDA) and the European Medicines Agency (EMA) have granted a Patient-Reported Outcome (PRO) labeling claim. The purpose of this abstract is to present an overview of the database six years after its implementation in April 2006. METHODS: To create the database, data were retrieved on the FDA website, from the European Public Assessment Reports for all the drugs approved through a centralized procedure since 1995. Evidence of a PRO endpoint was pulled for each product from the Summary of Product Characteristics and, when necessary, additional information was gathered from the scientific discussions. For the FDA website, data were collected from the approved labels and additional information was retrieved in the Medical Reviews. The database now contains all drugs approved or revised by the FDA since 1995, including Biological Approvals (BiAs). For the purpose of this review, all approvals between 1995 and 2011 were reviewed individually for each agency. RESULTS: As of December 31, 2011, the database contains 486 records of which 342 products were approved by the FDA (22.6% of all FDA approvals). There were 144 products with a PRO claim approved by the EMA (24.2% of all EMA approvals). Nervous system diseases is the therapeutic area for which the highest number of products is approved with a PRO claim (24.2% of all EMA approvals). Neurological disorders is the therapeutic area for which the highest number of products is approved with a PRO claim. A646