

questionnaire to ascertain whether the research question is still relevant and if there have been any developments to the evidence since publication of the HTA. The input from these stakeholders is collated and taken to HTW's Assessment Group to decide whether or not the HTA needs updating. If the Assessment Group decides that re-assessment of a HTA is warranted, HTW perform an updated literature search to inform the re-assessment.

Results. The HTA re-assessment SOP developed by HTW was approved by the organization's Assessment Group. At the time of writing this abstract, HTW sent questionnaires to stakeholders of three HTAs which had HTW guidance published three years ago, and were therefore due routine consideration for re-assessment as detailed in our SOP. HTW also received a request from a clinician for a more recent HTA to be considered for re-assessment as they believed the evidence-base had changed since original publication. These questionnaires have been collated and will be taken to an upcoming Assessment Group to decide whether HTW should proceed with the re-assessments.

Conclusions. HTW has developed a consistent process for HTA re-assessment, which ensures that HTAs done by HTW remain current and relevant to best serve the population and health and care providers in Wales. By utilizing expertise from HTA stakeholders and HTW Assessment Group members, an informed decision can be made as to whether a HTA warrants re-assessment after three years following publication or sooner if requested.

PP92 Should Missing Data Be Multiply Imputed Prior To Longitudinal Linear Mixed-Model Analyses In Trial-Based Economic Evaluations?

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Introduction. For the analysis of clinical effects, multiple imputation (MI) of missing data was shown to be unnecessary when using longitudinal linear mixed-models (LLM). It remains unclear whether this also applies to cost estimates from trial-based economic evaluations, that are generally right-skewed. Therefore, this study aimed to assess whether MI is required prior to LLM when analyzing longitudinal cost-effectiveness data.

Methods. Two-thousand complete datasets were simulated containing five time points. Incomplete datasets were generated with 10 percent, 25 percent, and 50 percent missing data in costs and effects, assuming a Missing At Random (MAR) mechanism. Statistical performance of six different methodological strategies was compared in terms of empirical bias (EB), root-mean-squared error (RMSE), and

coverage rate (CR). Six strategies were compared: (i) LLM (LLM), (ii) MI prior to LLM (MI-LLM), (iii) mean imputation prior to LLM (M-LLM), (iv) complete-case analysis prior to seemingly unrelated regression (CCA-SUR), (v) MI prior to SUR (MI-SUR), and (vi) mean imputation prior to SUR (M-SUR). To evaluate the impact on the probability of cost-effectiveness at different willingness-to-pay [WTPs] thresholds, cost-effectiveness analyses were performed by applying the six strategies to two empirical datasets with 9% and 50% of missing data, respectively.

Results. For costs and effects, LLM, MI-LLM, and MI-SUR performed better than M-LLM, CCA-SUR, and M-SUR, as indicated by smaller EBs and RMSEs, as well as CRs closer to the nominal levels of 0.95. However, even though LLM, MI-LLM, and MI-SUR performed equally well for effects, MI-LLM and MI-SUR were found to perform better than LLM for costs at 10 percent and 25 percent missing data. At 50 percent missing data, all strategies resulted in relatively high EBs and RMSEs for costs. In both empirical datasets, LLM, MI-LLM, and MI-SUR all resulted in similar probabilities of cost-effectiveness at different WTPs.

Conclusions. When opting for using LLM for analyzing trial-based economic evaluation data, researchers are advised to multiply impute missing values first. Otherwise, MI-SUR may also be used.

PP93 The Impact Of Using Different EQ-5D Scoring Methods On Cost-Utility Outcomes: A Simulation Study

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Introduction. Patients' EQ-5D health states are preferably valued using country-specific value sets. If value sets are not available, crosswalks may be used to estimate utility values. However, up until now the impact of using crosswalks instead of value sets on cost-utility outcomes remains unclear.

Methods. Trial-based cost-utility data were simulated for four conditions (depression, low back pain, osteoarthritis, and cancer), three levels of disease severity (mild, moderate, and severe), and three treatment effect sizes (small, medium, and large), resulting in 36 scenarios. For all scenarios, utility values were estimated using four scoring methods (EQ-5D-3L value set, EQ-5D-5L value set, 3L-to-5L crosswalk, and 5L-to-3L crosswalk) for three countries (the Netherlands, the United States, and Japan). Mean utility values, quality-adjusted life years (QALYs), incremental QALYs, and cost-utility outcomes (incremental cost-effectiveness ratios [ICER], probabilities of cost-effectiveness at willingness-to-pay [WTP] thresholds) were compared between value sets and crosswalks.

Results. Differences between value sets and crosswalks ranged from -0.33 to 0.13 for mean utility values, from -0.18 to 0.13 for QALYs, and from -0.01 to 0.08 for incremental QALYs. Because of the small differences in incremental QALYs, ICERs between scoring methods were considerably different. For small effect sizes, at a WTP of EUR

20,000/QALY gained, the largest difference in the probability of cost-effectiveness was found for moderate cancer between the 5L value set and 3L-to-5L crosswalk (difference 0.63) using Japanese valuations. For medium effect sizes, the largest difference was found for mild cancer between the 3L value set and the 5L-to-3L crosswalk (difference 0.06) using Japanese valuations. For large effect sizes, the largest difference was found for mild osteoarthritis between the 3L value set and 5L-to-3L crosswalk (difference 0.08) using Japanese valuations.

Conclusions. Our findings indicate that reimbursement decisions may change depending on the use of crosswalks. Crosswalks are justifiable in absence of country-specific value sets but should not be considered a sustainable alternative for value sets.

PP94 Exploring The Relationship Between Price And Outcome Of The Health-Economic Assessment In Japan

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Introduction. This study reviewed all publicly available Japanese cost-effectiveness appraisals delivered by the Center for Outcomes Research and Economic Evaluation for Health (C2H) from the national institute of public health (NIPH) and analyzed the relationship between the outcomes of the health-economic assessments and the final price adjustment decisions made by the Ministry of Health, Labour and Welfare (MHLW).

Methods. Data were extracted from all official health-economic assessments published by C2H website for the analysis. The extractions were structured based on the following items: indication, assessment methodology, appropriate comparators, health-economic outcomes, and key uncertainties identified by C2H. The analysis was performed on 29th November 2021. A threshold of 5 million JPY per Quality Adjusted Life Year gained (JPY/QALY) was used for the incremental cost-effectiveness ratio (ICER) analysis cut-off.

Results. Up to the time of this analysis, six health-economic assessments had been conducted for five products: three assessments performed cost-effectiveness analysis, one performed cost-minimization analysis and two performed cost-effectiveness and cost-minimization analysis for different comparators and different patient subgroups respectively. Among the five assessments' reported ICER values, four of them are under the 5 million JPY/QALY threshold, ranging from 328,585 JPY/QALY to 483,056 JPY/QALY. However, price adjustments were still implemented on three out of the four products which were deemed to be cost-effective, ranging from -0.5 percent to -4.3 percent (mean: -3.0%). For the only product deemed to be not cost-effective, a price adjustment of -4.3 percent was implemented.

Conclusions. A price discount could be implemented regardless of whether the ICER value falls under the 5 million JPY/QALY threshold. However, a lower magnitude of price discount is likely to be

applied by MHLW for more cost effective treatments. The outcome of this analysis may be limited by the small sample size and continuous monitoring of further HTA publications in Japan is needed.

PP95 Health Professionals' Participation On Health Technology Assessment (HTA) Public Consultation: A Distribution Analysis Of Brazilian HTA In 2021

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Introduction. The Brazilian HTA process includes calls for public consultations, in which society can give its opinion on reports emitted by the National Committee for Health Technology Incorporation (CONITEC). Open and closed queries for public consultation are performed by official formularies and are available online at CONITEC webpage. There are two categories of queries: clinical protocols and guidelines, and incorporation/exclusion demands. Incorporation/exclusion queries are subdivided in two additional categories: opinion and experience, or technical. In this study we analyze health professionals' technical contributions and their opinion (pro or con) on the inclusion or exclusion of health technologies.

Methods. On November 26th, 2021, formularies concerning concluded public consultations on health technology incorporation/exclusion reports were extracted from CONITEC website for the period, January 1, 2021 to November 26, 2021. Entries on the technical contributions formularies included a close-ended question about the opinion of participants on health technology incorporation/exclusion reports ("favorable"/"against"/"neither").

Results. A total of 63 health technology incorporation/exclusion queries were carried out during the study period, of which only 4 were exclusions. A total of 7783 contributions were registered. "Patients", "Family or caregivers", "Interest on the theme", and "Health professionals", accounted for 96.4% (10.9, 15.2, 17.1 and 53% respectively). Health professionals' participation alone accounted for 4130 entries. Concerning the category "health professionals", the total number of favorable opinions on the presented documents was 2740 (66.3%), 1306 (31.6%) disagreed, and 84 (2%) had no opinion.

Conclusions. Health professionals can be considered one of the main stakeholders considering HTA for technology incorporation in public health systems. Brazilian HTA reports are submitted to public consultation through queries, which are available open access at the Brazilian National Committee for Health Technology Incorporation website.