

Conclusions. The characterization of the main factors driving the integration of RWE in reimbursement appraisals at INESSS serves as a basis for communicating the requirements for evaluation submissions by sponsors. It further reinforces INESSS capabilities in assessing innovations, which can imply an appraisal of value at various moments along the lifecycle and with a diversity of evidence types. Considering the rapidly evolving literature and international experience, this work is expected to evolve too, and will be updated as needed.

OP44 Does The Health Economic Modelling Structure Matter? An External Validation Of Three Approaches Commonly Used In Obesity Modelling

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Introduction. Obesity, defined as a body mass index (BMI) greater than 30kg/m², is a multifactorial disease with severe health and economic consequences. As obesity associated events impact long-term survival, health economic (HE) modelling is commonly used. However, the current set of modelling approaches are very diverse and lack external model validation. The aim of our research was to compare the event simulation and the HE outcomes of different structural approaches.

Methods. We performed an external validation of three main structural modelling approaches for estimating obesity-associated events: (i) continuous BMI-related risks; (ii) general risk equations; and (iii) categorical BMI-related risks. The Swedish Obese Subjects (SOS) intervention study was used for validation. Outcomes compared were mortality, cardiovascular events (CVE), and type 2 diabetes (T2D), over time using the long-term data from the SOS study, looking at both the surgery arm and the control arm. Concordance between modelling results and the external validation study was measured by visual examination of the best fitting linear regression lines, R² coefficients, the root mean squared errors, and F-tests. Furthermore, we compared the HE modelling results, comparing surgery versus control, expressed as cost per quality-adjusted life-year (QALY) gained based on 1,000 Monte Carlo simulation samples.

Results. Mortality was overestimated by all approaches irrespective of the study arm. For CVE an overestimation by all structural approaches was observed for the control arm. The CVE surgery arm was overestimated by the categorical BMI approach and slightly underestimated by the others. For T2D an underestimation was observed for the continuous and the categorical BMI approaches, whereas there was an overestimation by the risk equation approach. Considering different confidence interval limits, the cost per QALY gained are comparable between all structural approaches.

Conclusions. None of the structural approaches provided perfect external event validation results although the risk equation approach

showed the smallest deviations compared to the external validation study. The cost per QALY gained resulting from the three approaches were fairly comparable.

OP46 Assessing The Quality Of Pharmacoeconomic Evaluations About Type 2 Diabetes Mellitus Drugs In National Reimbursement Drug List

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Introduction. With the disease spectrum changing in China, type 2 diabetes mellitus (T2DM) has become the main chronic disease which affects people's health severely, bring patients serious economic burden of disease. For T2DM patients, reliable quality of evidence in decision-making are significant, improving the efficiency of the adjustment of the National Reimbursement Drug List (NRDL). Based on the Consolidated Health Economic Evaluation Reporting Standards (CHEERS), we aimed to evaluate the quality of all published pharmacoeconomic evaluations on T2DM drugs in 2020 NRDL.

Methods. Because the 2020 NRDL came into effect on 1 March 2021, we searched all published pharmacoeconomic evaluations about T2DM drugs in 2020 NRDL before March 2021 in China National Knowledge Infrastructure (CNKI), Wan fang Data, China Science and Technology Journal Database (VIP), PubMed, and Web of Science. According to the criterion of inclusion and exclusion, all documents were screened and then relevant basic information of targeted documents was extracted. The quality was evaluated by calculating the final scores based on CHEERS. Two reviewers assessed each publication's quality using the CHEERS instrument and summarized study quality.

Results. A total of 910 papers were searched, and 24 papers were included. These involved six T2DM drugs, specifically IDegAsp, exenatide, liraglutide, lixisenatide, dapagliflozin and empagliflozin. The average score was 18.31, the standard deviation was 3.67, and the average scoring rate was 77.41 percent. Among all items, "characterizing heterogeneity" scored 0.04, least satisfied with requirements. "Setting and location", "choice of health outcomes" and "assumptions" scored one, most satisfied with requirements. Among the average scores of all parts, "results" scored lowest at 0.55, and "methods" scored highest at 0.85. The Wilcoxon sum-rank tests showed that score rate which represented reporting quality of economic evaluation (EE) was significantly related to "journal type", "EEs type", "model choice" and "study perspective".

Conclusions. The methodological quality of pharmacoeconomic evaluations about T2DM drugs in 2020 NRDL needs to be improved. Improving the quality of literature is the basic guarantee of scientific decision-making in national medical insurance negotiation.