

2018). We used a linear regression model to examine the relationship between frequency of optimizations and time.

**Results.** In total, 357 STAs outcomes were identified, 55 percent were recommended and 26 percent were optimized. The proportion of optimized recommendations increased over time vs all other outcomes ( $p = 0.01$ ), with more technologies being optimized over time ( $p < 0.01$ ).

**Conclusions.** The results indicate an increasing trend by NICE towards maximization of value through approval of drugs in select groups of patients. From a manufacturer's perspective, prediction of such outcomes at an early stage is fundamental for investment purposes and to maximize financial returns. An early stage model provides a framework to examine these issues as well as identifying data gaps, where real world evidence can be planned to support the value argument for products, and to inform clinical trial design through value of information analysis.

### PP177 Health Preference Research In Europe: A Review Of Its Use

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**Introduction.** Health Technology Assessment (HTA) and regulatory decisions involve value judgements. As patient groups, industry, and regulatory agencies conduct more preference studies to quantify these judgements, a better understanding of the methods and practices is needed. Currently, there is no systematic mapping of the use of preference data in Europe. This study aimed to identify (i) the use of quantitative preference data by all relevant HTA bodies and regulatory authorities of the European Union (EU) member states, and (ii) key standards and guidelines.

**Methods.** This study used a mixed method approach based on a systematic literature review, survey and subsequent interviews with decision makers and experts.

**Results.** A total of 62 survey responses were received. Many respondents reported that their agencies were responsible for supporting more than one type of decision, with 69.0 percent supporting approval decisions, 64.3 percent supporting reimbursement decisions, 61.9 percent supporting pricing decisions, and 64.2 percent supporting guideline development. Respondents reported that their agencies supported these decisions in multiple ways: 78.6 percent by assessing health technologies; 54.8 percent by appraising health technologies; 45.2 percent by compiling an HTA report; 7.1 percent by conducting primary research; 9.5 percent by conducting secondary research. More than 40 percent (42.9 percent) of agencies had the final say on one of the decisions of interest – approval, reimbursement, or pricing. Of the 31 countries studied, 71 percent ( $n = 22$ ) used quantitative preference data in their reimbursement and pricing decisions. Of those, 86 percent ( $n = 19$ ) used general population

preferences to inform the estimation of quality-adjusted life years (QALY) as part of cost utility analysis.

**Conclusions.** Much of this use of preference data can be understood within the standard framework of economic analysis adopted by many HTA agencies; either in the form of: standard ways to estimate QALYs; ways to broaden the impacts of technologies captured in the QALY; or ways to weigh health gain with other decision-making criteria, such as disease severity or innovativeness.

### PP178 Health Technology Assessment Of Laboratory Medicine

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**Introduction.** Recent studies have investigated the re-organization and automation of laboratory medicine as a challenge for the hospital in terms of reduction of costs, turnaround time, workload, optimization of human and technological resources and improvement of safety. The purpose of this study was to conduct a health technology assessment (HTA) evaluation process about the possibility to re-organize and automate laboratory medicine at Bambino Gesù Children's Hospital.

**Methods.** The decision-oriented HTA (Do-HTA) method, involving the integration of the European Network for HTA (EUnetHTA) CoreModel and the Analytic Hierarchy Process, was applied to assess the best technology solution. Twenty-one professionals were involved to define tender specifications related to the adaptation works of the new dedicated rooms, and the automatic technologies and organizational solutions for the new laboratory department. Finally, two manufacturer companies were consulted.

**Results.** Using Do-HTA, the study was focused on laboratory technologies while the infrastructure evaluation was conducted by the Engineering and Logistic Units of the hospital. Results showed that the total performance score of the first proposal was slightly higher (2.5 percent) than the second one, proving the comparable high qualitative level of both manufactures technologies. After an accurate analysis, evaluating all aspects (safety, clinical efficacy, cost, organization & technical criteria) and integrating the infrastructure evaluation, the decision has fallen upon the first company offer.

**Conclusions.** This HTA project provided an in-depth examination of two proposed technological and organizational solutions. Thanks to the Do-HTA method, which produced and developed data and all needed information, it was possible to guide and assist the decision makers on the choice between the two technical solutions.

### PP179 Health Technology Assessment Of Pediatric Intensive Care Ventilators

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