

**Results.** The network included 18 researchers (epidemiologists, infectious diseases experts, statisticians, and modelers) from various backgrounds, including ecology, geography, physics, and mathematics. The criteria for joining the network were having a communication channel with public health decision-makers and being involved in generating evidence for public policy. During a 24-month period, the following sub-projects were established: (i) development of a susceptible-exposed-infected-recovered-like, individual-based meta-population and Markov chain model; (ii) projection of COVID-19 transmission and impact over time with respect to cases, hospitalizations, and deaths; (iii) assessment of the impact of non-pharmacological interventions for COVID-19; (iv) evaluation of the impact of reopening schools; and (v) determining optimal strategies for COVID-19 vaccination. In addition, we mapped existing COVID-19 modeling groups nationwide and conducted a systematic review of relevant published research literature from Brazil.

**Conclusions.** Infectious disease modeling for guiding public health policy requires interaction between epidemiologists, public health specialists, and modelers. Communicating modeling results in a non-academic format is an additional challenge, so close interaction with policy makers is essential to ensure that the information is useful. Establishing a network of modeling groups will be useful for future disease outbreaks.

## PP26 Cost Utility Of Vaccination Against COVID-19 In Brazil

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**Introduction.** The severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), which causes coronavirus disease 2019 (COVID-19), is a single-strand ribonucleic acid virus that was first identified in January 2020 in patients with viral pneumonia in Wuhan, China. The virus has since spread rapidly around the world, leading the World Health Organization to declare it a pandemic on 11 March 2020. In Brazil there have been 21.8 million cases of SARS-CoV-2 infection and 608,500 deaths. The objective of this study was to evaluate the cost utility of the Oxford, CoronaVac, and Janssen vaccines from the perspective of the Brazilian public health system.

**Methods.** Three microsimulation models were constructed using individual data. The simulations contained seven transition states related to the natural history of COVID-19. The model with a daily cycle had a time horizon of one year and used data from 289 days of the pandemic. The analysis considered direct medical costs from the Brazilian health system perspective. Outpatient, hospital, and mortality databases were used for the model inputs and patient data were stratified by age. Effective vaccines reduced the likelihood of patients becoming ill. Information on the quality of life of patients receiving treatment in the outpatient or hospital setting and disease sequelae

were extracted from the published literature. The main outcome of the analysis was quality-adjusted life-years (QALYs).

**Results.** The vaccines had incremental cost-utility ratios ranging from USD 4,121 (Oxford) to USD 3,160 per QALY (CoronaVac). The older the population, the lower the incremental cost-utility ratio. Given a willingness-to-pay threshold of BRL 3,129 per QALY, all the vaccines were considered cost effective in the probabilistic sensitivity analysis. The incremental cost-effectiveness ratio stratified by age ranged from USD 6,327 per QALY in patients older than 75 years (Janssen) to USD 20,993 per QALY in patients younger than 59 years (CoronaVac).

**Conclusions.** The results of this analysis, stratified by patient age, can help in the preparation of a vaccination prioritization plan.

## PP27 Reusing And Adapting Health Technology Assessments (HTAs): An Example From The COVID-19 Time

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**Introduction.** Health technology assessment (HTA) reports are complex technical documents that address multiple aspects of the incorporation of a technology into the health care system applying complicated methodologies coming from different disciplines. The purpose of HTA is to support decision-makers and these should have an adequate level of training to fully understand these assessments. However, most HTA education programs and courses are intended for HTA doers and there is a lack of practical guidance training aimed at preparing health managers or policy makers in HTA. The objective is to describe an HTA training program developed for decision-makers of the three levels (health care administration, hospital management and clinical practice).

**Methods.** Rolling Collaborative Review (RCR) 01 of convalescent plasma was identified and selected because it complied with our Population Intervention Comparator Outcome Design Question. The EUnetHTA HTA adaptation Toolkit was used to check the relevance (about research question); reliability (quality of the report) and transferability (application of information to the target setting). Additional considerations regarding the local context were examined. A panel of four professionals and one patient was formed to rate the importance of the outcomes and to carry out the external review

**Results.** According to the toolkit, information on RCR01 Convalescent Plasma could be adopted for the safety and effectiveness domains. The technical characteristics and current use domains were adapted and extended. It was considered of interest to include the domains of organization and ethics. The organizational aspects were answered through the information retrieved in a search for systematic reviews and guides, and with the collaboration of experts.

The ethics domain was answered through a specific literature search on ethical issues related to COVID-19 and transfusions.

**Conclusions.** The use of the EUnetHTA Toolkit has been helpful in supporting the adaptation process. The adoption of the effectiveness and safety domains from already developed HTA assessments is an efficient way to provide useful information for the decision-making process. However, contextual elements should be included in the adaptation process to ensure a complete framework for the decision.

## PP28 Is My Medicine Suitable For An Outcomes Based Agreement? The Feasibility Conundrum

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**Introduction.** Outcomes Based Agreements (OBAs) are financial arrangements that offer the opportunity to align payment to health outcomes in the real-world, and share the financial risk by providing long-term solutions that grant access to medicines, with reimbursement only when performance is achieved. OBAs are most likely to be useful when there is high uncertainty in the clinical data, but they are difficult to design and implement, and other financial options are usually preferred by payers. As a result, OBAs have been more the exception than the norm, and there is not a clear pattern that indicates if an OBA is likely to succeed in practice.

**Methods.** Through a retrospective OBA exercise with NHS Wales (Project IDEATE: Innovation in Data to Evolve Agreements That Enhance patient health outcomes), we have explored the circumstances under which an OBA might be most appealing to payers, and assessed implementation challenges and solutions, to propose a framework to evaluate the feasibility of a medicine for an OBA.

**Results.** Along with mitigating some of the clinical uncertainties associated with a lack of mature data at the time of launch, an OBA must also consider other factors: the commercial viability of the agreement, the associated administrative burden, and its cost of implementation. Also, the Health System commitment to a Value-Based Healthcare agenda and, most importantly, its willingness to offer long-term sustainable solutions to optimise treatment, are key to support this approach.

Practical considerations include: how the relevant outcomes are going to be selected and tracked in the real-world, how the whole model is going to fit within the current procurement and finance infrastructures, and how industry works in collaboration with the Health System.

**Conclusions.** Insights from Project IDEATE will be used to explore how our OBA feasibility framework might be applied in the future.

## PP32 Assessment Of Preferences For Treatment: A Discrete Choice Experiment Among Italian Patients With Prostate Cancer

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**Introduction.** The integrated patient-centered, evidence-based approach to care recognizes the role of patient preferences. A discrete choice experiment (DCE) was developed with the aim of identifying the preferences of men with prostate cancer in Italy regarding the different risk-benefit factors of various treatment options.

**Methods.** The DCE was developed with the support of prostate cancer patients and oncologists and was based on a targeted scoping review. The final DCE included 26 choice sets divided into two blocks. The first block focused on all prostate cancer patients (both metastatic and non-metastatic), while the second block aimed to assess preferences for patients with metastatic hormone-sensitive prostate cancer (mHSPC). Patients were asked to choose from ten attributes in the first block and six in the second block. The aim was to identify attributes and levels with a statistically significant impact on patient preferences. Preference estimates were calculated using a conditional logit regression model and the results were stratified by cancer stage (metastatic or non-metastatic) in the first block.

**Results.** A total of 202 patients (mean age 72 years) completed the DCE. In the first block, the most important attribute was quality of life (QoL), particularly for patients with metastatic cancer. The other three attributes found to be significant, in order of relevance to patients, were the risks of experiencing cognitive impairment, hematologic complications, and fatigue. For patients with mHSPC, QoL was the strongest determinant of preference. The risk of experiencing fatigue was also a relevant attribute, followed by skin irritation.

**Conclusions.** This study shows that the effect of treatment on QoL was the most important attribute for patients diagnosed with prostate cancer. Specific risk factors play a different role in the choice of treatment depending on cancer type, with the risk of experiencing fatigue being valued by all groups. Identifying and understanding patients' preferences related to treatments for prostate cancer will help physicians identify the best treatment strategy.