periprosthetic joint infection. Probabilistic sensitivity analysis examined the effect of combined uncertainty across model parameters. **RESULTS:** Comparing DM to LFH, incremental costs over 3 years were £428 vs. £1,447 in the UK, €451 vs. €1,272 in Germany, €540 vs. €1,425 in Italy, and €523 vs. €1,562 in Spain (95% CI). DM implants were cost saving for patients undergoing revision THA at a cost differential of £1,019 in the UK, €820 in Germany, €885 in Italy, and €1,039 in Spain. **CONCLUSIONS:** A model using clinical data derived from a large-sample registry, healthcare costs using country-specific procedural reimbursement codes and tariffs, and probabilistic sensitivity analysis within a Markov decision-analytic model provided a novel and reproducible analytic method to assess the costs of DM vs. LFH in revision THAs.

PRM38

HOW MUCH IS YOUR LIFE WORTH? DEFINING WHAT THE WILLINGNESS TO PAY FOR A QALY IS AND SHOULD BE

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OBJECTIVES: Many countries have a national Health Technology Assessment (HTA) body that makes decisions/recommendations on publically reimbursing new healthcare technologies. For some, a key criterion is cost-effectiveness based upon their cost per Quality Adjusted Life Year (QALY) in relation to willingness to pay (WTP) thresholds. This research aims to identify, compare and evaluate WTP thresholds across countries. **METHODS:** Publically-available HTA guidelines were screened for 35 countries across Europe, Asia-Pacific, and the Americas for key criteria for decision-making and WTP thresholds. **RESULTS:** 20 countries spanning five continents were identified where cost/QALY was a key decision-making criterion encompassing both developed (e.g. England and Sweden) and emerging markets (e.g. Thailand and Colombia). 17/35 (49%) countries had explicit WTP threshold or threshold ranges, with the lowest in Thailand (160,000THB [€4,200]), and the highest in Sweden, where the upper-most threshold range reaches €90,000. Five countries link the WTP threshold to a multiple of GDP/capita (Brazil, Columbia, Czech Republic, Mexico, Poland). 6/35 (17%) countries had ICER thresholds that varied depending on the severity/burden of disease and/or the level of unmet need (Norway, Sweden, Netherlands, England, Australia, Colombia). An additional 4/35 (11%) markets (England, Australia, Netherlands, and Sweden) had specific decision-modifiers enabling eligible therapies to be considered at higher WTP thresholds (e.g. England: HST for ultra-orphan indications [£100,000-£300,000/QALY; €113,900-€341,700/QALY] and End of Life criteria [not stated]). **CONCLUSIONS:** The WTP for a QALY can vary substantially between as well as within countries. The WHO recommends a WTP of <3 times GDP per capita/QALY, which few countries follow. If other markets adopted this WHO standard it would substantially increase their WTP thresholds. From a utilitarian perspective, WTP should be consistent across diseases. Another perspective is that WTP should reflect the opportunity cost; new interventions with higher budget impacts should have lower WTP thresholds, supporting higher WTP for orphan diseases.

PRM39

IS THE CHOICE OF WILLINGNESS-TO-PAY THRESHOLD IN COST-UTILITY ANALYSIS ENDOGENOUS TO THE RESULTING VALUE OF THE TECHNOLOGY?

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OBJECTIVES: We explored whether the selection of a willingness-to-pay (WTP) threshold in cost-utility analysis (CUA) was endogenous to the economic model output in terms of the incremental cost-effectiveness ratio (ICER). This is based on a concern that CUAs are using higher WTP thresholds to compensate for technology of relatively lower value. **METHODS:** We conducted a systematic review of U.S. economic literature between 2000-2017, including studies with explicit WTP thresholds and ICERs from U.S. perspectives. We classified the ratio of studies hypothesized to analyze cost-effective health technologies at low WTP thresholds (i.e. $50,000/QALY) vs. higher thresholds (i.e. $100,000/QALY or $150,000/QALY) relative to reported ICERs. We analyzed whether technologies that were cost-effective at high WTP thresholds would still be cost-effective at lower thresholds using a chi-square test. **RESULTS:** Among 317 reported ICERs: 185 (58.4%) were <$50,000/QALY; 53 (16.7%) were between $50,000/QALY and $100,000/QALY; 20 (6.3%) were between $100,000/QALY and $150,000/QALY; and 59 (18.6%) were > $150,000/QALY. Although most studies referenced a single WTP threshold (75.1%), 13.6% and 11.4 % of the studies reported multiple WTP thresholds and did not reference WTP threshold, respectively. Among those articles referencing a single WTP threshold, 194 reported that both the ICER and referenced WTP threshold were less than or equal to $150,000/QALY. We dichotomized the ICERs and the WTP thresholds into two categories, either between $50,000/QALY–$100,000/QALY or between $100,000/QALY–$150,000/QALY. This approached illustrated that WTP thresholds were not independent of the ICER results (P<0.00001). **CONCLUSIONS:** WTP thresholds represent the hypothesis test for CUA. We shoe an association between a large proportion of CUAs with higher WTP thresholds having greater ICERs, that would otherwise not have been cost-effective at lower standard WTP thresholds. Researchers may select a WTP threshold after the ICER is calculated to infer value that suits their hypothesis.

PRM41

ESTIMATION OF HOSPITAL COST SAVINGS ASSOCIATED WITH HYPOTENSION REDUCTION IN SEPTIC INTENSIVE CARE UNIT PATIENTS IN FRANCE

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OBJECTIVES: Emerging data shows an association between hypotension during ICU stay with death and acute kidney injury (AKI). This analysis estimates the cost-savings per ICU patient that can accrue to French hospitals as a result of improved outcomes associated with hypotension reduction in sepsis. **METHODS:** In our economic analysis we estimated patient-level costs and the budget impact associated with hypotension reduction in septic ICU patients from the hospital perspective. The reduction in the probabilities of AKI and death were sourced from a prior EMR analysis in which hypotension exposure was defined by time-weighted average mean arterial pressure (TWA-MAP) and cumulative time in hours below 65 mmHg thresholds. Cost savings for each of the separate outcomes in sepsis was estimated from the current literature on cost of French sepsis hospitalization and a multivariate analysis reporting marginal hospitalization costs of AKI. We use the French HICP Index (General) from OECD to update costs. Scenario analyses and Monte Carlo simulations were performed to test the robustness of the model. **RESULTS:** 6 separate simulations (10,000 trials per simulation) comparing 5, 10, 15, 20, 25 and 30 unit improvement in TWA-MAP to reach a baseline of 65 mmHg. Mean savings for the hospital associated with hypotension control ranged from €471 (5 unit change) to €4,270 (30 unit change) per patient. In each case, the 95% confidence interval exceeded €0. If causal, a 15 unit improvement in TWA-MAP from 50 to 65 (baseline) would yield expected saving of €2,010 (95% CI: €97 - €6,113) per patient. **CONCLUSIONS:** In our study, hypotension reduction was shown to reduce hospitalization cost for septic ICU patients with even a 5 unit improvement in hypotension control yielding substantial per patient cost savings to hospitals in France.

PRM42

COST MODEL OF SWITCHING FROM ENBREL TO ETANERCEPT BIOSIMILARS, FOR NON MEDICAL REASONS, IN RHEUMATOID ARTHRITIS PATIENTS IN SPAIN

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OBJECTIVES: To assess the potential cost offsets of continuing stable Enbrel therapy versus switching to etanercept-biosimilars for non-medical reasons in Rheumatoid Arthritis (RA), from the Spanish National Health System (NHS) perspective. **METHODS:** A cohort-based decision tree analysis was developed to compare within a 1-year time-horizon the cost of continuing Enbrel therapy versus switching to etanercept-biosimilars for non-medical reasons in stable RA patients defined as being in remission or with low disease activity for at least 6 months. The model uses as inputs results of a survey of 30 rheumatologists in Spain, and data from the DANBIO Registry. Stable patients in the model can either switch to etanercept-biosimilar for non-medical reasons or stay on Enbrel, according to proportions derived from the DANBIO registry. The non-medical switch is associated with treatment adjustment costs including drug costs (public exfactory prices with mandatory deduction or reference prices), monitoring, hospitalization and other healthcare costs (€2018). Following the first switch for non-medical reasons, patients who have been switched to the etanercept-biosimilar have the option to switch back to Enbrel, or to another etanercept-biosimilar or to a therapy with another mode of action. If after 3-6 months do not respond to the first etanercept-biosimilar. **RESULTS:** In accordance to proportions from the DANBIO registry, 78.7% of stable patients treated with Enbrel switched to etanercept-biosimilars and 21.3% stayed on Enbrel. After 3 months of treatment, 18.2% of patients switched to etanercept-biosimilars switched to another mode of action (adalimumab, tocilizumab and abatacept, in similar proportion). Using the described patient journey scenario, the annual cost per-patient of switchers was €11,478.90 compared to the annual cost per patient of continuers (with Enbrel) was €10,251.14. **CONCLUSIONS:** This economic model suggest that switching from Enbrel to etanercept-biosimilars leads to higher cost (€1,227.75) than maintaining Enbrel treatment for 1 year using the Spanish NHS perspective.

PRM43

A COST-UTILITY ANALYSIS OF THE ISTENT INJECT TRABECULAR MICRO-BYPASS SYSTEM PLUS CATARACT SURGERY IN PATIENTS WITH MILD-TO-MODERATE OPEN-ANGLE GLAUCOMA IN FRANCE

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OBJECTIVES: To estimate the cost-utility of the iStent Inject trabecular micro-bypass system plus cataract surgery (intervention) versus cataract surgery alone (comparator) in the French healthcare setting. **METHODS:** A Markov model was designed to track progression of glaucoma through health states defined using Hodapp-Parrish-Anderson stages, mild, moderate, advanced, severe/blind, and death over a lifetime horizon. Reduction in intraocular pressure (IOP) and medication use due to the intervention and the comparator were identified from the iStent Inject randomized clinical trial. Transition probabilities were estimated using the IOP-adjusted rate of decline in visual field (VF) loss. A conservative 10% decline in relative treatment effect per year was assumed for extrapolation of efficacy beyond trial follow-up. Unit costs and resource use for France in 2018 were obtained from targeted literature reviews and expert advice. French claims data were acquired from MedicAM and used to estimate glaucoma medication costs with wastage, and medication persistence was extrapolated based on a recent French study. Probabilistic and one-way sensitivity analyses were conducted to estimate the impact of uncertainty on costs and quality-adjusted life years (QALYs). **RESULTS:** An improvement in quality of life of 0.60 QALYs and an increase in costs of €1,037.73 per patient were estimated over a lifetime, leading to an incremental cost-utility ratio of €17,365.92. Sensitivity analyses showed the results