ADAb-screening as compared to no screening. **METHODS:** A literature-informed decision tree model with 1-year time horizon was used for moderate-to-severe RA patients who failed 1stTNF-α blocker from a United States payer perspective. The model consisted of two alternatives as ADAb screening or non-screening. In ADAb screening arm, there was test positive or test negative branches. Each screening result included the probability of receiving a 2nd TNF-α blocker or non-TNF biologic. Each treatment resulted in a likelihood of response or failure. Response was defined as an improvement of 28-joint count Disease Activity Score >1.2 units. The pathway of non-screening was similar to ADAb-screening, but with screening naïve probabilities of treatment and response/failure. **RESULTS:** Over 1 year treatment period, ADAb-screening was more costly but more effective than no screening. Patients who received ADAb-screening had 82.0% chance of treatment response with an average of $28,218, while patients who did not get screened had 78.5% chance of treatment response with an average of $28,053. The incremental response was 3.5% with additional cost as $164. The incremental cost-effectiveness ratio was $4,641 per additional responder. **CONCLUSIONS:** ADAb-screening increases the likelihood of response in moderate-to-severe RA patients and slightly increases overall cost of RA treatment. Uncertainty in this analysis could be reduced with prospective or observational analyses.

PMD78

COST-EFFECTIVENESS ANALYSIS FOR THE USE OF THE CCP SCORE IN THE MANAGEMENT OF EARLY LOW RISK PROSTATE CANCER IN THE FRENCH CONTEXT

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OBJECTIVES: The Cancer Cell Progression (CCP) score is a validated genomic assay that assesses risk of prostate cancer–specific disease progression and mortality when combined with standard clinic-pathologic parameters to identify patients at low / very low risk of progression who are candidates for treatment abstention and surveillance. This study assesses the cost-effectiveness of the use of the CCP score versus actual risk-stratification practice in France in making treatment decisions for men diagnosed with low risk prostate cancer. **METHODS:** A Markov model was designed comparing treatment decisions based on diagnosis with and without the CCP score in men with localised low risk cancer prostate. Short term benefits were the number of radical treatments avoided at diagnosis. Expected long term benefits were avoiding delayed curative treatments for patients misdiagnosed as low risk, according to standard criteria. Direct medical costs were considered and were identified through public data sources. Transition probabilities, mortality rates and utilities were derived from a literature review. Costs and benefits were discounted at a 4% rate. **RESULTS:** The use of the CCP score at the time of diagnosis led to a 41 % reduction of the number of initial ablative treatments. The test generated an extra cost varying between € 12 and € 644, according to different price assumptions. In the long term, at a hypothetical price of € 2,000, using the test was a dominant strategy, with lower lifetime discounted costs of € 1,709 and an incremental discounted QALY gain of 0.23. **CONCLUSIONS:** The information provided by the test has the potential to reduce the number of unnecessary invasive treatments for low risk patients. Overall, the use of CCP score leads to cost savings and an improved quality of life by avoiding the side effects of more radical therapy.

PMD79

THE COST-EFFECTIVENESS ANALYSIS OF PHILIPS MOTIVA TELEHEALTH SYSTEM: A COMPARISON BETWEEN HOME TELEMONITORING, NURSE TELEPHONE SUPPORT AND USUAL CARE IN CHRONIC HEART FAILURE

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OBJECTIVES: The clinical effectiveness of Motiva Monitor platform was established in the previous study (TEN-HMS). Patients randomly assigned to receive Usual Care had higher one year mortality (45%) than patients assigned to receive Nurse Telephone Support (27%) or Home Telemonitoring (29%) (p=0.032). Our intention is to provide insights in the cost-effectiveness of Motiva telehealth system by modeling the intervention and running the analysis on top of the reported data. **METHODS:** Effectiveness was established by mining the EuroQol-5D from the original database, while the information on costs came from the literature and the manufacturer of the equipment. Direct healthcare costs considered ER visits, GP, Specialist, Hospitalist and Nurse time and resources utilization. The induced (indirect) costs were not considered in the analysis. The approximation of the cost of medical consumption came from the Netherlands only, although the original study was run in three European countries. We assumed the payer perspective for our analysis. **RESULTS:** The results clearly show, within the parameters of our model, the increased effectiveness of Home Telemonitoring and Nurse Telephone Support in comparison to the Usual Care. The deterministic results show ICERs of € 14.842 and € 12.547 per QALY (discounted at 1.5% a year) for HTM and NTS respectfully. Probabilistic results show that NTS was the most effective strategy in health systems that pay more than €12.500 per QALY. In the subgroup analysis HTM dominated both NTS and UC at the threshold of €16.500 in NYHA IV group of Chronic Heart Failure patients. **CONCLUSIONS:** Home telemonitoring by Motiva Monitor system reduces mortality and lowers the in-hospital length of stay. On the quality of life dimensions, Home Telemonitoring was similarly effective as the Nurse Telephone Support, but with more costs. The cost-effectiveness analysis shows that both NTS and HTM dominate the Usual Care at WTP of €15.000.

PMD80

COST EFFECTIVENESS ANALYSIS OF A DEVICE TO MONITOR LEVODOPA-INDUCED DYSKINESIA IN PARKINSON'S PATIENTS

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OBJECTIVES: Patients with Parkinson's disease are frequently treated with levodopa which treats stiffness and tremors. Many patients develop problems with involuntary movements called 'dyskinesia' as a result of levodopa medication. Levodopa-induced dyskinesia (LID) can be improved by adjusting the dosage to find a tolerable balance between the benefits and side effects. LID fluctuates in severity throughout the day but there is no reliable way of objectively monitoring patients at home. The intervention is ClearSky's LID-Monitor which demonstrates the severity of involuntary movements in relation to drug doses, enabling clinicians to make informed decisions regarding altering complex drug regimens. The objective of this study was to assess the cost effectiveness of implementing LID-Monitor in patients presenting with dyskinesia. **METHODS:** An early stage cost effectiveness model was developed from an NHS perspective. The decision tree model examined implementation of LID-Monitor compared to current practice over one year. The model considers the incident population, the proportion of patients that are well-controlled or poorly-controlled, the number of falls, healthcare resource use and utility associated with dyskinesia. The model inputs were derived from published literature and clinical expert opinion. Due to the high level of uncertainty, extensive sensitivity analyses were conducted. **RESULTS:** The results estimated that implementing LID-Monitor resulted in a dominant ICER and a NMB of over £84 million for the whole of England. The costs saved as a result of reducing consultations, reducing hospital monitoring and reducing the number of falls outweighed the cost of implementing LID-Monitor. Patients also benefitted from an increase in QALYs with an average incremental QALY of 0.13 per patient per year. Sensitivity analysis showed that results were dominant in all plausible scenarios. **CONCLUSIONS:** The model shows that implementing ClearSky's LID-Monitor in UK hospitals has the potential to reduce costs to the NHS and increase patients' quality of life.

PMD81

EARLY STAGE ECONOMIC EVALUATION OF CARETOY SYSTEM FOR EARLY INTERVENTION IN PRETERM INFANTS AT RISK OF NEURODEVELOPMENTAL DISORDERS

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OBJECTIVES: To preliminary assess the economic impact of CareToy, the innovative technological smart modular system for early intervention (EI) in preterm infants at risk of neurodevelopmental disorders. The incidence of preterm births (before than 37 weeks of gestational age) has increased and survival rates in very preterm infants have improved over the past two decades. EI has been used in the clinical setting with the aim of improving the overall outcome for preterm infants and the CareToy project – funded by the European Commission within the FP7 – has developed and validated the CareToy system as a new technological tool for an intensive, individualized, home-based and family-centred EI in preterm infants. **METHODS:** A decision tree model was developed in order to assess the likely cost-effectiveness of the innovative tele-rehabilitation system in comparison with the Standard of Care (SoC) to treat preterm infants at risk from a neurodevelopmental perspective. In addition to the data collected by the Randomized Controlled Trial (RCT) study within the CareToy project, a structured search was carried out to identify evidence of relevant facts concerning clinical outcomes, costs and effectiveness in order to populate the entire model. It should be stressed that a small amount of literature evidence on current treatments in the EI field was to date available. **RESULTS:** The decision model provided the tools to measure the innovation of the CareToy system in health economic terms. **CONCLUSIONS:** An advantageous collaboration among technology developers, physicians and assessors of innovations is essential for improving the efficiency of taking innovative biomedical technologies through the Early Health Technology Assessment (EHTA) process and into adoption in the healthcare practice.

PMD82

A FIVE-YEAR MODEL TO ASSESS THE COST-EFFECTIVENESS OF NEW DIAGNOSTIC TESTS IN THE EARLY DIAGNOSIS OF RHEUMATOID ARTHRITIS

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OBJECTIVES: We developed a cost-effectiveness model for inflammatory arthritis (IA) patients who were suspected of having rheumatoid arthritis (RA), and analysed the simulated costs and effectiveness of different diagnostic test strategies. **METHODS:** A decision tree to classify patients as true positive, false positive, true negative, and false negative, followed by a patient-level state transition model was developed. Disease progression was modelled as changes in disease activity (DAS28) over time, which were linked to costs and health-related quality of life obtained from a usual care IA cohort and an early RA trial. We modelled that an earlier diagnosis would improve early treatment, which in turn would reduce DAS28 by 0.2, thereby postponing the start of biologic treatment. Three new diagnostic test strategies (add-on for all patients, add-on for intermediate-risks, and replacement) evaluating four different tests (B-cell, MRI, IL-6 serum levels and genetic assay) were compared with the ACR/EULAR 2010 RA classification criteria representing the current test strategy. The time horizon was 5 years. Probabilistic sensitivity analyses, headroom analyses, and exploratory univariate sensitivity analyses were performed. **RESULTS:** A B-cell test (sensitivity: 0.60, specificity: 0.90, costs: €150) was the most cost-effective test in all three strategies. MRI (sensitivity: 0.90, specificity: 0.60, costs: €756) and IL-6 (sensitivity: 0.70, specificity: 0.53, costs: €50) test were less cost-effective mainly due to higher costs of MRI (€756) and lower specificity of IL-6 (0.53). When using a QALY willingness-to-pay threshold of €30,000, genetic assay (sensitivity: 0.40, specificity: 0.85, costs: €750) is not cost-effective in any of the strategies. **CONCLUSIONS:** We have shown that our model is able to assess the cost-effectiveness of different diagnostic test strategies including the consequences for treatment decisions and disease course, and can easily be used for any new test for the early diagnosis of RA.