

Objectives: We propose a methodology framework for evaluating complex intervention programs on connected care platforms such as remote patient monitoring for populations with long-term conditions in their potential in ROI for health care organizations and in their cost effectiveness for pending market introduction by health systems or payers. **Methods:** We built a probabilistic decision-analytic model to compare patient-reported costs and outcomes on QALYs of remote patient monitoring in addition to usual care given the published evidence and uncertainty from the Whole Systems Demonstrator Study which was setup in the United Kingdom from 2008 to 2009 [1]. The model was populated with as-reported survivor-specific QALYs distribution and compared to adjusted QALYs to compensate the effect of different mortality rates among the control and intervention group. We computed metrics such as, net monetary benefit, incremental cost effectiveness ratio and acceptability, expected value of perfect information and ROI. **Results:** The WSD reported an ICER of £92,000 and a CEA of 11% at willingness to pay threshold of £30 000 [1]. Our unadjusted model produced an ICER of £52,300 with a CEA of 38%. The adjusted QALY model produced an ICER of £24,800. At this level, the probability of cost effectiveness increased to 56%. **Conclusions:** Single-point measurements of QALY in an end-of-life population can cause bias which in turn can influence decision making on cost effectiveness of interventions. We suggest program effectiveness measurements to be taken repeatedly over time, covering the whole cohort at baseline and adjusting for non-survivors during follow-up, by collecting information on defined outcome measures from patients, clinicians, and administrative sources. The selected measures can be translated in the quadruple aim around lowered cost, improved staff experience, improved health outcomes and patient experience. [1] Cost effectiveness of telehealth for patient with long term conditions (Whole Systems Demonstrator study). Henderson et al. BMJ 2013

PMU29

ECONOMIC EVALUATION FOR THE TREATMENT OF ACUTE BACTERIAL SKIN AND SKIN STRUCTURES INFECTIONS (ABSSSI) FROM THE NATIONAL PAYER PERSPECTIVE: INTRODUCTION OF A NEW TREATMENT INTO THE PATIENT JOURNEY. SIMULATION IN 3 EUROPEAN COUNTRIES

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Objectives: This study aimed to evaluate the direct costs for the management of ABSSSI in non-severe patients treated with standard antibiotics therapy or innovative long-acting dalbavancin treatment in hospital for Italy, Spain and Austria. **Methods:** A Budget Impact Analysis was developed to evaluate the direct costs associated with the management of ABSSSI from the national public health system perspective. The model considers the possibility to early discharge patients directly from the Emergency Department (ED), after one, or after 2 or 3 night in the hospital. A scenario with Standard of Care was compared with dalbavancin scenario, where patients had the possibility of being early discharged. The epidemiological and cost parameters were extrapolated from national administrative databases and from a systematic literature review for each Country. The analysis was conducted in a 3-year time horizon. **Results:** The model estimated an average annual number of patients with non-severe ABSSSI in Italy, Spain and Austria equal to 5,396, 7,884 and 1,788 respectively. A total annual expenditure of about € 9.9 million, € 13.5 million and € 3.4 million was estimated for treating the full set of ABSSSI patients in Italy, Spain and Austria respectively. Dalbavancin reduces the in-hospital length of stay in each Country. In the first year of its introduction, Dalbavancin could significantly reduce the total economic burden in Italy and Spain (−€ 352,252 and −€ 233,991) while it could increase the total economic burden in Austria (€ 80,769, 0.7% of the total expenditure for these patients); in the third year of its introduction, Dalbavancin could reduce the total economic burden in each Country (−€ 1,1 million, −€ 810,650, −€ 70,269 respectively). **Conclusions:** The introduction of dalbavancin in a new patients pathway to treat non-severe ABSSSI, could generate a significant reduction of hospitalized patients and the overall patient's length of stay in hospital.

PMU30

A SYSTEMATIC REVIEW OF PREVIOUSLY PUBLISHED OR APPRAISED HEALTH ECONOMIC MODELS ESTIMATING THE SHORT- AND LONG-TERM CONSEQUENCES OF STEROID-SPARING AGENTS

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Objectives: Long-term treatment with corticosteroids is an option in many autoimmune conditions. This comes with an increased risk of various short- and long-term adverse events. These events may be avoided with the use of corticosteroid-

sparing (CSS) agents. Such benefits should be captured in cost-effectiveness models (CEMs). Hence, for this work, we aimed to find out how the short- and long-term consequences of CSS agents were estimated in previously published or appraised CEMs. **Methods:** A systematic literature review was conducted. Two bibliographic databases were included: PubMed and Embase. Additionally, technology appraisals (TAs) of CSS agents published by the National Institute for Care Excellence (NICE) were assessed to capture NICE's view on the inclusion of a CSS effect in CEMs. Data extraction items included model key characteristics, corticosteroid-specific model inputs and model outcomes. **Results:** We identified four published CEMs and nine NICE TAs where CSS value was recognized. Two TAs (TA397&TA278) submitted a CEM that incorporated a CSS effect. In the other TAs where the CSS effect was not incorporated in the CEM, NICE recognized that the most plausible ICER would be lower if incorporated. This positively impacted the appraisal's reimbursement decision. Most models used relatively simple assumptions except for TA397, where a cohort-based regression model was used. However, this was criticized due to uncertainty around the link between short-term CS dose reduction and long-term consequences. **Conclusions:** The CSS consequences are not frequently captured in CEMs. While NICE recommends and welcomes the inclusion of the CSS consequences, they are critical about the methods that were previously used by manufacturers to do so. Guidance is needed on the incorporation of CSS effect in CEMs.

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EARLY COST-EFFECTIVENESS ANALYSIS OF CONTINUOUS MONITORING OF LUNG-AERATION WITH ELECTRICAL IMPEDANCE TOMOGRAPHY IN PRETERM NEONATES WITH RESPIRATORY DISTRESS SYNDROME

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Objectives: Respiratory distress syndrome (RDS) is relatively common in preterm neonates due to lung immaturity. Clinical management by respiratory support is associated with high complications rates. Guidance on appropriate lung-aeration is limited using conventional thorax X-ray monitoring. Electrical impedance tomography (EIT) allows radiation-free, continuous lung-aeration monitoring to guide effective respiratory support. EIT produces dynamic images of air volume changes whereas X-ray shows 2-D structure. Clinicians expect EIT implementation to reduce the number of patients requiring mechanical ventilation, overall complication rates and hospitalisation length. We conducted an early cost-effectiveness analysis of EIT-monitoring in preterm neonates with RDS versus standard care in the Netherlands. **Methods:** A decision-analytic model was constructed comparing costs and effects of conventional X-ray versus EIT-monitoring for preterm neonates with RDS from the healthcare perspective with a time horizon of two years. Input parameters were based on literature and cost databases. The effects of EIT-monitoring were based on consensus by 6 clinical experts for two scenarios, (1) a conservative scenario assuming only a decrease of patients on mechanical ventilation under EIT-monitoring, and (2) an optimistic scenario including scenario (1) and assuming an additional 10% relative complication rate decrease in comparison to standard care. Main outcomes were total average costs per patient, number of patients with bronchopulmonary dysplasia (BPD), and mortality. One-way sensitivity analyses were conducted. **Results:** EIT-monitoring was estimated to be cost-saving in both scenarios, mainly due to a shorter average hospital length of stay. Total incremental costs per patient for EIT-monitored care versus standard care were −€929 and −€10,706 for scenario (1) and (2), respectively. The number of patients with BPD and deaths were reduced. Results were robust to changes in input parameters. **Conclusions:** EIT lung-aeration monitoring in preterm neonates is expected to result in cost-savings and lower mortality and BPD rates, in comparison to standard care, in a Dutch hospital setting.

Multiple Diseases - Epidemiology & Public Health

PMU32

COSTS OF HEALTHCARE ANTICIPATED IN PEOPLE AFTER METHANOL INTOXICATION

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Objectives: In 2012-2013 Czech Republic was confronted with a mass methanol-poisoning outbreak. There were 137 persons reported (the actual number might have been higher). The study of anticipated long-term healthcare costs is based on the research carried out in the General University Hospital in Prague that collected data on long-term effects in those who survived. The objective of the presented study was to assess only costs of healthcare that would possibly be required from the public insurance perspective. **Methods:** The Hospital research covered 66% out of 83 reported persons that survived. Their health state was biannually assessed in 2013-2019, when the following examinations were carried out: blood and urine biochemical analysis, EMG, brain MRI/CT, ocular examinations. Based on clinical data, expert estimations of needed healthcare whose projected consumption was related to the methanol intoxication effects were done for the period 2013-2019. Subsequently, the costs of that healthcare were calculated from the payer perspective. **Results:** Following diagnosed neurological and/or visual effects, particular therapies were indicated based on the expert estimations for 61.7-70.7% of patients in the research sample. Costs per person were estimated at CZK 4,143 in the first year and in