Title:
Removable dinoprostone vaginal delivery system: cost consequences model for Central and Eastern Europe countries

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CONCLUSIONS: The costs per AEs patient of drug therapy versus catheter ablation were as follows: antiarrhythmic drug (4,008 TRY vs 112 TRY), function tests (1,194 TRY vs 37 TRY), MRgFUS (4,918 TRY vs 663 TRY), and anticoagulant drug (21,502 TRY vs 392 TRY), medical devices and procedures (0 TRY vs 14,615 TRY) and hospital stay (1,620 TRY vs 312 TRY). The number of three-dimensional astymostatic catheter ablation procedures performed in Turkey in 2017 is 500. The total cost of AEs treatment for 500 patients was 17,079.30 TRY with drug therapy and 8,096.36 TRY with three-dimensional complex mapping catheter ablation. CONCLUSIONS: These results propose that catheter ablation requires less costly treatment than drug therapy for AEs patients in Turkey.

PMD50
MAGNETIC RESONANCE-GUIDED FOCUSED ULTRASOUND VERSUS DEEP ELECTROCAUTERY FOLLOWING TONSILLECTOMY: CONCLUSIONS
TRIMOR: A COST-CONSEQUENCE ANALYSIS IN THE UK SETTING

CONCLUSIONS: The results of our study suggest that mass screening may bridge the gap for CD in children. The analysis has shown that POCT is more effective and less costly, for CD patient identified, than CF strategy.

PMD53
REMOVABLE DINOPROSINE VAGINAL DELIVERY SYSTEM: COST-CONSEQUENCES MODEL FOR CENTRAL AND EASTERN EUROPE

OBJECTIVES: Celiac Disease (CD) is an immune-mediated systemic disorder, which affects worldwide, causing ingestion of gluten in genetically predisposed people. Low awareness of CD often leads to delays in diagnosis, which adds to medical costs because unrecognized CD is associated with excessive consumption of healthcare services and on-demand medications. This study has assessed the diagnostic yield and cost consequences of 2 strategies of pediatric CD in primary care: screening regardless of symptoms using a point-of-care test (POCT) for the detection versus case finding (CF). METHODS: Children who went to their family pediatrician were offered POCT for anti-transglutaminase immunoglobulin A antibodies. Immediately after the test, but before knowing the results, a systematic search for one or more symptoms associated with higher risk for CD was performed. All POCT positive subjects and those who were symptomatic at CF were referred to the CD Centers for disease confirmation. The costs of examinations and diagnostic and laboratory tests were estimated with regional outpatient tariffs (Sicily), and a price of €2.50 was used for each POCT. Two sensitivity analyses were performed, a 30% of POCT price and a patient visit cost of €15.31. RESULTS: POCT was offered to 3,358 children. This screening detected 6 new cases of CD; CF detected 5 new cases of CD, but all of these had positive POCT. The base and discounted mean and mean per CF patient detected were €10,932.83 and 663.80 for screening strategy with POCT, and €3,953.90 and €790.78 for CF, respectively. In both sensitivity analyses, POCT was less costly than CF. CONCLUSIONS: The results of our study suggest that mass screening may bridge the diagnostic gap for CD in children. The analysis has shown that POCT is more effective and less costly, for CD patient identified, than CF strategy.

PMD5
COMPARISON OF COSTS AND OUTCOMES BETWEEN COBLATION TECHNOLOGY AND ELECTROCAUTERY FOLLOWING TONSILLECTOMY AND ADENOIDECTOMY PROCEDURES

RESULTS: The following were the cost differences per instrument: CoBlate (15.96 € vs 10.23 €), CoLisade (2,622.54 € vs 2,571.13 €), and CoCath (0.75 € vs 0.00 €) for CoBlation compared to electrocautery, respectively.

OBJECTIVES: The aim of the project was to develop a user-friendly decision model to assess the savings and health benefits of induction of labour (IOL) when Dino- prosine Vaginal Delivery System (DVDS) is used instead of alternative technologies in local European practice. The model allowed to reveal in time consumed by hospital staff due to DVDS administration, demonstrate the safety profile of DVDS versus alternatives and calculate total cost of IOL for local settings.

METHODS: The model refers to clinical and safety aspects of technologies used in current practice, including time to vaginal delivery, time to active labour, occurrence of cesarean delivery, instrument vaginal delivery and adverse events. Ef- ficiency and safety data was retrieved following a systematic literature review conducted in medical databases. Cost and resource use data came from local medical centers as local data sources. Data was collected from the hospital perspective via a dedicated questionnaire.

RESULTS: A systematic review and data synthesis were performed for all comparisons used in IOL indication: Dino- prosine; dinoprostone; dinoprostone vaginal gel; labetalol, misoprostol; misoprostol vaginal tablets; misoprostol; misoprostol suppository. The number of instrument vaginal and Cesarean deliveries avoided by replacing current practice interventions with DVDS amounted to 1.9 and 6.2, respectively. DVDS is cost-saving for the following categories of costs: hospital stay, medical staff wages and additional oxytocin use as it generates additional expenditures in by central supply (394.0 vs 203.5, p<0.001). A comparison of total costs showed that DVDS compared to labetalol consumption reduced costs by 5.1% (€2,591, difference=−55.96, p<0.001). CONCLUSIONS: CoBlation technology delivers comparable outcomes at near equal cost to electrocautery.
the treatment of adverse events. CONCLUSION: The cost-consequences model used in this study estimated that DVSs aim reduces costs from local practice with experimental data retrieved from RCTs. The model is a transparent tool that provides information on treatment standards and costs of IOE in CEE countries.

PMDS4

DEBRIDEMENT BALLOON THERAPY FOR TREATMENT OF CRITICAL LIMB ISCHEMIA IN FEMOROPOLPITEAL ARTERY DISEASE: ECONOMIC ANALYSIS FOR THE NETHERLANDS

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OBJECTIVES: Drug-coated balloons (DCBs) for femoropopliteal peripheral artery disease (PAD) have been increasingly considered to be clinically superior and cost-effective compared to percutaneous transluminal balloon angioplasty (PTA). However, most studies focused on patients with critical limb ischemia (CLI). Our objective was to study the cost-effectiveness of DCB therapy vs PTA in a CLI patient population in the Dutch healthcare system. METHODS: Target lesion ulceration rates were extracted from the CLI subgroup of the IF-PACT Global study, in which a urea-encapsulated DCB was used. PTA outcomes were obtained from a systematic search of studies published through 2017. Costs were based on average radiology and surgery reimbursement PTA rates with additional cost of €480 assumed per DCB device. A Markov model computed costs and cost-effectiveness, considering in the base case a two-year time horizon and up to one re-intervention. QALY computations were based on an estimated TLR-associated QALY decrement of 0.06, post-treatment utility of 0.82, and post-amputation utility of 0.48, and Dutch general population mortality adjusted by a hazard ratio of 0.5 to reflect increased mortality in CLI patients. Costs and discounts were applied at 4% and 2.5% per annum; a willingness-to-pay threshold of €60,000 per QALY was assumed. Sensitivity analyses were performed.

RESULTS: Model-projected 24-month survival with DCB vs PTA was 26.3% and 41.0% for DCB and PTA, respectively, and amputation rates 2.8% and 6.5%. DCB was cost-saving, adding 0.0130 QALYs while saving €9,549.39. DCB was found dominant or cost-effective across a wide range of assumptions, including for a comparative TLR effect size of only one fourth of the base case. CONCLUSIONS: Urea-encapsulated drug-coated balloon therapy for treating CLI in the femoropopliteal artery is associated with improved patient outcomes and overall cost-savings to payers in the Dutch healthcare system, rendering it a dominant treatment strategy.

PMDS5

COSTS OF STENT-RETRIEVER MECHANICAL THROMBECTOMY IN PATIENTS WITH ISCHEMIC STROKE IN THE RUSSIAN FEDERATION

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OBJECTIVES: To evaluate the cost of stent-retriever mechanical thrombectomy (MTE) in patients with acute ischemic stroke (AIS) from the Russian government perspective. METHODS: The model was developed to simulate health outcomes and costs of three treatment scenarios: 1) MTE added to standard thrombolytic therapy (MTE + TLT); 2) MTE alone; 3) no reperfusion. Direct medical, direct non-medical and indirect costs due to AIS and its complications were calculated for 5 years. The model was presented as a Markov model. Patients eligible for reperfusion were estimated on the basis of available data on epidemiology of AIS in RF. Patients were considered eligible for all 3 scenarios if they were taken to hospital within 4.5 hours after stroke symptoms onset. Costs were based on average radiology and surgery PTA rates (€480 assumed per DCB device). A Markov model computed costs and cost-effectiveness, considering in the base case a two-year time horizon and up to one reintervention. QALY computations were based on meta-analysis of Campbell BC et al., 2016. The sensitivity analyses were carried out.

RESULTS: Model-projected 24-month survival with DCB vs PTA was 26.3% and 41.0% for DCB and PTA, respectively, and amputation rates 2.8% and 6.5%. DCB was cost-saving, adding 0.0130 QALYs while saving €9,549.39. DCB was found dominant or cost-effective across a wide range of assumptions, including for a comparative TLR effect size of only one fourth of the base case.

CONCLUSIONS: Urea-encapsulated drug-coated balloon therapy for treating CLI in the femoropopliteal artery is associated with improved patient outcomes and overall cost-savings to payers in the Dutch healthcare system, rendering it a dominant treatment strategy.

PMDS6

HEALTHCARE RESOURCE UTILIZATION AND COSTS AMONG PATIENTS WITH SICKLE CELL DISEASE: AN ECONOMIC ANALYSIS OF TSF INFECTION AFTER INTRAMEDULLARY NAILING FOR A TIBIAL SHAFT FRACTURE IN FRANCE


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OBJECTIVES: To analyse the healthcare resource use and costs among patients with and without infection after Intramedullary nailing (IMN) for tibial shaft fractures (TSF). METHODS: A retrospective cohort design using the Clinical Prac-
tice Indicator Reporting System (CPR-S), a database of hospital episode statistics (HES) data from England and Wales. Patients undergoing IMN treatment for TSF were identified, with the first date of procedure being the index date. Patients were categorized into two groups based on presence of post-surgical infection identified two days post-index through 30 days and 365 days post-infection of interest. Baseline characteristics (e.g., hospital admission) were extracted from local practice with experimental data retrieved from RCTs. The model is a transparent tool that provides information on treatment standards and costs of IOE in CEE countries.

PMDS8

A PROSPECTIVE, RANDOMIZED TIME-AND-MOTION STUDY COMPARING RATE OF PROCESSING TECHNIQUES IN AUTOLGOS FAT GRAFTING: AN ECONOMIC ANALYSIS

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OBJECTIVES: Autologous fat grafting (AFG) is increasing every year, with 30,516 procedures in reconstructive breast surgery performed in the United States in 2016. With limited reimbursement for AFG, it is important to select an efficient processing technique to minimize the hospital economic burden. METHODS: A preliminary economic model was developed based on a prospective, randomized time-and-motion study comparing three AFG techniques: passive washing, filtration system (PF), an active washing-filtration system (AF), and centrifugation (C). The primary outcome was rate of fat processed (ml/min). Volume of fat injected/patient and total AFG time was used to derive the total cost for AFG. Threshold and sensitivity analyses were conducted to characterize cost un-certainties. RESULTS: Forty-six patients were included in the study (n=15 for PF, n=15 for AF, and n=16 for C). With comparable patient and clinical characteristics between the groups. The time to inject 150 ml of fat/patient was significantly lower with AF compared with PF (p<0.0001) with a TE of 8.3 min per 150 ml. The total cost saving with AF was $2,862.66 ($1,335.29–$4,390.04) vs PF and $6,839.25 ($4,129.11–$9,549.39) vs C. Threshold analyses identified a minimum of 102.2 ml of fat to be injected/patient to see cost savings with AF vs C. Time savings were always seen with AF compared with PF, regardless of the volume of fat injected, unless the cost of PF was assumed to be lower than AF. CONCLUSIONS: This is the first randomized study of AFG techniques to demonstrate that AF had significantly faster fat processing and grafting rates, translating into potential cost savings vs PF and C. These results can aid surgeons in selecting an efficient processing method considering the absence of reimbursement in AFG.

PMDS9

DEVELOPING A COMPREHENSIVE TREATMENT COST COMPARISON MODEL IN SICKLE CELL DISEASE

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OBJECTIVES: A previous cost model created during a health technology evaluation organized by NICE in the UK, related to Sickle Cell Disease (SCD), identified the cost of treatment and transition processes (hospitalization and chelation) as the main drivers of SCD cost for the UK health system. Our study intended to go beyond these cost drivers and to create a cost model that also includes cost of disease complications and the costs of a life lost. METHODS: The methods applied to create the cost model were 3-fold: a systematic literature review to identify the main cost drivers within sickle cell disease, a critical review of the model by an academic institute (i.e. the University of Sheffield) and review of the model by multiple clinicians seeing SCD patients. RESULTS: A universal health economic cost model was created that estimates the full cost of sickle cell disease in function of healthcare policy, prescriber treatment choice, cost of treatment, cost of treatment complications (hospitalization and chelation), incidence of disease complications, cost of disease complications, mortality of disease complications, life expectancy and life years lost due to SCD. Incidence of disease complications varied largely per source and was built into the model as a dynamic variable that can be adjusted by the end-user. CONCLUSIONS: In the economic evaluation of treatment alternatives for sickle cell disease, looking only at direct treatment cost and complications of the treatment itself may largely underestimate the full cost of sickle cell disease. Health systems could therefore consider the costs of hospital stay, and treatment cost to overcome these complications) and life years lost.

PMDS0

DEVELOPING A COMPREHENSIVE TREATMENT COST COMPARISON MODEL IN GULLAIN-BARRE SYNDROME AND MYASTHENIA GRAVIS TO DETERMINE THE TOTAL COST OF INPATIENT TREATMENT VERSUS CENTRIFUGAL THERAPEUTIC PLASMA EXCHANGE

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OBJECTIVES: Published literature that discusses the total cost of treatment by means of Intravenous Immunoglobulins (IVIG) versus Therapeutic Plasma