PCI registry, despite higher total healthcare costs, the use of DES was cost-effective in patients who underwent 2- and 3-vessel PCI than in single vessel PCI.

PMD33

COST-EFFECTIVENESS OF MOLECULAR IGE IN VITRO DIAGNOSTICS (IVD) IN CHILDREN SUSPECTED WITH PEANUT ALLERGY COMPARED TO DOUBLE BLIND PLACEBO CONTROLLED FOOD CHALLENGE (DBPCFC) IN EU, USA AND JAPAN

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OBJECTIVES: In vitro diagnostic (IVD) has a considerable health economic impact: 60% of patients' information derives from IVD tests, but IVD makes 1% of the total health care budget in EU (EDMA, 2010). No cost-effectiveness (CE) analyses are available on molecular IVD in allergy; only NICE in the UK made a CE study IgE IVD for peanut allergy (PA). Given the impact of PA on quality of life (Qaly), accurate diagnosis is crucial. 10% of children are considered peanut sensitised, but only 1-2% is true positive for PA. Subjects with IgE antibodies to allergens Ara h1-2-3 have high risk of allergic reactions (Astier, 2006). DBPCFC is the gold standard for food-allergy diagnosis; however it is time-consuming, expensive and might induce severe reactions (Nicolau, 2010). IVD can give clinicians a tool to decide the need of DBPCFC (Sastre, 2010); is IVD CE compared to DBPCFC in suspected PA children in EU, US and Japan? **METHODS:** Data was collected at Stockholm's Sach's Children's hospital (Nilsson, 2011) and from published literature. A 5-year Markov simulation model comparing IVD (ImmunoCap® - allergens f13, Ara h 1- 2-3-8-9) with DBPCFC was developed with Tree AgePro®, to analyse CE for IVD and the incremental cost per Qaly in suspected PA children. The sensitivity and specificity of each diagnostics determines the percentage of patients true-allergic, false-allergic, true-healthy and false-healthy. BaseCase® was used to interactively visualize results. Results are presented from the health care perspective; care giver indirect costs are included in a sensitivity analysis. **RESULTS:** IgE IVD is CE and cost saving for children with suspected PA in multiple countries compared to golden standard DBPCFC. **CONCLUSIONS:** IVD is a CE alternative to DBPCFC in selected patients in multiple countries. DBPCFC might be replaced in selected cases, still being useful in subjects with conflicting immunological/clinical results (Codreanu, 2011).

PMD34

COST EFFECTIVENESS MODEL: COMPARISON OF CLOSED INCISION MANAGEMENT USING NEGATIVE PRESSURE AND STANDARD OF CARE OVER CLEAN CLOSED INCISIONS BASED ON A 2012 RANDOMIZED CONTROLLED TRIAL

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OBJECTIVES: Wound complications following surgical procedures are a significant cost burden to the health care system and have been identified as one of the hospital-acquired infections not reimbursed by payers. Surgical site infections have been associated with both an increased hospital stay of 9.58 extra days and $38,656 in additional medical charges, and postoperative dehiscence can add as much as 9.42 extra days, resulting in $40,323 in additional charges. A health economic model was developed to demonstrate potential cost savings associated with using closed incision management (CIM*) to apply negative pressure wound therapy (NPWT) over clean closed surgical incisions in patients treated for an open fracture of the tibia and fibula. **METHODS:** The hypothetical economic model applied national cost dollars to clinical outcomes of the Stannard et al randomized controlled trial (RCT) using NPWT† over closed incisions. National cost data (Thomson Reuters custom report) were selected using the diagnosis codes related to the population of patients within the Stannard et al RCT, which were open fracture of the tibia and fibula with complications such as infection and dehiscence (ICD9 79.36). The infection rates (10%, 14/141 patients NPWT and 19%, 23/122 patients Control [standard of care], p=0.049) and dehiscence rates (8.6%, 12/141 NPWT and 16.5%, 20/122 Control, p=0.044) were calculated from the Stannard et al RCT and were applied to a hypothetical 100 patient population (50 CIM and 50 Control). **RESULTS:** Reduced infection and dehiscence rates in this patient population resulted in potential per patient cost savings of $5338 for infection and $1586 for dehiscence with CIM. **CONCLUSIONS:** These findings illustrate the potential cost effectiveness of CIM over closed incisions of high-risk fractures. *Prevena™ Incision Management System and †V.A.C. Therapy; KCI USA, Inc., San Antonio, TX, USA

PMD35

COST EFFECTIVENESS ANALYSIS OF DEOXYRIBONUCLEIC ACID CHIP KIT (ANDCK) FOR THE DETERMINATION OF BLOOD ERYTHROCYTE VARIANTS

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Current available methods in Mexico for blood group typing are made through a tube serological antigen/antibody reaction (TST) but has limitations due to the lack of blood weak antigens detection that generate incomplete information on blood group phenotype and potential recipient alloimmunization that can cause life threatening transfusion-related reactions as acute lung injury and hemolytic reactions. **OBJECTIVES:** To develop an economic model based in Mexican Institute of Social Security (IMSS) resource payments to evaluate the cost-effectiveness of ANDCK versus TST for the determination of blood erythrocyte variants in Mexico. **METHODS:** A two branch decision tree model was developed to evaluate and compare the cost-effectiveness in Mexican pesos (MxP) of ANDCK and TST for the determination of blood erythrocyte variants. The effectiveness measure was blood group typing errors rate obtained from published clinical trials. Resource use and cost were obtained from expert interviews and IMSS published data respectively. The model estimated cost per patient and incremental cost-effectiveness ratios (ICER). Costs and effectiveness do not were discounted. A deterministic sensitivity analysis was also performed. **RESULTS:** The rate of blood group typing errors was 0.07% for ANDCK group and 0.17% for TST group. Cost per patient was always lower with ANDCK ($2,340.00 MxP) than TST ($3,921.21 MxP) showing that ANDCK was the dominant alternative. Sensitivity analysis shows model robustness and confirms ANDCK as dominant alternative. **CONCLUSIONS:** Our results show that ANDCK is cost-effective for the determination of blood erythrocyte variants in Mexico and should be considered by clinicians and decision makers as a favorable option for the determination of blood group typing in order to avoid life threatening transfusion-related reactions.

PMD36

THE USE OF CHLORHEXIDINE GLUCONATE IMPREGNATED SPONGE DRESSINGS TO PREVENT CENTRAL-LINE ASSOCIATED BLOODSTREAM INFECTIONS AND LOCAL SITE INFECTIONS IN CANADIAN HOSPITALS: AN ECONOMIC ANALYSIS

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OBJECTIVES: The objective of the study was to evaluate the economic impact of adding the use of chlorhexidine gluconate (CHG) impregnated sponge dressings to Canadian hospitals' standard infection prevention routine. The current standard of care for catheter insertion in Canada involves hand hygiene, skin preparation and transparent film dressings. The aim of this study was to determine whether the addition of CHG impregnated sponge dressings to catheter insertion procedure was cost-effective. **METHODS:** The economic model was populated with clinical and economic data obtained from peer-reviewed literature along with case-costing data from a large Canadian hospital network. One and two way sensitivity analyses were conducted on economic and clinical parameters to ensure robustness. **RESULTS:** Based on model calculations using a hypothetical hospital with 400 in-patient beds and 20 intensive care unit beds, the use of CHG dressings would reduce the number of CLABSIs from 107 to 43 annually, and would reduce the number of local site infections from 430 to 258 annually. The model demonstrates cost savings through the reduction of CLABSI and local site infections as well as through decreased nursing costs. The model establishes that the use of CHG dressings has the potential to provide $869, 867.49 of net cost savings in one hospital per year. **CONCLUSIONS:** The use of chlorhexidine gluconate impregnated sponge dressings for central venous and arterial catheter insertion sites proves to be a cost-effective intervention in Canadian hospitals.

PMD37

THE COST-EFFECTIVENESS ANALYSIS OF CT CORONARY ANGIOGRAPHY VERSUS MYOCARDIAL SPECT FOR THE DIAGNOSIS OF ISCHEMIC HEART DISEASE IN PATIENTS WITH CHEST PAIN

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OBJECTIVES: The aim of this study is to evaluate the cost-effectiveness of CT coronary angiography (CTCA) and myocardial SPECT for ischemic heart disease in patients with chest pain. **METHODS:** We assessed cost-effective of CTCA and myocardial SPECT for patients with intermediate risk with pre-test likelihood of 10-90. The model was analyzed by using diagnosis accuracy and QALY. The model using diagnosis accuracy used the number of patients accurately diagnosed among 1000 persons as the effect, and reflecting only the medical expenses for tests as the cost. In the model using QALY, a decision tree was developed and the time horizon was 1 year. Utility weights were calculated using questionnaires for each case from general population. Costs were calculated through analysis of Health Insurance Review & Assessment Service claim data and transition probabilities were estimated from retrospective cohort data. Analyses were conducted from the Healthcare system perspectives. **RESULTS:** In the model using diagnosis accuracy, CTCA appeared to be more effective (224.41 correct diagnosis) and even less expensive (US$58,819 per 1,000 persons) than myocardial SPECT proposed to be the dominate alternative. In the model using QALY, CTCA showed more effective (0.00040QALYs) and less cost (US$465) than myocardial SPECT. Sensitivity analysis was performed for transition probabilities, utility weights and costs. The results of sensitivity analysis were robust. In subgroup analysis, myocardial SPECT showed cost-effective in patients with pre-test likelihood of 30-60. **CONCLUSIONS:** In conclusion, cost-effective analysis between CTCA and myocardial SPECT indicated that CTCA was the cost-effective test for both models using diagnosis accuracy and the one using QALY in patients with intermediate risk with pre-test likelihood of 10-90.

PMD38

COST MINIMIZATION ANALYSIS OF A MULTI-SITE RANDOMIZED CLINICAL TRIAL OF HOME-BASED VERSUS LABORATORY-BASED TESTING FOR THE DIAGNOSIS AND TREATMENT OF OBSTRUCTIVE SLEEP APNEA (HOMEPAP STUDY)

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OBJECTIVES: The cost implications of adopting portable monitoring devices for the diagnosis of obstructive sleep apnea ("OSA") are largely unknown. We conducted an