societal perspective, CK costs $8,400/ QALY compared to surgery; CK remained dominant versus IMRT and PT. Results were most sensitive to cost of CK and surgery, and utility weights for GU and SD. **CONCLUSIONS:** CyberKnife was found to be cost-effective versus surgery, and resulted in cost savings and improved quality-adjusted survival compared to radiation options for the treatment of localized PC.

PMD22

COST-EFFECTIVENESS ANALYSIS OF THREE WOUND DRESSINGS FOR THE TREATMENT OF PRESSURE ULCERS FROM THE PUBLIC HOSPITAL PERSPECTIVE

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OBJECTIVES: Each year in Brazil, 42.3% of all inpatients present skin ulcers during the hospitalization period. Current clinical practice guidelines have not established a gold standard protocol of care for pressure ulcers. Thus, this study aimed to develop cost-effectiveness analysis comparing three different dressings: hydrocolloid, silver sulfadiazine 1% cream (SSD) and saline gauze (SG), under the perspective of Brazilian public hospitals. **METHODS:** The mean time to healing (MTH) for each protocol was obtained from systematic reviews. Data from the Brazilian Hospital Information System from January 1st to December 31st 2009 was used to define the annual number of hospital admissions due to pressure ulcers (only non-surgical records with L89 ICD-10 code were included). The model assumed that SG is the current practice in Brazilian public hospitals and patients are discharged at the time their wound heals. The difference in MHT was applied to the average length of stay (LOS) reported in the database. Resource use was estimated through expert panel and unit costs were obtained from Brazilian official price lists. **RESULTS:** 934 hospitalizations were identified with mean LOS of 13.72 days. Hydrocolloid and SSD would reduce the MHT in 4.72 and 2.72 days, thus reducing patients' LOS. The cost per change was estimated as 15.52BRL, 43.20BRL and 15.72BRL and the cost per protocol per patient (daily room charges and dressing changes) was 902.50BRL, 559.61BRL and 907.99BRL, for SG, hydrocolloid and SSD, respectively. Adopting hydrocolloid as wound management protocol would save −342.89BRL per patient and -BRL320,259 for the 2009 cohort. SSD projected savings was −5.49BRL per patient and -BRL5,125.79 for the entire cohort. **CONCLUSIONS:** Hydrocolloid dressing has shown higher efficacy when compared to SG or SSD dressings, with fewer costs. The clinical and economic incremental results between different dressings reinforce the need of evidence-based decision making and rational resource allocation.

PMD23

COST-EFFECTIVENESS OF SPECIFIC USE OF THE LANCET BD QUIKHEEL® IN SCREENING PROGRAM OF NEONATAL CONGENITAL HYPOTHYROIDISM IN MEXICO

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OBJECTIVES: Congenital hypothyroidism (CH) is a serious conditions and expensive illness. The purpose of this study was to develop an economic model in order to evaluate the cost-effectiveness ratios between two heel lancet devices in terms success of the procedure in neonates undergoing the newborn screening test at the Social Security Mexican Institute (IMSS) from the health care payer's perspective. **METHODS:** A cost-effectiveness analysis was developed using a decision-tree model. The model simulates costs and effectiveness outcomes in a 15 years period. The comparators were: Heel lance BD Safety-Flow lancet® and the BD QuikHeel lancet®. The effectiveness measure was the number of cases of severe congenital hypothyroidism avoided at the end of the follow-up period. Effectiveness data and transition probabilities were taken from international published literature. The estimation of resource use was performed employing local expert opinion surveys. Cost and effectiveness were discounted 5% annually. The model was calibrated according to international pharmacoeconomics guidelines. One-way and probabilistic sensitivity analyses were performed using Monte Carlo Simulation second-order approach. **RESULTS:** Regarding effectiveness, the lancet Contact Activated would prevent 75% of patients with CH detected in advanced stages and with the use of the lancet Quickheel the percentage would increase to 98%, preventing 23% more cases of severe CH. The mean cost per newborn screened in case of using the lancet type would Contact Activated $12.2 and with the lancet Quikheel type $11.71. The potential savings from the use of the lancet Quikheel would be around $779,545.75 in the hold program. **CONCLUSIONS:** With these data we can conclude that the use of the lancet Quikheel type is the best alternative, as it offers better results at lower cost. In Mexico the use of the lancet Quikheel brings significant clinical and economic benefits that make of the neonatal screening program a better one.

PMD24

GLYCOSYLATED HEMOGLOBIN OR FASTING GLUCOSE TESTING FOR SCREENING DIABETES IN COLOMBIA: A COST-EFFECTIVENESS ANALYSIS

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OBJECTIVES: Diabetes is a growing cause of death and morbidity in middle-income countries carrying a large financial burden for health systems. In recent years, diabetes screening practices in Colombia have shifted from using the fasting glucose test (FGT) towards relying on glycosylated hemoglobin (HbA1c) as physicians consider it a more reliable tool to early detect diabetes. This analysis assesses the cost-effectiveness of alternative screening strategies in general population in Colombia from a health system perspective. **METHODS:** A decision-analytic model was designed to compare four strategies: (1) FGT + confirmatory FGT (standard practice); (2) FGT + confirmatory HbA1c; (3) Only HbA1c and (4) no screening. Long-term health outcomes (life years) and cost-outcomes were modeled via a 20-year Markov model with three diabetes states: non-complicated, complicated diabetes and death. Parameter values were based on data from the National Health Survey and from the Ministry of Social Protection on general population. The model projections were comparable to those published elsewhere using CORE and Colombian literature on diabetes costs. One-way sensitivity analysis on the HbA1c cost was also performed. **RESULTS:** No significant differences on costs per life-year saved were found when comparing FGT + confirmatory FGT ($1,047) and FGT + confirmatory HbA1c ($1,069) against no-screening. However, the use of only HbA1c was associated with a higher cost per life-year saved ($2,455.93) when comparing against no-screening. This result was mainly driven by not using a confirmatory test rather than by the test itself. **CONCLUSIONS:** This analysis found the performance of FGT + confirmatory FGT and FGT + confirmatory HbA1c to be similar and highly cost-effective in general population older than 45 when in comparison to no screening. This finding has implications in both clinical and healthcare policymakers in Colombia and in other Latin American countries with similar diabetes prevalence and treatment options.

PMD25

THE COST-UTILITY AND VALUE OF INFORMATION OF TRANSCATHETER AORTIC VALVE IMPLANTATION COMPARED TO STANDARD MANAGEMENT AND SURGICAL AORTIC VALVE REPLACEMENT IN PATIENTS WITH SEVERE SYMPTOMATIC AORTIC VALVE STENOSIS

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OBJECTIVES: The primary analysis of this study was to estimate the cost-effectiveness of TAVI compared to standard management (SM) in inoperable patients with severe, symptomatic aortic valve stenosis (SSAVS). The secondary analysis was to preliminarily explore both the cost-effectiveness and value of information of TAVI compared to surgical aortic valve replacement (SAVR) in operable patients at high surgical risk with SSAVS. **METHODS:** A combined decision tree and Markov model was developed to compare the costs, life-years (LYs) and quality-adjusted life-years (QALYs) of TAVI (transfemoral (TF) and transapical (TA) approaches) to SM and SAVR over a 5-year time horizon. This evaluation was conducted from a third party payer's perspective. **RESULTS:** In the primary analysis, comparing TF and SM resulted in an incremental cost-effectiveness ratio (ICER) of $126,874/LY and $222,378/QALY. Comparing TA and SM resulted in an ICER of $262,672/LY and $1,454,241/QALY. In the secondary analysis, TF and SAVR were compared, resulting in an ICER of $39,676/LY and $81,758/QALY. Comparing TA and SAVR resulted in an ICER of $183,454/LY. TA was dominated by SAVR when comparing QALYs. The total expected value of perfect information (EVPI) was at a maximum with a value of $6,928 at a WTP threshold of $80,000/QALY. The expected value of partial perfect information (EVPPI) was highest for the 30-day clinical event rates when compared to the EVPPI values for the 1-year, 2-year and >3-year clinical event rates. **CONCLUSIONS:** This economic evaluation suggested that TAVI might not be a cost-effective option for inoperable patients in comparison to SM. The secondary analysis suggested that TAVI might be a cost effective option for operable patients compared to SAVR. To reduce the uncertainty in our estimate it might be worthwhile to obtain empirical evidence related to clinical event rates occurring 30-days post operation.

PMD26

ECONOMIC EVALUATIONS FOR SCREENING AND TREATMENTS OF DIABETIC RETINOPATHY AND DIABETIC MACULAR EDEMA: A SYSTEMATIC REVIEW

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OBJECTIVES: New technologies in screening and treatment of diabetic retinopathy (DR) and diabetic macular edema (DME) have emerged recently. The goal of this systemic literature review is to identify and compare critical gaps in the published economic evaluation literatures for screenings and treatments strategies of DR/DME. **METHODS:** A systematic literature search was conducted to identify literature in English from 1980-2010, using PubMed, Embase, NHS NICE EED, and Tuft CEA Registry. Key terms included "diabetic retinopathy", "diabetic macular edema", and relevant terms for economic evaluations. All studies related to economic analysis and decision modeling were included. Studies that focused only on cost or utility were excluded. **RESULTS:** 52 articles were identified and 33 were excluded based on the pre-specified exclusion criteria. Of the remaining 19 studies, nine (47%) focused on screening methods, six (32%)on diabetic care, and four (21%) on DR/DME treatment. Among the included studies, 12 studies (63%) were cost-effective analyses, and sight-years saved was the most frequently used endpoint. Seven studies (37%) were cost-utility analyses. A broad range of decision-analytic frameworks and health state descriptions were observed. Some only assigned utility to blindness, not to diabetic patients who may have impaired quality of life due to vision loss. In addition, although DR/DME is a bilateral condition, most studies did not clearly explain how cost, utility, and disease progression were modeled for the second eye. **CONCLUSIONS:** This literature review identified a range of decision analytic frameworks, health states definitions, and utility sources employed in economic evaluations of screening and treatment of DR/DME. Future studies assessing cost-effectiveness of new technologies should transparently address these areas.