the care pathway to ensure rapid assessment and treatment for TIA patients would avoid 128 future stroke events over three years. As a result, the costs associated with the reconfiguration of the TIA patient care pathway would be partially offset by savings in acute stroke management costs. CONCLUSIONS: Our model suggests that implementing a revised TIA care pathway in Hungary would result in a reduction of TIA-related recurrent strokes, leading to reduced costs associated with the acute management of stroke. This would partially offset the costs of establishing rapid assessment and treatment clinics for patients experiencing TIA.

FINANCIAL IMPACT OF A NOVEL PRECELPALMIA DIAGNOSTIC TEST VS. STANDARD CARE: A DECISION-ANALYTIC MODELING ANALYSIS FROM A UK HEALTH CARE PAYER PERSPECTIVE

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OBJECTIVES: Preeclampsia, a leading cause of maternal and perinatal morbidity and mortality, is only detected after the onset of clinical symptoms. Earlier diagnosis may be possible with a new serum test using soluble fms-like tyrosine kinase-1 (sflt-1) and placental growth factor (PIGF) biomarkers. Clinical and economic benefits may result from appropriate detection and management of subclinical cases, and from averting costs associated with incorrect diagnoses. We evaluated the financial impact of the novel test versus standard care from a UK health care payer perspective.

METHODS: We developed a decision-analytic model of the clinical and economic impact of using an improved sensitivity and specificity of the new test over current diagnostic practice. Acute management and follow-up costs were associated with true positive, true negative, false positive, and false negative diagnoses. The base-case analysis assumed that, of all pregnant women, 15% present with risk factors which would allow the CHF 52 (£-equivalent) test to be administered after 20 weeks of gestation. True positive and false negative patients were assumed to enter one of four health states: mild preeclampsia; severe preeclampsia; eclampsia; or death. Data pertaining to treatment practices, health care resource utilization, incidence, costs, and funding for detection and management of preeclampsia in the UK were obtained through interviews with clinicians, laboratory managers, and health care payers in the UK. Additional data were obtained from published literature and public databases. RESULTS: Model results suggest that when used for screening, the novel test would reduce false negative diagnoses of preeclampsia by 67% and false positives by 71%. Costs per patient are estimated to be £1781 with the novel test and £2726 with standard practice, saving an estimated £945 per patient given the novel test. CONCLUSIONS: This test has the potential to improve detection and management of preeclampsia translating into substantial cost savings for UK health care payers.

EXAMINING THE COST IMPACTS OF RECONFIGURING TIA CARE IN SPAIN

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OBJECTIVES: Due to lack of awareness of Transient Ischaemic Attack (TIA) symptoms, many patients may not immediately seek medical help, creating delays in access to treatment. The UK EXPRESS study by Rothwell et al. [Lancet 2007;170:1432-42] demonstrated that a greater focus on rapid assessment and management of TIA could significantly reduce subsequent stroke rates. With nearly 35,000 cerebrovascular diseases-related hospitalizations in Spain last year, we wanted to examine how a shift in care pathways towards that outlined in the EXPRESS study could affect stroke rates, and explore the financial implications of such a shift in care pathway. METHODS: We developed an economic model to estimate the costs and savings associated with establishing a rapid assessment and treatment clinic for patients with suspected TIA in Spain, in line with phase 2 of the EXPRESS study. We used a population of 1,000,000 people with an assumed annual incidence of TIA of 0.021%. Current management was based on ESO guidelines and common clinical practice. We included direct costs associated with care (medications, diagnostics and staff—where data were unavailable, converted UK costs were used), and modeled the impact of changing management over a three-year time horizon. RESULTS: For an assumed population of 1,000,000, changing the care pathway care to ensure rapid assessment and treatment for TIA patients would result in 66 future stroke events avoided over 3 years. As a result, the costs associated with changing the pathway of care for TIA would be partially offset by savings in acute management costs associated with stroke. CONCLUSIONS: Our model suggests that implementing a revised TIA care pathway in Spain would reduce the number of TIA-related recurrent strokes, leading to reduced costs associated with acute stroke management. This would partially offset the cost of establishing rapid assessment and treatment clinics for patients experiencing TIA.

BUDGET IMPACT ANALYSIS OF DIAGNOSTIC OF UNEXPLAINED AND/OR RECURRENT SYNCOPE WITH APPLICATION OF IMPLANTABLE LOOP RECORDER

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OBJECTIVES: Syncope that remains unexplained after a conventional evaluation is a common and vexing medical problem. Implantable loop recorder (ILR) is a new diagnostic method in diagnosis of recurrent syncope with unexplained etioloogy (NO). The aim of this analysis was to estimate the impact of ILR reimbursement in NO diagnostics on budget of public payer’s in Poland. METHODS: The analysis was performed in 5-year time horizon from the public payer’s perspective. Information regarding target population and relevant medical resources was extracted from literature and registry PL-US. Data in the registry PL-US were collected during 2006-2008 in 18 Polish centers. Cost data were obtained from the National Health Fund. In the analysis two scenarios were compared: actual (current situation with ILR reimbursement only) and prognostic (after ILR reimbursement). In the prognostic scenario two financing options of monitoring of patients after ILR implantation were distinguished—AOS and KAOS. One-way sensitivity analysis were performed for the key input parameters. RESULTS: The number of target population for ILR implantation in Poland is stable, approximately 2,370 patients. In actual scenario estimated public payer expenditure for NO diagnostics in year 2010-2014 is in the range of 9.90 mPLN, while cost of ILR is 0.25 mPLN. Assuming reimbursement of ILR estimated public payer expenditure for NO diagnostics in option AOS is 9.77 mPLN in year 2010 and 16.76 mPLN in year 2014 while ILR costs is 1.33 mPLN. In option KAOS public payer expenditure is 9.86 mPLN in year 2010 and 18.49 mPLN in year 2014, while ILR costs is 1.53 mPLN and 13.07 mPLN, respectively. CONCLUSIONS: Our findings suggest that decision concerning ILR reimbursement should not lead to increase total expenses on the NO diagnostics for public payer more than 0.95 mPLN in year 2010 and 10.00 mPLN in year 2014.

IMPACT OF INCLUDING PRASUGREL ON THE FORMULARY FOR PATIENTS WHO UNDERGO PERCUTANEOUS CORONARY INTERVENTION FOR ACUTE CORONARY SYNDROME

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OBJECTIVES: Budget impact models for new drugs provide estimates of the changes in actual costs of drug therapy as well as estimates in the changes in other health care costs attributable to the underlying disease or the side effects of treatment. METHODS: In this study we estimated the annual change in disease and side-effect costs associated with the addition of prasugrel to a pragmatic formulary for treatment of those with acute coronary syndrome (ACS) undergoing a percutaneous coronary intervention in a managed care organization with 1,000,000 covered lives. The model compared the annual costs in each of the first three years after addition of prasugrel to the formulary assuming a maximum treatment share of 50% after 1 year. The only alternative treatment was clopidogrel and people already being treated with clopidogrel were not switched to prasugrel. The relative risk of subsequent cardiovascular events and bleeding events for each drug were taken from a head-to-head 15-month clinical trial. The risk of cardiovascular events reverted to the risk of those taking only aspirin for those discontinuing prasugrel or clopidogrel treatment. RESULTS: The estimated numbers of cardiovascular events (bleeding events) after an ACS episode with prasugrel on the formulary in the first three years were 541 (36), 528 (42), and 525 (43) respectively and without prasugrel were 548 (35) in all three years. The annual reductions in disease- and bleeding-related costs in the first 3 years after adding prasugrel to the formulary were estimated to be $141,907, $419,377, and $488,119 respectively. CONCLUSIONS: Using a more effective dual oral antiplatelet regimen is likely to result in lower disease-related costs that are not offset by higher bleeding-related costs. The disease- and bleeding-event cost savings estimated in the model should be included in a comprehensive estimate of the budget impact of adding prasugrel to a formulary.

COSTS OF ATRIAL FIBRILLATION IN SLOVAKIA FROM A PAYER PERSPECTIVE

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OBJECTIVES: Atrial fibrillation (AF) is frequent cardiac disease. The prevalence in Slovak republic is estimated about 1% in adult population. The most potential risk of AF is stroke, it is incidence is estimated about 2.3% e.g. more than six times as in standard population. The main objective of this study was to determine direct medical costs related to AF and the possible budget impact of new treatment by dronedarone. METHODS: Direct medical costs were evaluated from data collected in 2007 from the General Health Insurance Company, the largest one in Slovakia, covering 55% of 5.4 million inhabitants. The results were recalculated to the total population. The costs were quoted in 2007 prices. RESULTS: The AF costs were €16,685,720; in out-patients care they were €4,138,743; in hospital care they were €12,135,486; in drug costs the presentation they were €2,013,127 and in diagnostic procedures they were €1,152,635. Totally it was 0.556% of total Slovakia health care budget. The cost of treating the patients with stroke was €30,098,891, which is 1.003% of total Slovakia health care budget. Dronedarone is new drug for the treatment of AF. The outcome from the ATHENA study showed 26% risk reduction of hospitalization and 34% risk reduction of stroke. The dronedaron usage can reduce the health care costs by 30,098,891, which is 1.003% of total Slovakia health care budget in 2007.
the need to establish effective strategies for AF. Clinical outcomes from the ATHENA study adapted to Slovak conditions show the actual potential of dronedarone to be a cost-effective way in reducing AF complications and decreasing health care expenditures.

BPCV80

THE DIAGNOSTIC BENEFIT OF STRESS TEST PRIOR TO CARDIAC MULTI-SLICE COMPUTED TOMOGRAPHY IN PATIENTS WITH SUSPECTED CORONARY ARTERY DISEASE: CLINICAL AND ECONOMIC OUTCOMES FROM THE EMILIA-ROMAGNA MSCT REGISTRY

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(context: Portoguese Social & Healthcare Agency, Rome, Italy)

OBJECTIVES: Cardiac Multi-Slice Compared Tomography (MSCT) has been demonstrated as a valid diagnostic tool for coronary artery disease (CAD) especially due to its higher comparative accuracy. Consequently, there is mutual agreement on its use over a non-invasive or equivocal stress-test (exercise, perfusion or stress-echo) result; however, its frequent use as first-step investigation contributes to the controversy on which strategy really maximizes patient outcomes. Using data from a regional registry, we investigated the optimal application of MSCT in patients with suspected CAD. METHODS: During 2007, 366 patients with suspected CAD or stable angina underwent MSCT in six different public structures in Emilia Romagna; after applying exclusion criteria (previous hospitalization for Acute Myocardial Infarction and/or revascularization; MSCT performed in inpatient setting), 350 subjects (209 with and 141 without a previous stress-test result, respectively) were considered eligible. Baseline characteristics were similar between the two groups. No relevant differences were found in all endpoints except for the average number of cardiovascular-related hospitalizations (0.46 vs. 0.33; p < 0.0013) which was significantly lower in the “stresstest-MSCT” group. Notably, hospitalizations alone accounted for 90% of total health care expenditures ($1,018,054 for all 350 patients). The sensitivity analysis (based on 5000 bootstrap samples) indicated a mean cost difference of $513 ± 22 (CI 95%) and a mean hospitalizations difference of 0.13 ± 0.0013 in favor of the “stresstest-MSCT” strategy (0.46 vs. 0.33; p = 0.66), which showed a probability of being cost effective of 0.86 (WTP $100,000) and 0.95 (WTP $50,000). CONCLUSIONS: Using MSCT after stress-test is likely to reduce the risk of hospitalization and additionally provides good value for money from the perspective of the RHS.

COST-EFFECTIVENESS AND BUDGET IMPACT ANALYSIS OF BETA BLOCKERS FOR CHRONIC HEART FAILURE PATIENTS IN SPAIN

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(context: Madrid, Spain)

OBJECTIVES: Chronic heart failure (CHF) is a major health issue because of its growing prevalence, morbidity and associated resource consumption. Beta blockers have been shown to be effective and cost-effective therapies for CHF. The aim is determining what beta blocker constitutes the most efficient therapy for CHF patients in Spain. METHODS: Systematic review of primary clinical trials and secondary (meta-)analyses, clinical practice guidelines, economic assessments and reports from independent local agencies) evidence on beta blockers for CHF issued before April 2007. Cost-utility analysis yields that bisoprolol implies a mean cost difference of $231 ± 22 (CI 95%), and an average number of cardiovascular-related hospitalizations difference of 0.13 ± 0.0013 in favor of the bisoprolol regimen (0.46 vs. 0.33; p = 0.66), which showed a probability of being cost effective of 0.86 (WTP $100,000) and 0.95 (WTP $50,000). CONCLUSIONS: Using MSCT after stress-test is likely to reduce the risk of hospitalization and additionally provides good value for money from the perspective of the RHS.

CPCV61

COST OF EXERCISE TRAINING AND ITS IMPACT ON MEDICAL RESOURCE USE AND COSTS: RESULTS OF HF-ACTION TRAIL

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OBJECTIVES: The HF-ACTION study was a controlled trial to evaluate efficacy and safety of exercise training in patients with heart failure. A prospective economic evaluation was planned alongside the trial to evaluate resource use and costs associated with exercise training. METHODS: Between April 2005 and January 2008, 2,383 exercise training and 2,395 usual care subjects were enrolled from 41 sites. The mean age of patients was 69 ± 11 years. The mean duration of follow-up was 2.5 years in both groups. Resource use was measured using patient-level data from the trial, administrative records, and published unit costs. Counts of resource use were compared using negative binomial regression models. Confidence intervals for cost differences were derived using nonparametric bootstraping. RESULTS: Mean follow-up was 2.5 years in both groups. There were 2,297 hospitalizations in the exercise training group (n = 1,159) and 2,332 in the usual care group (n = 1,172). P = 0.924. The mean number of inpatient days was 13.6 (SD = 27.0) and 15.0 (SD = 31.4) days in the exercise training and usual care groups, respectively (p = 0.21). Additional measures of medical resource use, including urgent care visits, outpatient visits and procedures, home IV therapy, skilled nursing and rehabilitation care were similarly performed between groups, with the exception that fewer patients in the exercise training group underwent high-cost inpatient procedures including heart transplantation and/or placement of a left ventricular assist device (n = 44 [3.7%] vs. n = 31 [2.7%], p = 0.14). Total direct medical costs were estimated at $50,857 (SD = $1,488) in the exercise training group and $56,177 (SD = $2,749) in the usual care group (95% CI for difference: $5–12,753 to $1,847). Direct cost of exercise training was estimated at $106 (SD = $37). CONCLUSIONS: Exercise training had little systematic impact on medical resource use overall, but the cost of exercise training may have been offset through a reduction in high-cost procedures.

PULMONARY ARTERIAL HYPERTENSION (PAH) COST OF ILLNESS IN THE U.S. PRIVATELY-INSURED POPULATION

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OBJECTIVES: Estimate annual direct costs for privately-insured U.S. pulmonary arterial hypertension (PAH) patients and matched controls. METHODS: From a privately-insured claims database (>8 million beneficiaries, 2002–2007), 951 PAH