

OBJECTIVE: To estimate the cost-effectiveness of citicoline in comparison to conventional therapy for the treatment of patients with acute ischemic stroke. **METHODS:** Decision tree analysis incorporating economic data and results from alternative systematic reviews of effectiveness. Data on effectiveness were obtained from a systematic review performed by the Cochrane Stroke Review Group (CSRG) and a pooled analysis of primary data from clinical trials sponsored by the Ferrer Group. Resource use was obtained from a panel of experts based in 5 Spanish hospitals. Unit costs were obtained from the centres included in the study and from prices published by the Spanish health care authorities. Two alternative scenarios were considered: hospitalised patient and hospitalised patient with ambulatory follow-up. Sensitivity analysis of the key variables included was performed. The time horizon for the study was 12 weeks. **RESULTS:** Even in the most unfavourable scenario analysed, citicoline proved to be an efficient treatment option in patients with acute ischemic stroke. Citicoline led to increases in the proportion of patients without disability of between 5% and 10%, compared to conventional treatment. Based on the efficacy figures reported by the CSRG, the cost per patient treated with citicoline was €3026.12 when only hospitalisation was taken into account, while the equivalent cost per patient receiving placebo was €3127.34. When the costs of ambulatory follow-up were added, the cost per patient increased to €3663.50 in the citicoline group and €3795.90 in patients receiving placebo. **CONCLUSION:** Citicoline is an effective and efficient treatment alternative in the management of stroke patients, in all of the scenarios analysed.

PCV50

COSTS OF THE DIAGNOSIS OF RENAL ARTERY STENOSIS

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OBJECTIVES: Timely detection of renal artery stenosis (RAS) is important as it may cause renovascular hypertension and renal impairment. In the Renal Artery Diagnostic Imaging Study in Hypertension (RADISH), 402 patients suspected of having RAS were submitted to computed tomographic angiography (CTA), magnetic resonance angiography (MRA) and digital subtraction angiography (DSA), in order to investigate the diagnostic performance of CTA and MRA. Providing policy makers and clinicians with information about the costs associated with applying different diagnostic imaging strategies for detecting RAS is important. Therefore, also a comparative short-term cost analysis was performed. **METHODS:** The analysis involved three diagnostic strategies: 1) direct DSA; 2) CTA ± DSA, and 3) MRA ± DSA. Strategies 2 and 3 included DSA as the gold standard to confirm the

diagnosis. After a negative CTA or MRA test result no further tests were performed. The cost calculations were performed from the societal perspective. Data were analyzed using a decision model, combining original patient data and medical literature data. Short-term costs were defined as costs occurring during the first year after treatment, including the diagnostic work-up and revascularization procedure. **RESULTS:** The strategy, whereby patients are referred for DSA only in case of a positive CTA test result was the least costly option (€2286), followed by MRA ± DSA and direct DSA (€2598 and €3695, respectively). **CONCLUSIONS:** Considered from the cost perspective, CTA followed by DSA only in case of a positive test result is the strategy of choice. However, the cost consequences of false negative test results were not considered since these effects generally reveal in the long term. Also, health benefits in terms of quality of life and life expectancy were not included in the analysis. Therefore, a cost-effectiveness Markov model, including short and long term costs and health effects, is currently built.

PCV51

IRBESARTAN IS COST-SAVING COMPARED TO AMLODIPINE AND STANDARD BLOOD PRESSURE TREATMENT IN PATIENTS WITH TYPE 2 DIABETES, HYPERTENSION AND NEPHROPATHY IN HUNGARY

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OBJECTIVES: In the Irbesartan in Diabetic Nephropathy Trial (IDNT), treatment with irbesartan demonstrated 23% and 20% reductions in the combined endpoint of doubling of serum creatinine (DSC), end-stage renal disease (ESRD) or death in patients with hypertension, type 2 diabetes, and overt nephropathy compared to amlodipine and control respectively. A simulation model was developed to project long-term cost consequences of the IDNT in Hungary. **METHODS:** A Markov model simulated progression from nephropathy to DSC, ESRD, and death in patients with hypertension, type 2 diabetes and overt nephropathy. Treatment-specific probabilities were derived from IDNT. Hungarian-specific ESRD-related data were retrieved from local databases. Delay in onset of ESRD, life expectancy and mean lifetime costs were calculated for patients with baseline age 59 years. Future costs were discounted at 5% per annum, and clinical benefits were discounted at 0% and 5% per annum. Extensive sensitivity analyses were performed. **RESULTS:** Onset of ESRD was delayed with irbesartan by 1.41 and 1.35 years versus amlodipine and control respectively.

Cumulative incidences of ESRD were 54.7%, 59.3% and 46.7% for control, amlodipine, and irbesartan respectively. When a 25-year (lifetime) horizon was considered, delay in ESRD onset led to anticipated improvements in life expectancy (discounted results shown in brackets) of 0.29 (0.15) years versus amlodipine and 0.63 (0.36) years versus control. Irbesartan led to cost savings of Hungarian Forint (HUF) 2,698,826 (€10,267) and HUF 1,605,897 (€6,109) per patient versus amlodipine and control respectively. The results were robust under a wide range of plausible assumptions. **CONCLUSIONS:** Treating patients with hypertension, type 2 diabetes and overt nephropathy using irbesartan was both cost- and life-saving compared to amlodipine and control in the Hungarian setting.

PCV52

ECONOMIC ANALYSIS OF THE USE OF CLOPIDOGREL IN PATIENTS WITH ACUTE CORONARY SYNDROME WITHOUT ST-SEGMENT ELEVATION (ACS) FROM THE RUSSIAN HEALTH CARE SYSTEM PERSPECTIVE

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OBJECTIVE: More than 5.4 million Russian patients have an history of Ischemic Heart Disease and this accounts for 26% of all deaths every year. The CURE trial demonstrated the efficacy of clopidogrel in ACS, vs placebo, both group received standard therapy including ASA. This evaluation was performed to assess the cost-effectiveness of clopidogrel in Russia based upon the CURE trial. **METHODS:** Resource use (hospitalisations, procedures, comedications, study drugs) was collected in the Case Report Form of the clinical trial. Costs of medications were based on cost per day of study drugs and average cost per day of the different therapeutic classes for comedications. Hospitalisations costs including the costs of stay at an intensive care unit were calculated from Russian medicoeconomic standards. The efficacy outcome was the number of total events prevented (cardiovascular deaths, myocardial infarctions, and strokes). Cost-effectiveness was expressed as the cost per event avoided with clopidogrel plus ASA versus ASA alone. All costs were calculated in 2002 prices. The Russian ruble-to-US dollar exchange rate used was 31.3. **RESULTS:** During the 12-month study period, the CURE trial showed that patients treated with clopidogrel had significantly lower rates of cardiovascular events (11.14% vs 13.15%). The mean cost per patient was higher with clopidogrel (\$2,425.60) than with standard therapy (\$18,82.80). The difference of \$542.80 was primarily due to a higher acquisition cost of clopidogrel. Nevertheless total cost of hospitalisations was lower in the clopidogrel

arm (\$1119 vs \$1149). The estimated incremental cost per event avoided was \$27,000. **CONCLUSION:** This analysis showed that clopidogrel on top of standard therapy including ASA, for ACS, results in a favourable cost-effectiveness ratio in terms the cost per event avoided compared to other cardiovascular drugs. These data provide strong arguments for the choice of a treatment for ACS in the public health care system.

PCV53

MANAGEMENT OF THE PRIMARY CARE HYPERCHOLESTEROLEMIC PATIENTS THROUGH A CLINICAL DECISION SUPPORT SYSTEM. OPTIMCARE STUDY REPORT

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OBJECTIVES: The Clinical Decision Support Systems (CDSS) can be intended as tools to improve the health care. The Optimcare Study objectives are to implement a clinical guideline to manage hypercholesterolemic patients on a CDSS and to assess its impact in cost-effectiveness terms, in usual practice conditions. **METHODS:** Naturalistic and unicentric design in which a therapeutically intervention including a CDSS and a flexible patient education was applied and compared between two periods in a patient cohort. Five hundred hypercholesterolemic patients (ICD9-CM code = 272.0) were randomly selected from the Primary Health Care center database (CAP Vila Olímpica, Barcelona, Spain). The CDSS implemented algorithms agreed by the participating physicians, with therapeutical recommendations to achieve cLDL objectives in a cost-effective manner. The compared periods were the year before (PRE) and the year after (POS) the first visit in which physicians could access to the CDSS from their physician desk. The clinical and resources consumption data in PRE were obtained from the center database. The effectiveness was assessed through the therapeutical objective achievement in PRE and POS periods referred to the clinical guideline objectives. The costs were assessed from the social perspective. **RESULTS:** The therapeutical objective achievement increased an 11.9% (54.2% PRE vs 66.1% POS). While cLDL decreased 10 mg/dl (CI 95% -14 to -6). The number of pharmacologically treated patients decreased a 14.6% (76.5% PRE vs 61.9% POS). The patient mean total costs were decreased in POS period [difference = €78.4 (IC 95% -94.7 to -62.1)]. Considering all the visits the adherence to the therapeutical recommendations were a 88.4% while showed a decrease until 72.5% when next visit dates recommendations were considered. **CONCLUSIONS:** The CDSS given recommendations were accepted by the physician in a high degree and were shown as more cost-effective than the usual care practice.