PCV120

COST-EFFECTIVENESS OF EDOXABAN COMPARED WITH WARFARIN FOR THE PREVENTION OF STROKE AND SYSTEMIC EMBOLIC EVENTS IN THE UK

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OBJECTIVES: The primary objective of this economic evaluation was to assess the cost-effectiveness of edoxaban 60mg versus warfarin for the prevention of stroke and systemic embolic events among patients with non-valvular atrial fibrillation (NVAF) in the UK, from the perspective of the NHS. METHODS: A Markov model was developed to simulate the course of disease in hypothetical cohorts of patients with NVAF and to assess the cost-effectiveness of edoxaban versus the current UK standard of care, warfarin. The model used data from the ENGAGE study, and was based on patients with CHADS2 score ≥ 2. Utilities were derived from published literature and were extracted from the literature and the NHS reference cost database; both were discounted at 3.5% per annum. Health outcomes were assessed in quality-adjusted life years (QALYs), and evaluated over a lifetime time horizon. Deterministic and probabilistic sensitivity analyses were performed to assess the robustness of the results to uncertainty in input parameters on the results. RESULTS: In the base case analysis (CHADS2 ≥ 2), the incremental cost-effectiveness ratio (ICER) for edoxaban compared with warfarin was £12,881 per QALY gained. At a threshold of £20,000 per QALY, the net monetary benefit associated with edoxaban was £1,406. Edoxaban was also cost effective compared with warfarin in higher risk (CHADS2-3) and higher anticoagulant cost (CVR60) subgroups (ICER £7,012 and £25,576 per QALY, respectively). Sensitivity analysis confirmed these findings and conclusions are robust to alternative assumptions about model inputs. Starting age, edoxaban cost, monitoring costs and mortality due to non-ICH major bleeds are the drivers of the results. PSA in the base case analysis shows that edoxaban has a 60% probability of being the optimal treatment strategy under the cost-effectiveness plane for this comparison, and that the probability that edoxaban is cost-effective versus warfarin is more than 50%. CONCLUSIONS: Compared with warfarin, edoxaban represents a cost-effective alternative for stroke prevention in UK patients with NVAF.

PCV121

COST-UTILITY ANALYSIS OF CHOCOLATE CONSUMPTION FOR PREVENTION OF CARDIOMETABOLIC DISEASE

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OBJECTIVES: Randomized controlled trials have shown favorable effects of polyphenols and flavonoids found in chocolate on various cardiometabolic risk factors, including inflammatory markers, blood pressure, lipids, and insulin sensitivity. Epidemiologic and observational studies suggest chocolate reduce risks of cardiometabolic diseases. This study aims to assess the cost-utility of chocolate consumption from a US health system perspective. METHODS: A cohort life-table analysis was developed to model life years (LYs) and quality-adjusted life years (QALYs) of chocolate consumption versus non-consumption over a lifetime horizon in US adults. Age and sex-specific disease incidence and mortality rates were used to model outcomes of cardiometabolic diseases, including coronary heart disease, stroke, and diabetes. Relative risks of cardiometabolic disease associated with chocolate consumption were obtained from meta-analyses of prospective cohort and cross-sectional studies. Utility weights, baseline healthcare costs, and attributable disease costs were obtained from the literature. Costs of chocolate were estimated based on “high” consumption, consisting of three 150mg chocolate bars per week. Outcomes included undiscounted LYs and discounted costs and QALYs. Incremental analyses, stratified by sex, and probabilistic sensitivity analyses (PSA) were conducted to assess the cost-effectiveness of chocolate consumption versus non-consumption for each comparator, incremental cost per QALY threshold was $1,482 for males and $8,931 for females. In the PSA chocolate consumption had a 97.8% probability of being cost-effective for males and females, respectively, at a $50,000/QALY threshold. CONCLUSIONS: Chocolate consumption may be a cost-effective means to reduce the risk of cardiometabolic disease. Given the limitations of observational study data, further research is warranted to confirm these findings.

PCV122

COST-UTILITY OF RANOLAZINE FOR THE SYMPTOMATIC TREATMENT OF PATIENTS WITH CHRONIC ANGINA PECTORIS IN GREECE

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OBJECTIVES: To conduct a systematic review on the pharmacoeconomic value of ranolazine vs standard-of-care (SOC) for the treatment of symptomatic chronic stable angina. METHODS: The cost-effectiveness analysis was conducted from the French national healthcare insurance perspective. The model used data from the ENGAGE study, and was based on patients with symptomatic chronic stable angina who did not respond adequately to first line therapy, in Greece. Probabilistic sensitivity analysis (PSA) was performed. RESULTS: Ranolazine as add-on therapy was more costly compared to SOC alone, as the 6-month total cost per patient was €1,170 and €984, respectively. Patients received ranolazine plus SoC and SoC alone gained 0.3155 QALYs and 0.2752 QALYs, respectively. Hence, ranolazine is a cost-effective therapy for the symptomatic treatment of patients with chronic stable angina in Greece.

PCV123

COST-UTILITY ANALYSIS OF APIXABAN IN THE ACUTE TREATMENT AND PREVENTION OF VENOUS THROMBOEMBOLISM IN FRANCE

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OBJECTIVES: A dual antithrombin inhibitor (apixaban) has been shown to be cost-effective compared to the current UK standard of care (warfarin) in the acute treatment of venous thromboembolism (VTE) from the French National healthcare insurance perspective. METHODS: A cohort of patients with VTE were placed on one of five therapeutic strategies for 6-months and tracked over a course of 5-years in a Markov model. Modeled clinical events included recurrent VTE, major bleed, clinically-relevant non-major bleed, chronic thromboembolic pulmonary hypertension, post-thrombotic syndrome and death. Data on efficacy and safety were derived from a network meta-analysis. Medical costs of clinical events were extracted from a dedicated analysis of the French health administrative databases and utility data were derived from literature. RESULTS: In the base case analysis, apixaban was the dominant strategy compared to all other comparators. Probabilistic sensitivity analyses revealed apixaban was more likely to be cost-effective than all other strategies. CONCLUSIONS: An extended treatment duration of 12 months, apixaban remained dominant versus rivaroxaban and dabigatran but cost-effective compared to fondaparinux/VKA and LMWH/VKA (ICUR 2,381/QALY). Similar results were observed for treatment duration of 18 months with an increase of ICUR to 5,034/QALY and 5,035/QALY, respectively. CONCLUSIONS: Apixaban can offer substantial clinical and economic benefits over alternative therapies for acute and extended treatment of VTE.

PCV124

A LITERATURE REVIEW TO EVALUATE THE PHARMACOECONOMIC VALUE OF RANOLAZINE FOR THE TREATMENT OF SYMPTOMATIC CHRONIC STABLE ANGINA

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OBJECTIVES: To conduct a systematic review on the pharmacoeconomic value of ranolazine vs standard-of-care (SOC) for the treatment of symptomatic chronic stable angina. METHODS: The cost-effectiveness analysis registry was conducted from the French National healthcare insurance perspective. RESULTS: A Pro-con search was conducted in Medline, Cochrane Library and Cost-Effectiveness Analysis Registry without time limits were searched. Articles in English were identified with the following keywords: cost, economic, ranolazine, ranexa, angina, coronary artery disease. The identified studies were independently reviewed by two investigators against pre-determined inclusion and exclusion criteria. The Quality of Health Economic Studies scale was used to assess the quality of the included studies. The data of selected studies were extracted onto a data extraction form and subsequently were synthesized into a cost-effectiveness table. From each comparator, incremental cost per quality-adjusted-life-year (QALY) gained and results from sensitivity analyses were extracted. RESULTS: Five studies containing evidence on effectiveness and cost of ranolazine were included in the review. Four of these studies assessed the cost-utility of ranolazine added to SOC compared to SOC alone, using decision tree or Markov models whereas one was a retrospective cost–comparative study. In all studies, patients were stratified according to their angina frequency symptoms. The analysis was conducted from a payer perspective in 4 studies and from the societal perspective in 1 study. The time horizon of analysis did not exceed the 1 year at any case. Ranolazine appeared to be cost-effective since it reduced the number of angina-related hospitalizations and improved the quality of life with an incremental Cost–Effectiveness Ratio (ICER) varying from €4,000 to €15,000 per QALY gained. The ranolazine acquisition cost was the variable that mainly drove the ICER. CONCLUSIONS: The existing evidence showed that ranolazine is cost-effective for the second–line treatment of patients with symptomatic chronic stable angina, added to SOC. Further research is required to confirm – effectiveness of ranolazine in each angina frequency group.

PCV125

COST-UTILITY OF STATIN IN SECONDARY PREVENTION: A PROPENSITY MATCHED ADMINISTRATIVE DATABASE

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OBJECTIVES: Cost-effectiveness analysis for secondary prevention in statues in Brazil. Administrative data such as cost and utility values from foreign populations. Effectiveness from observational database and utility values from a similar population provides real world evidence. The aim of this study is to evaluate the cost-utility of secondary prevention with statins in fatal and non-fatal events based on real world data. METHODS: A cohort model model