were driven by the lower costs of oral administration relative to subcutaneous injection and a lower rate of long-term complications. A number of one-way sensitivity analyses showed that the model was robust. CONCLUSIONS: Rivaroxaban dominates enoxaparin as prophylaxis against VTE following THR and TKR in Korea, reducing overall costs and improving health outcomes.

OBJECTIVES: To evaluate the cost-effectiveness of dabigatran etexilate (DGB) compared to enoxaparin in the prevention of venous thromboembolism (VTE) following total hip replacement (THR) or total knee replacement (TKR) from the perspective of the Portuguese NHS. METHODS: DGB (220 mg once daily) was compared to enoxaparin (40 mg once daily) in patients undergoing THR (prophylaxis 28–35 days) and TKR (6–10 days). A decision tree was used to model the ten week post-surgery acute phase. A Markov process modeled long-term events such as recurrent VTE, post-thrombotic syndrome and intracranial hemorrhage for patient’s remaining lifetimes. Relative risks for VTE and bleed events were derived from the DGB phase III trials, RE-NOVATE and RE-MODEL which compared DGB with enoxaparin 40 mg once daily. Published longitudinal studies were used to estimate the probabilities of long-term events. Resource use associated with administration of the prophylaxis and the management of clinical events was obtained from a national multi-centre prospective study involving 50 patients. Unit costs were taken from national sources. Utility weights were taken from published international literature. RESULTS: VTE and bleeding rates were similar for DGB and enoxaparin. DGB was marginally more expensive than enoxaparin in TKR but less costly in THR, since no nursing time for administration of treatment is required in hospital or following discharge. The probabilistic analysis estimated that DGB cost an additional $111 per patient in TKR (ICER $2,848 QALY) and saved $253 per patient in THR. The probability of DGB being cost-effective was 79% in TKR and 99% in THR at a willingness to pay threshold of $20,000 per QALY. Results proved to be robust across a wide range of sensitivity analyses. CONCLUSIONS: DGB is cost-saving in THR compared to enoxaparin and non-inferior in terms of efficacy or safety. Thus, DGB is cost-effective for the prevention of VTE in patients undergoing THR.

OBJECTIVES: To evaluate the incremental cost-effectiveness of four angiotensin receptor blockers in hypertension patients in a US managed care population. METHODS: A decision analytical model was developed to estimate costs to reach JNC-7 blood pressure (BP) goal for four ARBs: olmesartan (OLM), valsartan (VAL), irbesartan (IRB), and losartan (LOS). The study period was 5/1/01 to 12/31/06. Patients were 218 years, have 22 claims for the IndexARB, a medical claim for HTN (ICD-9 codes 401.xx-404.xx), and minimum 6 months pre- and 9 months post-index eligibility. Outcomes were all-cause and HTN-attributable actual plan costs to achieve JNC 7 goal (<140/90, <130/80 with diabetes mellitus, IDM). Costs were calculated over 120,000 eligible patients receiving ARBs in the plan. BP goal attainment was determined from 1293 medical charts and linked to costs in the claims database. Model robustness was tested using Monte Carlo simulation and probabilistic sensitivity analysis (PSA). RESULTS: 121,472 patients met inclusion criteria. Mean age was 52.2 years, 22 % had DM. ARB cohorts were (n OLM 19,525; VAL 59,176; IRB 17,226 and LOS 25,546). OLM was found more effective in achieving JNC 7 goal, and to incur lower all-cause and HTN-attributable costs, dominating other options. The GE ratios of per percent to patients reach HTN goal for OLM were $8,964 (all-cause costs) and $2,704 (HTN-attributable costs), compared to the ratios for LOS ($10,848 and $3,291), VAL ($10,537 and $3,527) and IRB ($13,397 and $4342). (All costs adjusted to 2006 CPI). Monte Carlo and PSA results were consistent with the baseline analysis. CONCLUSIONS: Compared to VAL, IRB and LOS, OLM was found to be the most cost-effective of the four ARBs for the treatment of hypertension in a large US managed care population.

OBJECTIVES: To estimate the cost-effectiveness of either the public health strategy of increasing tobacco taxes or implementing smoking bans in public venues as a strategy for tobacco control. METHODS: Quit and mortality rates for smokers and nonsmokers were obtained from extant published literature and incorporated into a Markov Chain Monte Carlo model. The model included the public policies of taxes or public accounting for the incidence of acute myocardial infarction (AMI) and related mortality. The model incorporated the value of statistical life, and medical care associated with AMI. RESULTS: The expected life years under conditions of taxes, bans, or neither (base case) were similar at 60.23, 60.25, and 60.37 per smoker respectively. Implementation of bans resulted in net societal losses of $1476 and taxes $984 per smoker over the “no policy” condition. Costs were lowest under the strategy of
increasing per pack taxes by at least 10%, but smokers’ lives were slightly extended by the ban condition. Incremental cost effectiveness ratios for taxes and bans, relative to no intervention were: $29,827 and $29,814 per life year gained, respectively. CONCLUSIONS: Both public policy strategies of taxes and bans have a minimal impact on health and economic benefits over the lifetimes of smokers. Taxes showed an advantage in lower hospitalization and value of lives saved. In addition, taxes are revenue enhancing, while bans require additional enforcement resources. Using tobacco taxes to reduce tobacco consumption and subsequent tobacco-related disease is superior to smoking bans, though the combination of the two policies may be mutually reinforcing for behavioral change and additive in effect.

OBJECTIVES: Clopidogrel is a frequently used drug to prevent subsequent atherothrombotic events in patients with stroke, myocardial infarction, or peripheral arterial diseases. Doctors should subjectively determine whether the price of clopidogrel is justified by its improved therapeutic effect compared to that of aspirin, considering country-wise economic situation. This study analyzed the cost-effectiveness of clopidogrel for atherothrombotic treatment in South Korea. METHODS: Cost-effectiveness was analyzed using the Cambridge model; a Markov model developed using data from the Clopidogrel versus Aspirin in Patients at Risk of Ischemic Events (CAPRIE) study, as per Korean situation. The effect was estimated using data from the Framingham and Saskatchewan databases to calculate the expected survival (in years) for various health states. Direct medical costs from the social perspective, direct non-medical costs, and indirect medical costs were analyzed applying 5% discount rate to both cost and effect. RESULTS: The 2-year follow-up results showed that the number of cardiovascular (CV) events and CV deaths per 1000 patients was decreased by 13.19 and 2.21, respectively, in the clopidogrel group as compared to the aspirin group. As clopidogrel treatment decreased the incidence of CV deaths; the number of life-years gained per 1000 patients was 65.65 (Framingham) and 48.20 (Saskatchewan). The incremental cost-effectiveness ratio determined using incremental costs per life-year gained was US$ 19,017 (Framingham) and US$ 23,904 (Saskatchewan). CONCLUSIONS: Our results showed that clopidogrel was cost-effective treatment of atherothrombotic South Korea, and evaluated a basis for the economic feasibility of clopidogrel administration for atherothrombotic treatment.

OBJECTIVES: Syncope is a significant burden on the health care system and individuals. Screening manoeuvres including medical examination, ambulatory external monitoring, imaging and clinical diagnostic tests provide a presumptive diagnosis in a limited number of cases, since syncope recurrence is unpredictable. Especially, Syncope is ruling out a cardiac arrhythmia as the cause is challenging, time consuming and relies on recording the cardiac rhythm at the time of spontaneous recurrences. The Insertable Cardiac Monitor (ICM) is a new, efficient and accurate technique for long-term monitoring and recording the "events" in a patient. This study assesses the cost-effectiveness of adding the ICM to the standard diagnostic protocol in Canadian health care system. METHODS: A decision analytic model was developed assessing the cost-effectiveness of the standard diagnostic approach compared to ICM from a Canadian provider perspective. The main clinical outcome used in the model was "yield" defined as the rate of correct diagnoses derived from published literature. The frequency of resources used and associated costs were derived from literature, and the Ontario Health Insurance Policy. RESULTS: The diagnosis yield for ICM and standard approach was 33.7% and 41.8% respectively. The model assessed the cost per diagnosis in the two arms. The incremental cost per diagnosis was $6237 in favour of ICM. Sensitivity analysis showed that in the lower confidence interval (CI) the ICM is the “dominant” option and in upper CI limits the ICER was $35,358 and below the $50,000 acceptability threshold. CONCLUSIONS: ICM is a safe, accurate and effective device for diagnosis of syncope and should be considered as an alternative in diagnosis of syncope. The cost of ICM is partially offset by savings in hospitalization. A societal perspective will reduce the ICER in favour of ICM by preventing complications of syncope (i.e., falls, fractures, mortality) and increase patient HRQoL.

OBJECTIVES: To determine the cost-effectiveness, from the Brazilian Ministry of Health perspective, of Fluvastatin IR 20 mg, Fluvastatin IR 40 mg, Fluvastatin IR 80 mg and Fluvastatin XL 80 mg. Also we calculated the budget impact of introducing Fluvastatin XL 80 mg into the current Brazilian national drug formulary. METHODS: The cost effectiveness was determined using clinical data from published systematic reviews and cost the values were derived using government prices. RESULTS: The incremental cost-effectiveness ratio (ICER) the ICM is the "dominant" option or the ICM is partia...