related cost-effectiveness studies on diabetes. METHODS: A literature search using PubMed and OhioLINK websites was conducted for cost-effectiveness studies. The key terms used for literature search were “diabetes”, and “cost, cost-effectiveness, cost-benefit, economics, or treatment outcome”. Eligible studies were randomized controlled trials focusing cost-effectiveness of diabetes drug therapies, published in English between July 2005 and October 2007. Review articles were excluded. RESULTS: Initial search resulted in 911 abstracts. After applying the inclusion/exclusion criteria, 11 studies were selected from Canada, UK, USA, Austria, Germany and Asian regions. The median sample size was 638 patients; the median duration of trials was 39 weeks. Most studies demonstrated overall positive effects in economic outcomes and found that interventions improved the cost-effectiveness and health care utilization over the control groups from their individual perspectives. Four studies focused on insulin glargine, which together with other new drugs including insulin detemir, exenatide and rosiglitazone can be more cost-effective. With regard to diabetes-related complications such as renal disease, hypertension and diabetic peripheral neuropathic pain, these studies suggest that the earlier introduction of preventive measures such as therapeutic drugs would lead to longer delays in the onset of its complications and the overall savings in health care resource utilization. CONCLUSION: There is growing evidence that these drug interventions may promote diabetic health with better economic outcomes. The review complemented our previous study of cost on diabetes till July 2005. Future research should include extensive database search including databases such as Cochran and manual search for the journals Diabetes, and Diabetes Care.

PCV37
BIATRIAL VERSUS RIGHT ATRIAL APPENDAGE PACING IN BRADYCARDIA TACHYCARDIA SYNDROME
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OBJECTIVE: Bradycardia-tachycardia syndrome (BTS) management includes bradycardia and tachyarrhythmia therapy. Right atrial appendage pacing (RAA), a typical pacing site, manages bradycardia but have poor AF preventive properties. Biatrial pacing (BiA) is a modality of pacing to prevent AF in BRT patients with interatrial conduction disturbances. It is a cost-effectiveness analysis of BiA versus RAA pacing in AF prevention, in BTS patients. METHODS: Follow-up study: 125 pts (51 males, mean age = 67.9) with BTS, P-wave >120 ms and paroxysmal, recurrent AF; 50 pts had BiA and 75 RAA pacing system implanted. Observation window was one year before pacemaker implantation to three years after. Costs were calculated from the public health care payer perspective. Primary clinical endpoints: chronic AF occurrence and patient reported outcome reflecting symptomatic AF episodes frequency at four point scale. AF episodes were defined very frequent in case of AF episodes >1 per week (rank 3), recurrent AF = 1 episode per week to 1 episode per month (rank 2), occasional AF if occurred <1 per month (rank 1), no recurrences = rank 0. Confidence intervals for CER by bootstrap method. RESULTS: The frequency of symptomatic AF episodes decreased in BiA group as measured on the scale (2.54 vs 1.28; p < 0.001) and not in the RAA group (1.33 vs 1.53; NS). There was 71.2% reduction of annual number of hospitalizations in BiA group; no change in RAA group as compared to pre-implantation period. In BiA group 12.0% of patients developed chronic AF; 17.3% in the RAA group (NS). Incremental cost-effectiveness ratio for decrease of AF frequency episodes (BiA vs RAA) was 499.97 USD PPP (95% CI—272.5–1353.6) for one point on the scale. CONCLUSION: Biatrial pacing in contrast to RAA pacing decreases symptomatic AF episodes frequency and hospitalizations. BiA compared to RAA pacing is a cost-effective method of AF prevention in BTS patients with pacing indications.

PCV38
BOSENTAN IS A COST-EFFECTIVE TREATMENT FOR UNITED KINGDOM PATIENTS WITH PULMONARY ARTERIAL HYPERTENSION OF WHO CLASS III
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OBJECTIVE: To assess whether bosentan is a cost-effective first-line treatment option compared with epoprostenol and with no active intervention, all added to palliative care, for patients with pulmonary arterial hypertension (PAH) of WHO functional class (FC) III in the UK. METHODS: A cost-utility model was constructed to simulate hypothetical patients with PAH. Patients were assumed either to remain in FC III until death or to deteriorate to FC IV where epoprostenol and palliative care would be prescribed until death. It was further assumed that the choice of first-line treatment would not affect the time to death, but instead would affect the duration patients spend in FC IV. The time to deterioration in FC was approximated by time to clinical worsening (TTCW), a composite measure of death or worsening of PAH leading to a change in treatment. Data on TTCW was estimated from over three years of observational data for bosentan and from published epidemiological literature for palliative care alone. For epoprostenol, TTCW was assumed equal to that of bosentan—in accordance with published literature. The time horizon was that of patient lifetime with only direct medical costs considered. The utility associated with each FC was taken from published literature. Costs and benefits were discounted at 3.5% per annum. Probabilistic sensitivity analyses were undertaken. RESULTS: Bosentan dominated epoprostenol, as it provided the same number of QALYs at a reduced cost. Bosentan dominated no active intervention, as it had lower costs and greater QALYs, due to the reduced time, per patient, spent in FC IV. CONCLUSION: Bosentan is a more cost-effective first-line therapy for patients with PAH FC III in the UK than either epoprostenol or no active intervention. It can be inferred that bosentan would also dominate any other intervention with a TTCW not proven to be better than palliative care alone.

PCV39
INDIRECT COMPARISONS OF RIVAROXABAN VS ALTERNATIVE PROPHYLAXES FOR THE PREVENTION OF VENOUS THROMBOEMBOLISM IN PATIENTS UNDERGOING TOTAL HIP OR TOTAL KNEE REPLACEMENT
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OBJECTIVE: To estimate differences in the efficacy and safety of rivaroxaban versus fondaparinux, warfarin and dabigatran in prevention of venous thromboembolism (VTE). Such differences may influence the cost-effectiveness of thromboprophylaxis following total hip replacement (THR) or total knee replacement (TKR). METHODS: Three large, randomized controlled trials (RCTs; RECORD1–3) demonstrated relative risk reductions...
RESULTS: Rivaroxaban showed statistically significant reductions in the incidence of key endpoints. In THR, when compared with fondaparinux, rivaroxaban was associated with RRRs of 56% in total VTE (p = 0.015) and 89% (p = 0.015) in symptomatic VTE. When compared with dabigatran, RRRs with rivaroxaban were 86% (p = 0.0018) in symptomatic VTE and 77% (p < 0.001) in total VTE. Similarly, when compared with warfarin, the RRR in symptomatic VTE with rivaroxaban was 92% (p = 0.003). In TKR, rivaroxaban produced 67% (p < 0.001) and 66% (p < 0.001) reductions in total VTE and deep vein thrombosis (DVT) respectively, versus warfarin, and 50% (p < 0.001) reductions in total VTE and DVT versus dabigatran. No other statistically significant differences were found. Importantly for a new anticoagulant, there were no increases in major bleeding so safety endpoints are unlikely to influence cost-effectiveness. CONCLUSION: Rivaroxaban reduced the incidence of overall or symptomatic VTE events relative to alternative prophylaxes without increased major bleeding, reflecting a better clinical profile. These risk reductions may have implications for cost-effectiveness analyses.