ECONOMIC IMPACT OF A PHYSICIAN-PHARMACIST COLLABORATIVE CARE INTERVENTION IN PRIMARY CARE FOR PATIENTS WITH DYSLIPIDEMIA: A CLUSTER-RANDOMISED CONTROLLED TRIAL (TEAM STUDY)

Villeneuve J1, Perreault S1, Blais L1, Berbiche D2, Hudon E2, Lussier MT3, Vanier MC4, Lamarre D5, Genest J1, Lalonde L1
1University of Montreal, Montreal, QC, Canada, 2Centre de Santé et Services Sociaux de Laval, Laval, QC, Canada, 3McGill University Health Center, Royal-Victoria Hospital, Montreal, QC, Canada

OBJECTIVE: To evaluate the health care costs of a physician-pharmacist collaborative care (PPCC) over usual care (UC) for patients at moderate (MR) or high risk (HR) of coronary heart disease with dyslipidemia. Trained community pharmacists provided advanced care including monitoring of laboratory tests and lipid-lowering medication dosage adjustments. METHODS: Annual direct health care costs and incremental costs were estimated from an interim analysis of a 3-year cluster randomised controlled trial (TEAM study) evaluating the efficacy of a PPCC versus UC for patients on a statin but not at lipid targets. The mean annual costs of pharmacists’ follow-up (pharmacists’ training, pharmacist visits, laboratory tests), physicians’ follow-up (physician visits, laboratory tests), lipid-lowering treatment (medication, pharmacists’ fee), and total cost (pharmacists’ follow-up, physicians’ follow-up, lipid-lowering treatment) were compared between groups by t-tests. RESULTS: Geographical clusters of general practitioners (GP) and pharmacists were randomised to PPCC (GP = 41; pharmacists = 58) or UC (GP = 36; pharmacists = 46) and followed 167 patients (PPCC = 67; UC = 100). Costs for the pharmacists’ follow-up per patient were CND$390.80 and CND$410.53 for MR and HR, respectively, including CND$320.67 per patient for the pharmacists’ training. Total costs per PPCC patient were significantly higher than for UC patient (MR: CND$1065.39 vs. CND$591.48; HR: CND$1065.39 vs. CND$591.48). Incremental costs per patient for the physicians’ follow-up were: CND$33.38 (p = 0.004) for MR and CND$16.17 (p = 0.07) for HR, and for the lipid-lowering treatment, CND$39.04 (p = 0.06) for MR and CND$79.69 (p = 0.06) for HR. Incremental total costs per patient were CND$396.45 (p < 0.0001) for MR and, CND$473.91 (p < 0.0001) for HR. Assuming an incremental efficacy of 10% LDL reduction between groups, ICERs per patient (95% CI) would be CND$39.65 (2CND$1.35 to CND$7.94) for MR and CND$47.39 (CND$38.54 to CND$56.24) for HR per 10% LDL reduction. CONCLUSION: Community pharmacists can provide advanced care to patients with dyslipidemia at a reasonable cost and contribute to reduce the GP workload.

THE COST-UTILITY OF ALISKIREN IN THE TREATMENT OF MILD TO MODERATE HYPERTENSION: A CANADIAN HEALTH CARE SYSTEM PERSPECTIVE

Lee A1, Barry SJ2, Leiter L3, Nani J2, Annemans L4, Tucker D5, Michaliszyn AE6, Barbeau M4, Vincke G7
13 Innovus, Burlington, ON, Canada, 2University of Toronto, Toronto, ON, Canada, 3Cara Medical Clinic, Calgary, AB, Canada, 4Gent University, Gent, Belgium, 5iMS Health, Basel, Switzerland, 6Novartis Pharmaceuticals Canada Inc, Dorval, QC, Canada, 7Novartis Pharma AG, Basel, Switzerland

OBJECTIVE: To determine the cost-utility of aliskiren in combination or monotherapy vs. usual care for patients with mild to moderate hypertension from the Canadian health care system perspective. METHODS: A Markov model was programmed to simulate patient flow between 17 health states (including death), different treatment lines and allowing for non-persistence. Cardiovascular disease (CVD) related outcomes were projected for over 40 years from systolic blood pressure (SBP) reductions observed in several randomized trials using risk equations from landmark studies, including the Framingham Heart Study. Patients were at low risk of CVD, based on their demographic and clinical history at baseline. The following comparisons were analyzed: aliskiren + thiazide-diuretic vs. ACEI + thiazide-diuretic, ARB + thiazide-diuretic, and CCB + thiazide-diuretic, aliskiren + CCB vs. thiazide-diuretic + CCB, and aliskiren vs. ARB. Direct costs for health states and events were taken from published literature. Weighted average unit prices were obtained for each antihypertensive drug class. All costs are in 2007 CAD. The primary outcome was incremental cost per additional quality-adjusted life-year QALY. Additional outcomes included life expectancy and number of CVD-related deaths. RESULTS: Aliskiren + thiazide-diuretic was shown to be dominant vs. CCB + thiazide-diuretic, cost-effective in monotherapy vs. ARB ($1011/QALY) and cost-effective when in combination therapy with CCB vs. thiazide-diuretic + CCB ($29,813/QALY). More variability occurred when comparing aliskiren + thiazide-diuretic to ARB + thiazide-diuretic (ranging from dominance to being dominated). Based on pooled data of aliskiren vs. ARBs showing similar SBP-lowering effect, the cost impact of aliskiren is the need for a repeated percutaneous coronary intervention. Transition probabilities were directly extracted from the meta-analysis. Quality of life data was derived from the ARTS trial. Costs for the resource use (including stenting with DES and BMS) were obtained from Medicare diagnosis related groups for ten leading cardiology hospitals and a random sample of ten United States hospitals offering stenting procedures. All costs are in USD$ of the financial year 2007. Probabilistic sensitivity analysis was performed with 10,000 Monte Carlo simulations. RESULTS: Cypher stents are slightly more effective than bare metal stents with an incremental effect of 0.001 QALYs (95% CI –0.042 to 0.012 QALYs), while the Taxus stents provide ~0.004 incremental QALYs (95% CI –0.064 to 0.012). DES are more costly than BMS. At a willingness to pay of $100,000/QALY, the incremental net monetary benefit (INMB) for Cypher stents is $–940 and $–1612 for Taxus stents, respectively, for the leading hospitals. Using the random sample of hospitals Cypher and Taxus stents yield an INMB of $–1146 and $–1751, respectively. The probability that DES are cost-effective ranges from 34% for Taxus stents in the random sample to 43% for Cypher stents in the leading hospitals. CONCLUSION: From a Medicare perspective, the use of drug-eluting as compared to bare metal stents is not cost-effective when implanted in unselected patients with symptomatic ischemic coronary artery disease.