OUTCOMES RESEARCH IN CANADA

ECONOMIC ANALYSIS OF IMPLANTABLE CARDIOVERTER DEFIBRILLATORS IN THE PRIMARY PREVENTION OF SUDDEN CARDIAC DEATH—A CANADIAN PERSPECTIVE

Deniz B1, Sadri H2
1United BioSource Corporation, Concord, MA, USA, 2Medtronic of Canada Ltd, Toronto, ON, Canada

OBJECTIVE: To conduct a cost-benefit analysis (CB) for the Implantable Cardioverter Defibrillators (ICDs) in the primary prevention of Sudden Cardiac Death (SCD) compared to amiodarone. METHODS: A discrete event simulation model was built to determine the cost-benefit ratio associated with ICDs from a societal perspective in Canada using the “value of life” approach as a measure of “benefit”. The clinical inputs were derived from the Sudden Cardiac Death in Heart Failure Trial (SCD-HeFT) and the Amiodarone Trial Analysis (ATA) studies. The related costs were derived from the Ontario Health Insurance Plans’ (OHIP) schedule of benefits and fees, Ontario Drug Benefit formula (ODB) and published data. The value of life in Canada (CND$5.8 Mil), as determined by Health Canada, was used in the model. One hundred replications of 1000 identical twin pairs over 7 years, aligned with the average life of an ICD, were run. The costs (year 2006) and outcomes are discounted at 3%. Sensitivity Analysis (SAs) were performed for key input parameters. RESULTS: The absolute all-cause mortality was reduced by eight percent with ICD over seven years compared to amiodarone. The average costs associated with ICD and amiodarone treatments were estimated as CND$32,000 and CND$6400 per patient, respectively. The predicted cost-benefit ratio (CBR) was 0.04. This figure suggests that for every $1 spent for ICD in the primary prevention of SCD the society will gain $25 in “value” by human lives saved. SAs showed that results were robust (CBR: 0.035–0.044). CONCLUSION: SAs suggest that ICDs are worthwhile investment from a societal perspective in Canada. The initial investment for ICD in primary prevention of SCD in Canada is comparable and in many cases lower when compared to other societal programs for saving lives.

THE USE OF RESEARCH ABSTRACTS IN FORMULARY DECISION MAKING BY THE ONTARIO CANCER DRUG APPROVAL COMMITTEE

Weizman A1, Bell C2
1University of Toronto, Toronto, Ontario, Canada, 2Department of Medicine, St. Michael’s Hospital, Toronto, ON, Canada

OBJECTIVE: To evaluate the influence of research abstracts in guiding evidence based decisions of the Ontario Cancer Drug Approval Committee. METHODS: The Ontario Cancer Drug Approval Committee is a joint initiative between the Ontario Ministry of Health and Cancer Care Ontario that provides a clinical and economic evaluation process for new cancer-related drugs for formulary listing consideration. The minutes of the monthly committee meetings between 2005 and 2007 were reviewed. One submission per drug indication was included. Elements from the decisions were entered into a database which included the level of evidence supporting each decision, the location from which the evidence originated, and the year the literature was produced. An abstract was defined as anything in the evidentiary base that was unpublished or was clearly defined as an abstract in the meeting minutes. RESULTS: There were 62 recommendations reviewed over the 27 months. Ten recommendations were deferred and 8 recommendations were re-submissions, thus 44 recommendations underwent analysis. The subcommittee decisions were based on literature of varying levels of evidence. There were 24 recommendations based on abstracts, of which 14 (58%) were approved and 10 (42%) were rejected. Eleven recommendations were based exclusively on abstracts, 7 (64%) of which were in favor of the new chemotherapy indication. Among the 20 recommendations not based on an abstract, 10 (50%) were approved and 10 (50%) were rejected. As a comparison, published Randomized Control Trials were part of the evidentiary base in 27 committee recommendations (61%). Of these, 16 (59%) were in favor of a new chemotherapy indication while 11 (41%) were opposed. CONCLUSION: Research abstracts are commonly involved in evidence based decision making for cancer drug funding. The rates of approving cancer drugs for funding by the Ontario Cancer Drug Approval Committee were similar among recommendations based on abstracts and other levels of evidence.

A COST-EFFECTIVENESS ANALYSIS OF HEPATITIS C SCREENING AMONG IMMIGRANTS IN CANADA

Chen W1, Dinner K1, Wong T1, Heathcote J2, Krahm MD1
1University of Toronto, Toronto, ON, Canada, 2Public Health Agency of Canada, Ottawa, ON, Canada

OBJECTIVE: The costs and benefits of hepatitis C (HCV) screening among immigrants need to be assessed since about 20% of HCV cases in Canada are immigrants. METHODS: A decision analytic model was developed to assess HCV screening among immigrants. The prevalence of hepatitis C and distributions of viral genotypes among immigrants were projected by the studies related to HCV epidemiology in their home countries. Meta-analyses of randomized trials were conducted to estimate the effectiveness of current anti-viral therapy (pegylated interferon plus ribavirin) in terms of genotype and disease stage. Survival regression model and logistic regression model were applied to project the transition probabilities for the disease progression by identifying cohort studies on the natural history of chronic HCV. The awareness of the disease, and the HCV incidence among immigrants were estimated using PHAC’s surveillance data. The costs associated with HCV screening test, anti-viral therapy, and health care were estimated through published literatures. Cost-effectiveness analysis for immigrants was further stratified by world regions. RESULTS: HCV screening was associated with an increase of life years (0.0013 years) and cost ($40.6) when compared to no screening for all immigrants ($30,552 per additional life year). HCV screening for immigrants born in South Asia was associated with longer life years (0.0108 years) and less cost (~$50.6). HCV screening strategy for immigrants born in Africa cost $8635 to gain one additional life year. No obvious advantages of HCV screening were observed for immigrants from other areas. CONCLUSION: The preliminary findings suggest that it may be cost-effective to screen immigrants from South Asia and Africa. However, further studies are needed to confirm our findings.

THE EARLY CLINICAL AND ECONOMIC BENEFITS OF ATORVASTATIN IN A CANADIAN SETTING

Menikle E1, Ramos E1, Kuznik A2, Botteman MP3
1Pfizer Canada Inc, Kirkland, QC, Canada, 2Pfizer Inc, New York, NY, USA, 3PharmEnter North America LLC, Bethesda, MD, USA

OBJECTIVE: Recent analyses from randomized clinical trials (RCTs) indicate that, compared to generic simvastatin, atorvas-