ISPOR 4th Asia-Pacific Conference Research Abstracts

COST-EFFECTIVENESS STUDIES

CE1
COST-EFFECTIVENESS ANALYSIS OF GLUCOSAMINE SULPHATE FOR THE TREATMENT OF OSTEOARTHRITIS IN THAILAND
Chayakunapruk N1, Saokawee S2, Pansang S1
1Naresuan University, Muang, Phitsanulok, Thailand; 2Naresuan University Phayao, Muang, Phayao, Thailand

OBJECTIVES: Recent evidences have shown that glucosamine sulphate (GS) is a potentially effective treatment for osteoarthritis; however, it is unclear whether its use is cost-effective from the perspective of Thai Ministry of Public Health (MOPH). This study aims to estimate the cost-effectiveness of glucosamine sulphate (GS) compared with current care (CC) in osteoarthritis (OA) patients in Thailand. METHODS: A Markov model was used to simulate 10,000 hypothetical OA cohorts. The model comprised four health states including OA with total knee replacement (TKR), OA with TKR after TKR, OA without TKR, and death. Transition probabilities, utility, costs, and time horizons were obtained from published literature. Cost-effectiveness analysis was performed from the Thai healthcare system perspective. RESULTS: The estimated cost/QALY gained was 774,125 THB/QALY for GS generic brand and 2,612,605 THB/QALY for GS original brand. Based on a cost-effectiveness cut-off of 100,000 and 100,000 THB/QALY, the probability that GS (generic brand) would be cost-effective was 38.6% and 50.0%, respectively. Using GS generic brand would be cost-effective if the price was lowered by 20%.

CONCLUSIONS: Use of GS in OA patients may not be cost-effective from the perspective of Thai Ministry of Public Health. Policymakers may consider using such value for money information for aiding policy decision-making.

CE2
COST-UTILITY ANALYSIS OF INTENSIVE LIFESTYLE INTERVENTIONS OR METFORMIN VERSUS STANDARD CARE IN THE PREVENTION OF TYPE 2 DIABETES IN HIGH-RISK SUBJECTS IN AN AUSTRALIAN SETTING. A SIMULATION ANALYSIS BASED ON THE LONG-TERM RESULTS OF THE DIABETES PREVENTION PROGRAM AND DIABETES PREVENTION PROGRAM OUTCOMES STUDY
Tucker DM, Palmer AJ
Menzies Research Institute, University of Tasmania, Hobart, Tasmania, Australia

OBJECTIVES: The 3-year Diabetes Prevention Program (DPP) and 7-year follow-up Diabetes Prevention Program Outcomes Study (DPPOS) demonstrated that both intensive lifestyle interventions (ILI) and metformin led to reductions in the incidence of type 2 diabetes (T2D) versus standard care (control) in overweight or obese subjects. This study aims to evaluate cost-effectiveness of ILI and metformin from societal perspective. METHODS: A Markov model was used to project the 10-year clinical and cost outcomes of the DPP to patient lifetimes. Four health states were modeled: normoglycemia (NG), IGT, T2D and dead. Subjects started in IGT and progressed to T2D or NG, depending on the treatment received. State mortalities were performed. Both cost and health outcomes were discounted at 3%. RESULTS: The estimated QALYs were 17.88 and 17.79 QALYs for GS and CC, respectively. The costs were 31,256 THB (31,442 THB) for GS generic brand and 123,679 THB, 279,988 THB, and 57,863 THB, respectively. Compared to CC, the incremental cost per QALY gained was 774,125 THB/QALY for GS generic brand and 2,612,605 THB/QALY for GS original brand. Based on a cost-effectiveness cut-off of 100,000 and 100,000 THB/QALY, the probability that GS (generic brand) being cost-effective was 38.6% and 50.0%, respectively. Using GS generic brand would be cost-effective if the price was lowered by 20%.

CONCLUSIONS: Use of GS in OA patients may not be cost-effective from the perspective of Thai Ministry of Public Health. Policymakers may consider using such value for money information for aiding policy decision-making.

CE3
COST-UTILITY ANALYSIS OF CHOLINESTERASE INHIBITORS IN THE TREATMENT OF MILD TO MODERATE ALZHEIMER’S DISEASE
Turongkaravee S
Health Intervention and Technology Assessment Program (HITAP), Northburi, Northburi, Thailand

OBJECTIVES: To evaluate the cost-effectiveness of cholinesterase inhibitors (i.e., donepezil, rivastigmine, and galantamine) compared with no drug treatment in patients with mild to moderate Alzheimer’s disease (AD) based on the governmental and societal perspectives. METHODS: A Markov model was used to evaluate the cost-effectiveness of drug treatment options versus no treatment. Input parameters on the clinical efficacy of cholinesterase inhibitors were obtained from systematic reviews and meta-analysis of international literature. Costs associated with AD were obtained from primary data collection at a university hospital and literature reviews. RESULTS: Costs of providing galantamine for all Thai patients with mild to moderate AD at the first year were 12,768 million THB. CONCLUSIONS: At the ceiling threshold of three times of gross domestic product (GDP) per capita (300,000 Baht per QALY), providing galantamine would be a cost-effective intervention for mild to moderate AD patients in Thailand. Galantamine would also be cost-effective at the threshold of one-time of GDP per capita (100,000 Baht per QALY) for patients with EPS.

CE4
ECONOMIC EVALUATION OF REHABILITATION SERVICES FOR INPATIENT WITH STROKE IN TWO REGIONAL HOSPITALS IN THAI CONTEXT
Khiaocharoen O1, Tesarawattanon Y1, Pannarunothai S2, Riewpaiboon W3
1Naresuan University Faculty of Medicine, Phitsanuloke, Thailand; 2Health Intervention and Technology Assessment Program (HITAP), Northburi, Thailand; 3Naresuan University Muang, Phitsanuloke, Thailand

The Program of Health Promotion for People with Disabilities in Thai Society, Nonthaburi, Thailand

OBJECTIVES: To evaluate cost-effectiveness and cost-utility of rehabilitation for stroke patients under Thai settings. METHODS: This was a prospective observational cohort study with a 4-month follow-up. Subjects were 207 first stroke patients in two regional hospitals. Data was prospectively collected from July 2008 to May 2009. Top-down and bottom-up costing approaches were employed using societal perspective. The Barthel index (BI) was used to evaluate functional status and the EQ-5D was used to assess patients’ quality of life. Effectiveness was defined as improving functional status and QALY. Multivariate analysis of variance, longitudinal logistic model, and multiple regressions were employed. Results: Compared to the control group, BI and QALY of patients with rehabilitation were significantly improved (P < 0.01). The incremental cost-effectiveness ratio of providing of rehabilitation services for stroke patients was 73,191 Baht per QALY. Cost-effectiveness acceptability curves was moderate at the level of 85% for societal perspective. The rehabilitation services are likely to represent good value for money at the threshold of 200,000 Baht per QALY. CONCLUSIONS: The rehabilitation services for disabled stroke survivors were cost effective under the Thai health-care setting.