COST AND OUTCOMES OF THE DIABETES CLINIC IN A COMMUNITY HOSPITAL, MAE HONG SON, THAILAND

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OBJECTIVES: To determine cost and outcomes of a diabetes clinic in a community hospital of Mae Hong Son Province in 1999. METHODS: A retrospective study, from the provider viewpoint, was performed by collecting three groups of annual operating cost; labour cost (LC), drug and medical supplies cost (MC), and diagnostic cost (DC). The clinic contained of behavioral group counseling about diet, drug, exercise and foot-care by nurses, pharmacist and self-help group. At the end of the study, outcomes were evaluated by the number of patient who achieved in the fasting blood sugar (FBS) of 126 mg/dl. without any severe complications and/or the number of patient with adherence for follow up visits. RESULTS: Results showed that total operating cost of diabetes clinic was 193,244.64 Baht with a proportion of LC:MC:DC of 2.36:5.55:1. Drug and medical supplies accounted for more than 60% of total operating cost. The unit cost of diabetes clinic was 1932.45 Baht per patient. In total, 62 patients with FBS control and 71 patients with adherence for follow-up were found from all of 100 diabetic patients in the clinic. A total of 33 successful patients with both FBS control without severe complications and having adherence were found. Uncontrol FBS and loss from follow up were the failures that affected to the cost through drug and medical supplies overuse and the number of unwanted admissions. CONCLUSIONS: Drug and medical supplies accounted for the highest cost of the clinic. To reduce cost of drug and medical supplies overuse and increase the outcomes of the clinic, drug and self-care personnel counseling by pharmacist could be a good procedure for solving the problem. To evaluate the efficiency of the clinic, cost and outcomes were the needed indicators.

ECONOMIC VALUE OF ACARBOSE TREATMENT IN PERSONS WITH IMPAIRED GLUCOSE TOLERANCE (IGT) FOR THE GERMAN HEALTH CARE SYSTEM

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OBJECTIVES: The Study TO Prevent Non-Insulin Dependent Diabetes Mellitus (STOP-NIDDM) demonstrated that acarbose therapy over 3.3 years delays or prevents the development of type-2 diabetes as well as cardiovascular (CV) events in persons with impaired glucose tolerance (IGT). The aim of the present study is to assess the economic advantage of these clinical results for the German health care system. METHODS: A cost-effectiveness-analysis from the German payers' perspective was conducted. The outcome measure was cost per transition to diabetes prevented or delayed. Analyses were conducted for the total population (acarbose (N = 682) and placebo (N = 686)), and subgroups at high risk for CV disease, for diabetes or both. Cost data were derived from published sources and adjusted to the year 2003 where necessary. Future costs and benefits were discounted by 5%. Acarbose therapy costs and the costs for managing new cases of diabetes, hypertension, and CV events were taken into account. Only direct healthcare costs were considered. RESULTS: For the total population treated over 3.3 years, the incremental cost-effectiveness-ratio was 772€ per case of diabetes delayed. For all high-risk subgroups, acarbose treatment was the dominant treatment option: Cost savings per person in the subgroup at high risk for CV disease, for diabetes and for both CV disease and diabetes were 674€, 42€ and 408€ respectively over 3.3 years. These results were robust to sensitivity analyses. CONCLUSIONS: In addition to the significant clinical benefits observed with acarbose therapy in pre-diabetic persons, the cost-effectiveness model estimated potential cost savings to the German healthcare system in those persons at high risk for diabetes and/or cardiovascular events. For the total population, acarbose therapy was estimated to be cost-effective.

COST-EFFECTIVENESS ANALYSIS OF THE DIABETES PREVENTION PROGRAM IN A SPANISH SETTING

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OBJECTIVES: Metformin (plus standard lifestyle advice) or intensive lifestyle changes (ILC) reduced the risk of developing Type-2 diabetes by 31% and 58% versus standard lifestyle advice (control) respectively, in subjects with impaired glucose tolerance (IGT) in the Diabetes Prevention Program (DPP). We adapted a validated, peer-reviewed, published diabetes prevention model to assess the cost-effectiveness of DPP interventions in a Spanish setting. METHODS: The published Markov model simulated 3 states; patients progressed from “IGT” to “Type-2 diabetes” and “death”. Probabilities were derived from the DPP and published Spanish data. Life expectancy (LE) was calculated for each treatment arm. Spanish-specific direct costs of implementing DPP interventions and of diabetes were retrieved from published sources. Total costs/patient (TC) and costs/life-year gained were calculated. LE was discounted at both 0 and 3% annually, while costs were discounted at 3% annually in accordance with current Spanish guidelines. Extensive sensitivity analyses were performed. RESULTS: Both interventions improved LE but increased TC versus control. Mean improvements in non-discounted LE were 0.33 and 0.87 years for metformin and ILC, respectively. TC were increased by 626€ and 8784€/patient with metformin or ILC respectively, with incremental costs/life-year gained (LYG) (TC and LE discounted 3% annually) of 3913€ and 22,523€ for metformin or ILC versus control, respectively. Results were most sensitive to the costs of implementing ILC (in particular, the costs associated with dieticians). CONCLUSIONS: Metformin was cost-effective, and the initial costs of pharmacological intervention in prediabetic individuals should not deter healthcare systems from implementing diabetes prevention programs. ILC was towards the upper limits of what is generally considered good value for money in Spain (i.e. <30,000€/LYG). If the role of lifestyle case managers was played by less expensive personnel (e.g. a fitness trainer), the incremental cost-effectiveness ratio for ILC versus control could be as low as 9185€/LYG.

COST-EFFECTIVENESS OF ACARBOSE FOR THE MANAGEMENT OF IMPAIRED GLUCOSE TOLERANCE IN SWEDEN

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OBJECTIVES: To assess the cost-effectiveness of acarbose in the management of patients with impaired glucose tolerance (IGT) in Sweden using the multinational, randomised, placebo-controlled STOP-NIDDM trial, in which patients with IGT treated with acarbose experienced significant reductions in the incidence of type-2 diabetes and cardiovascular (CV) events. METHODS: A disease state transition model using data from the subgroup at high risk for CV disease, for diabetes and for both CV disease and diabetes were 674€, 42€ and 408€ respectively over 3.3 years. These results were robust to sensitivity analyses. CONCLUSIONS: In addition to the significant clinical benefits observed with acarbose therapy in pre-diabetic persons, the cost-effectiveness model estimated potential cost savings to the German healthcare system in those persons at high risk for diabetes and cardiovascular events. For the total population, acarbose therapy was estimated to be cost-effective.