HOW TO ESTIMATE THE COST OF DIABETES BASED ON INFORMATION FROM THE FRENCH HEALTH INSURANCE DATABASE (SNIRAM)?

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OBJECTIVES: The aim of this study is to assess for 2012 the cost of diabetes from a payer perspective, based on the French health insurance database and using two different approaches: (1) bottom-down versus bottom-up.

METHODS: Using information from about 60 million of individuals from the general scheme insurance database (85% of the French population), we developed algorithms to identify all people who received care for each of 56 groups of diseases or medical events or treatments, which are frequent, severe and/or costly. Algorithms have been defined for each patient. For diabetes, we used ICD-10 diagnoses for long-term chronic diseases, reimbursement for anti-diabetic drugs. Costs of all reimbursed expenditures (out-patient, hospitalization, disability/sickness benefits) were extracted per individual.

The top-down method allocated expenditure to each of the 56 diseases based on the average expenditure by disease calculated for individuals with only one disease. All expenditures were thereafter extrapolated to the whole population. For the bottom-up approach, diabetes expenditures were estimated by identifying finely in our database expenditure items which are partly or wholly directly related to diabetes according to expert judgment.

RESULTS: Based on the top-down approach, among the 146 billion euros of expenditures reimbursed by national health insurance (all insurance schemes) in 2012, 7.5 billion (5%) are attributable directly to diabetes. Expenditures for chronic renal insufficiency and cardio-vascular diseases, frequent diabetes complications, are attributed separately. The bottom-up method represents more than 50% of the diabetes expenditures, other outpatient care 34% (2.5 billion), inpatient care 9% (700 millions) and disability/sickness benefits 7% (500 millions) on our bottom-up approach.

CONCLUSIONS: Our study provides estimation of the cost of diabetes from a payer perspective, according to two different approaches but with concordant results.

DIRECT COST OF DIFFUSE TOXIC GOITER AND ITS COMPLICATIONS IN UKRAINE

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OBJECTIVES: To determine the direct cost of health care technologies used for treatment of diffuse toxic goiter in Ukraine. METHODS: We made the retrospective analysis of 52 patients’ medical records with DTG that were hospitalized to treatment of diffuse toxic goiter in Ukraine.

RESULTS: The mean (95% CI) health care cost was €4,750 (€3,799 to €5,799, p<0.001) and total costs ($610 ± $591, p<0.001) and total costs ($610 vs. $591, p<0.01) than the comparison cohort. CONCLUSIONS: Study results suggest that patients diagnosed with T2DM utilized more health resources and incurred four times higher costs compared to those without a T2DM diagnosis.

MEDICAL EXPENSES ASSOCIATED WITH TYPE 2 DIABETES MELLITUS IN JAPAN: A LARGE CLAIMS DATABASE STUDY

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OBJECTIVES: The objective of the study was to estimate the excess costs associated with type 2 diabetes mellitus (T2DM) and diabetes-related complications in Japan through the use of a large claims database. METHODS: We performed a retrospective cohort analysis using a large commercial claims database obtained from the Medical Data Center Co., Ltd. (Tokyo, Japan). Data from the period between January 2005 and June 2012 were analyzed. Patients diagnosed with T2DM were identified using the International Classification of Diseases 10th revision (ICD-10) diagnosis codes E11–E14, with the month of initial diagnosis designated as the index month. Cost and health care utilization data from claims for outpatient, inpatient, and dispensing services during the study period were summarized per patient per-month (PMP) levels. Costs were calculated from the perspective of a payer, and diabetes-related complications were identified through the occurrence of the following diseases after the index month and/or their associated treatment: retinopathy, nephropathy, neuropathy/extremity disease, ischemic heart disease, and diabetic foot disease. Regression models were used to estimate excess, total, and direct costs associated with each health state of T2DM were estimated using a fixed-effects model. RESULTS: A total of 8,063,139 PMP records from 152,791 T2DM patients were identified and examined. The average follow-up duration per patient was 5.8 months. The average incremental cost for T2DM was US$123 PPPM. The average incremental costs for diabetes-related complications were US$94 (retinopathy without surgery), US$1,933 (retinopathy with surgery), US$1,197 (prevalent), US$819 (renal failure), US$4,478 (neurology and/or extremity disease without surgery), US$4,498 (neurology and/or extremity disease with surgery), US$953 (ischemic heart disease without surgery), US$13,560 (extended hospital stay with surgery), US$666 (cerebrovascular disease with surgery), and US$2,605 (cerebrovascular disease with hospitalization).

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