DIRECT HEALTH CARE COSTS OF DIABETES MELLITUS IN HUNGARY

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OBJECTIVES: The burden of diabetes mellitus is responsible for a huge burden of mortality, reduction in QoL, and high cost, and the epidemiological trends, diabetes mellitus should be a public health priority in Hungary. Our objective was to estimate the direct health-care costs of patients with diabetes in Hungary. METHODS: Real-world data were retrieved from the National Health Insurance Fund database. Diabetic patients were defined as persons who filled in a prescription of oral antidiabetics (OAD) or insulin in Q3-Q4 2007. Study population was divided into two groups depending on whether they were hospitalized for major complications of diabetes in 2007–2008. Patients without hospitalization were further divided into three subgroups according to the use of drugs (only OAD, only insulin, OAD + insulin) and insulin users obtained health-care costs for each cost item by age group in the whole study group and among those who actually used a particular prescription of oral antidiabetics (OAD) or insulin in Q3-Q4 2007. Study population was conducted to assess the patient-level economic burden of painful DPN. Rational basis is four times larger than the available estimates for diabetes’ attributable inpatient care in National Health Service hospitals.

RESULTS: Mean health-care cost of 2,514,545 diabetic patients was €2,125 in 2008. It was €4,016 for those with hospitalization for complications, €1,533 for OAD users without complications, and €2,847 for insulin users without complications. Fifty-three percent of the total cost covered drug treatment and 27% acute hospital treatment, 26% of the total drug cost was spent on OADs and on insulin. CONCLUSIONs: Health-care cost of diabetes is already high in Hungary, especially for its complications. Public health-care cost of diabetes exceeds 0.65% of GDP and 13% of total direct health-care expenditure. Considering the burden of disease that manifests in premature mortality, reduction in QoL, and high cost, and the epidemiological trends, diabetes mellitus should be a public health priority in Hungary.

RELATIONSHIPS OF QUALITY OF LIFE AND COSTS WITH CLINICAL CHARACTERISTICS OF DIABETES PATIENTS

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BACKGROUND: Recent research suggests that direct medical costs and quality of life in diabetes depends on number of diabetes-related complications. OBJECTIVES: To analyze relationships of quality of life and medical costs with clinical characteristics of diabetes mellitus patients. METHODS: A retrospective longitudinal cost of care study was conducted; type 1 and 2 diabetic patients accessing at two hospitals in the north-east area were recruited between October 2008 and March 2009. An enrollment data on demographic, clinical status and QoL (EQ-5D) were collected. Information on costs occurring during the previous 2 years was obtained from a chart review: hospitalizations, specialist medical visits, diagnostic examinations, drugs, and the main clinical parameters. Costs were quantified from the National Health Service (NHS), by applying tariffs and prices valid in 2009. Data were analyzed with a multivariable linear regression model.

RESULTS: A total of 411 valid patients (mean + SD age = 64.1 ± 12.7, 36.5% male) were enrolled: 15.9% had type 1, 83.4% type 2 diabetes, and 0.7% other type of diabetes. Costs were on average €234,360 per patient-month; hospitalization accounted for the greatest proportion of costs (58.5%), followed by pharmaceutical treatments (32.6%) and diagnostic exams (8.9%). With EQ-5D VAS was on average = SD = 67.7 ± 16.71. Both Costs and HRQOL showed a linear-positive (costs) and -negative (HRQOL) relationship with number of diabetes-related complications (diabetic retinopathy, diabetic nephropathy, diabetic neuropathy, ischemic cardio- and peripheral vascular diseases, and diabetic foot disease). The relationship was significant for age and gender and type of diabetes. On the contrary, no relationship was found with type of complications. CONCLUSIONS: Long-term complications carry a considerable impact on medical cost and HRQOL. Although apparently costly, strategies aimed to prevent the onset of diabetes complications should be considered as a potential investment to gain health and reduce costs in the long run.

ECONOMIC BURDEN OF PAINFUL DIABETIC PERIPHERAL NEUROPATHY IN KOREA

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OBJECTIVES: The painful diabetic peripheral neuropathy (DPN) is the most common complication of diabetes. Despite the prevalence of painful DPN and its potential risk of foot ulceration, there has been no study focused on the economic burden of painful DPN on patients with diabetes in Korea. This study was conducted to assess the patient-level economic burden among patients with painful DPN. METHODS: A cross-sectional multicenter study was performed using a standardized questionnaire, to estimate recent 3-month health-care and non-health-care cost, and productivity loss of diabetic patients. a total of 4000 patients were recruited from 40 hospitals between December 2009 and May 2010. Cost items mainly included health-care cost such as outpatient, pharmacy, inpatient, and outpatient medical; non-health-care cost such as traffic expenses, nursing care cost, complementary, and alternative medicine. Cost included insurance-covered cost as well as patient’s out-of-pocket expenses during 3 months. To estimate productivity loss due to morbidity, days away from work due to painful DPN were also investigated. RESULTS: Among 2681 diabetic patients completed questionnaire (response rate = 67.0%, 26.3% (n = 786) had painful DPN. Numbers of outpatient visit within 3 months were higher in patients with painful DPN compared to those in patients without painful DPN, 3.79 ± 2.83 and 3.25 ± 2.36, respectively (P < 0.01). Total costs over 3 months were also higher in patients with painful DPN than in those without painful DPN (1,049,477 ± 1,549,446 and 721,933 ± 1,394,970 KRW, respectively, P < 0.01). Median costs were higher among patients with painful DPN (545,585 vs. 421,668 KRW). Within 3 months, 8.2% and 41.5% of patients with painful DPN had been away from work and reported the decreased work productivity, respectively. CONCLUSIONS: Painful DPN increased health-care cost and decreased work productivity of diabetic patients in Korea.