

Disability-adjusted life-years (DALYs) for diabetes in Mexico in 2005: a cross-sectional burden of disease analysis

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Abstract

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Background Diabetes is one of the leading causes of morbidity and mortality in Mexico and its prevalence has been rising since the end of the last century. The aim of this study was to estimate, for 2005, the share of burden due to this disease in the Instituto Mexicano del Seguro Social—the major social security institution in Mexico, which covers nearly half of Mexico's population.

Methods Disability-adjusted life-years (DALYs) were calculated by the sum of the estimated years of life lost (YLLs) and years lived with disability (YLDs) due to diabetes. The International Statistical Classification of Disease and Related Health Problems 10th Revision was used, and we included the E10–E14 codes related to diabetes mellitus. YLLs were calculated from age–sex–time-specific estimates of mortality by diabetes. YLDs were calculated by age and sex, and prevalence of diabetes and its disabling sequelae such as retinopathy, amputation, diabetic foot, and neuropathy.

Findings In 2005, diabetes contributed 787 397 DALYs, 9·21% (95% CI 9·19–9·23) of total DALYs in Mexico, an increase from 7·31% (7·28–7·33) estimated in 1995. 5·83% (95% CI 5·79–5·89) of DALYs due to diabetes were attributed to retinopathy, 2·62% (2·58–2·65) to amputation, and 0·94% (0·92–0·96) to diabetic foot and neuropathy. While in adults aged between 25 and 44 years of age 64·29% (95% CI 64·00–64·60) of DALYs were due to YLDs, this proportion was 18·70% (18·50–18·90) in adults aged 45–59 years and only 6·47% (6·39–6·54) in those aged 60 years and older. 55·52% (95% CI 55·40–55·60) of the population affected with DALYs due to diabetes were female.

Interpretation In recent years, diabetes has been challenging the Mexican health-care system due to its high mortality rate and its high costs of care. In spite of the burden due to mortality, there is also a high burden due to YLDs, mainly among the younger age groups. Some neglected microvascular complications of diabetes, such as retinopathy, neuropathy, and diabetic foot, have contributed considerably to DALYs in Mexico.

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Contributors

JE and GR-A prepared the abstract. JE, GR-A, and BZ conceived the study and provided overall guidance. JE and GR-A oversaw the implementation of the work. JA developed cause-specific models, reviewed results, provided guidance on the selection of key variables, and reviewed the abstract. JH developed cause-specific models, reviewed results, and reviewed the abstract. TR reviewed results and the abstract.

Conflicts of interest

We declare that we have no conflicts of interest.