

Analysis of morbidity in Czechia investigating health care provision and take-up in relation to diabetes mellitus

Abstract

Diabetes mellitus is a life-threatening disease which presents as hyperglycaemia or raised blood glucose. Late detection or a failure to follow treatment guidelines may lead to complications that significantly impact on the sufferer's daily life and require expensive medical treatment. The growing prevalence of this disease, which no longer only affects developed countries, therefore presents enormous risks to health care systems and society as a whole.

The aim of this thesis is to analyse the geodemographic characteristics of the current diabetic population in Czechia. Particular attention will be paid to the age of diabetes sufferers, since in Czechia data on this is lacking. In pursuit of this aim the thesis makes use of anonymised data from the largest Czech health insurance company (Czech General Health Insurance).

The first part of the thesis looks at diabetes mellitus as a medical condition, concentrating primarily on the basic types of the disease but also considering the potential health complications this disease causes. The theoretical part will discuss the main risk factors of developing the disease, such as genetic predisposition, age, obesity and other potential factors that increase the risk of diabetes.

The central part of the thesis consists of analytical chapters that look at the prevalence and incidence of diabetes as well as the population age structure of diabetics. Age can be a determining factor for diabetes and so the decomposition method is used to quantify the impact of changes in the population age structure and incidence rate on the increase in new cases of diabetes over time. Since diabetes mellitus is a potentially fatal disease, deaths in diabetes sufferers will also be analysed in detail. The data obtained from Czech General Health Insurance allows us to investigate the provision and take-up of health care among diabetics. The subsequent analyses therefore allow us to highlight any insufficiencies in health care provision.

The number of diabetes sufferers is rising over the long-term in Czechia. Hence knowledge of future trends in diabetes prevalence is essential to ensure a timely response to this growth. The thesis therefore includes a chapter on modelling future change, which could be used to predict the number of sufferers on the basis of this assumption.