Abstract

**Purpose:** The aim of this work was to describe the comparative levels of technical efficiency in terms of quality and time of managing diabetes at patient level in Primary Care (PC) systems in Europe.

**Methods:** We used Data Envelopment Analysis (DEA). The Decision Making Units (DMU) to be compared were the PC systems in the seven countries of the EU primecare project. The input for the analysis was the average time spent by general practitioners (GPs) with a diabetic patient in a year in each country. We used three outputs: 1) a composite indicator based on the proportion of prevention activities performed in the last year, 2) proportion of patients under treatment whose therapy was prescribed by the GP, 3) a composite indicator of patient satisfaction; constructed with 11 PC-related items. We adopted an output oriented program with constant returns to scale and a multi-stage analysis.

**Findings:** The efficiency scores were 1.00, 0.60, 0.59, 0.47, 0.40, 0.38, and 0.37, for Spain, Germany, Finland, Italy, Hungary, Lithuania, and Estonia; respectively.

**Discussion:** The quality of care of diabetic patients resulting from the time spent with the patient by the GP is maximised for the Spanish PC system. For the rest of the countries, higher intensity of outputs could be obtained considering the time spent with these patients. Quality outcomes related to procedures were selected rather than health outcomes since the latter might be prone to confounding effects coming from inherent attributes of the country. For some of the countries the inefficiency comes from the large number of administrative activities carried out by the GPs, which are not translated into direct benefit to the patient. In other countries, the PC inefficiency derives from a referral to the specialist who ultimately manages the case.
Keywords:

efficiency, diabetes, europe, data envelopment analysis, primary care, quality