

The health and economic burden of diabetes continues to rise. Across the European Union there are an estimated 31 million adults living with diabetes and many people remain undiagnosed (Mladovsky *et al.*, 2009). Diabetes leads to an increased risk of cardiovascular disease, blindness, kidney disease, lower limb amputation and mortality. Across Europe, the treatment and management of diabetes has been estimated to account for approximately 10% of total health care expenditure (Zhang *et al.*, 2010).

There is a considerable body of evidence on how best to prevent and treat diabetes. Modest weight loss and dietary changes can delay or even prevent the onset of diabetes by almost 60% (DPP, 2002). Better management of blood glucose levels in Type 2 diabetes patients can reduce microvascular complications by 25% (UKPDS, 1998) and non-fatal myocardial infarctions by 17% (Ray *et al.*, 2009). However, health care systems have historically struggled with optimising diabetes care and many patients do not seek treatment until complications have set in.

Figure 4.2.1 shows the extent to which the failure of effectively controlling and managing diabetes manifests in avoidable hospital admissions. The figure shows that the EU average for uncontrolled diabetes admissions (without complications) is 50 per 100 000 population. For admissions with short- and long-term diabetes complications, the EU average is 109 per 100 000 population. Males tend to have higher admission rates than females even though evidence suggests that there are no significant gender differences in diabetes prevalence (DECODE Study Group, 2003).

Figure 4.2.2 examines the relationship between diabetes prevalence and avoidable admissions. The line in the graph indicates that countries with higher disease prevalence tend to have higher rates of diabetes-related admissions. However, substantial variations remain even after controlling for disease prevalence, with countries such as Austria, the Czech Republic and Poland having higher rates of admissions, whereas Spain, Switzerland and Portugal experience lower rates. The variation in diabetes-related hospital admissions (after taking prevalence into account) suggests that other factors, such as adherence to high-quality diabetes care, may also play a role.

In combating the challenges posed by diabetes, a number of countries have introduced initiatives to reduce the impact of the disease. For example, a number of European countries have recently introduced taxes on unhealthy food and drink to promote better nutrition and reduce obesity, an important risk factor for diabetes (OECD, 2012b). Austria has introduced a disease management programme, with early indications showing some success in process quality and enhanced weight loss, but no significant improvement in diabetes control (Sönnichsen *et al.*, 2010). As part of the United Kingdom's Quality and Outcomes Framework, up to 25% of British practice income is linked to performance, including a range of diabetes indicators such as glucose control, medication compliance and foot care

(Adler, 2012). In France, results from a two year pay-for-performance pilot has shown positive results in diabetes management through better medication compliance and glucose control (Polton, 2012).

Alongside national initiatives, there are also some recent examples of international diabetes collaborations. In April 2012, the European Diabetes Leadership Forum brought together a wide range of stakeholders to produce the Copenhagen Roadmap outlining initiatives to improve diabetes prevention, early detection and intervention as well as management and control (see www.diabetesleadershipforum.eu for more information). In the European Union, the EUBIROD Project has developed a European Diabetes Register that brings together data from across Europe. The registry allows comparisons across Europe on how diabetes is treated and share knowledge to reduce the burden of diabetes (EC, 2012b).

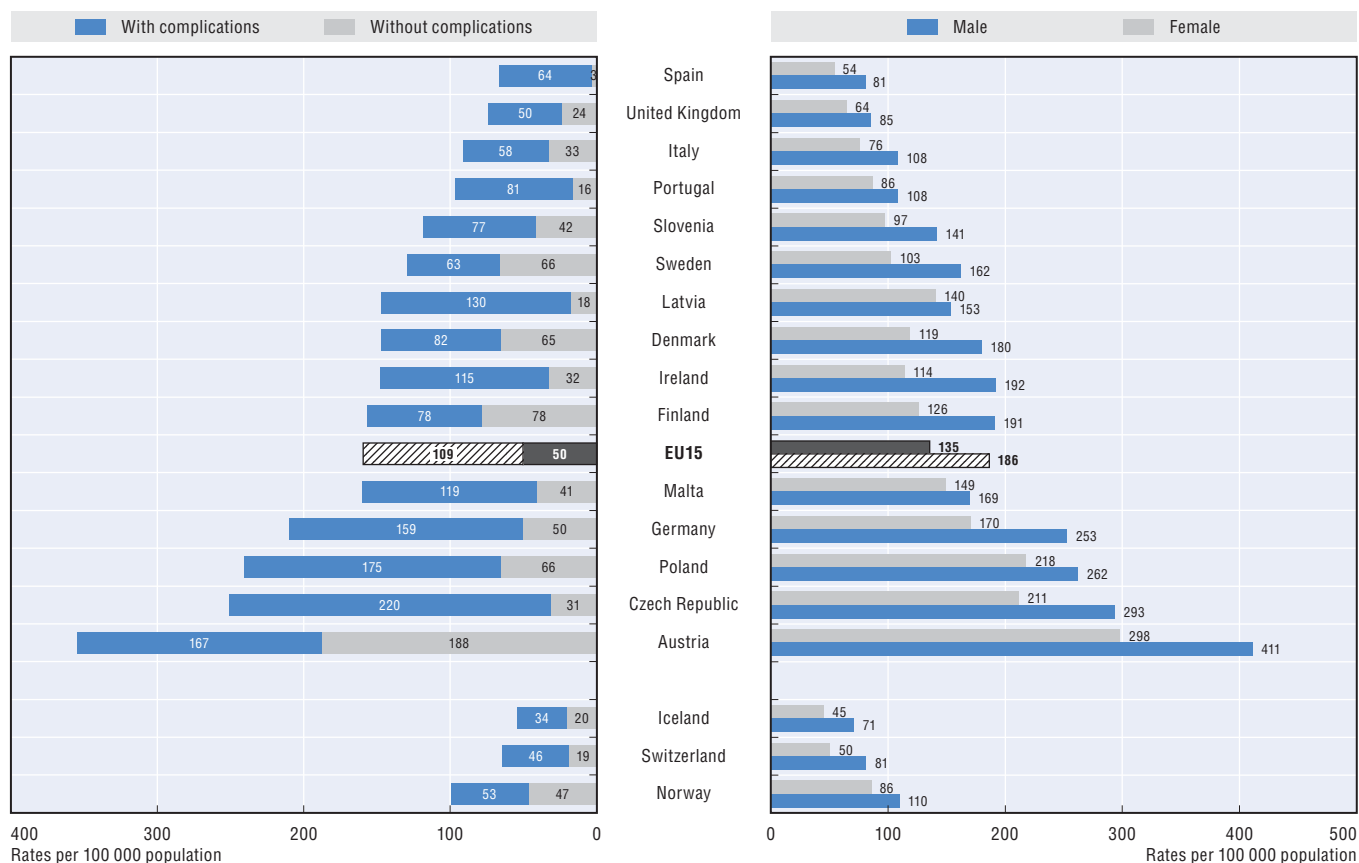
Definitions and comparability

The indicator for uncontrolled diabetes hospital admission rates with and without complications is based on the sum of the three indicators: i) short-term diabetes complications; ii) long-term diabetes complications; and iii) uncontrolled diabetes without complications.

The indicator for admissions with short-term diabetes complications is defined as all non-maternal/non-neonatal hospital admissions of people aged 15 years and over with a principal diagnosis code for diabetes short-term complications including coma and ketoacidosis, caused by a shortage of insulin in the body. The indicator for long-term diabetes complications is defined similarly but where the principal diagnosis code indicates the presence of long-term diabetes complications such as renal, eye or circulatory complications. The indicator for uncontrolled diabetes without complications is defined as all non-maternal/non-neonatal hospital admissions of people aged 15 years and over with a principal diagnosis code for uncontrolled diabetes, without mention of a short-term or long-term complication.

The rates are per 100 000 population and have been adjusted to take account of the age and sex composition of each country's population structure. Differences in coding practices among countries may affect the comparability of data. Differences in disease classification systems, for example between ICD-9-CM and ICD-10-AM, may also affect the comparability of the data.

4.2.1. Uncontrolled diabetes hospital admission rates with and without complications, population aged 15 and over, 2009 (or nearest year)

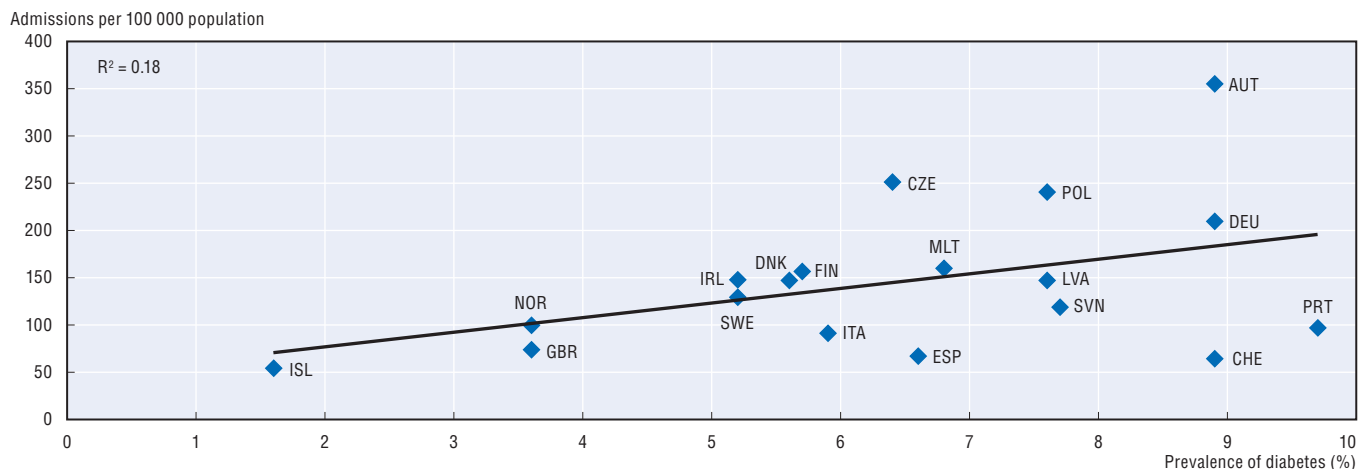


Note: Rates are age-sex standardised to the 2005 OECD standard population. Male and female rates refer to the sum of admissions with and without diabetes complications.

Source: OECD Health Data 2012.

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4.2.2. Uncontrolled diabetes hospital admission rates and prevalence of diabetes, 2009 (or nearest year)



Note: Prevalence estimates of diabetes refer to adults aged 20-79 years and data are age-standardised to the World Standard Population. Hospital admission rates refer to the population aged 15 and over and are age-sex standardised to the 2005 OECD standard population.

Source: IDF (2009) for prevalence estimates; OECD Health Data 2012 for hospital admission rates.

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