5.3. Avoidable admissions: congestive heart failure, hypertension

Congestive heart failure (CHF), the inability of the heart to provide adequate circulation, is a severe condition with prevalence estimates of around 5% in Portugal and Denmark, and 3% in England (Ceia *et al.*, 2002; Raymond *et al.*, 2003; Davies *et al.*, 2001). As the risk of developing heart failure increases with age and the presence of cardiovascular disease, prevalence rates for this disease are expected to increase substantially in the future.

Outpatient medical treatment with vasodilators and beta-blockers, combined with fluid management and controlled exercise, has been shown to improve survival rates of heart failure (SOLVD Investigators, 1991; CIBIS-II, 1999). Data from the Euro Heart Survey II on patients hospitalised with congestive heart failure showed limited adherence to evidence-based treatment, suggesting room to improve outpatient management of those patients (Komajda *et al.*, 2003). Data from the same research programme also revealed that one quarter (24%) of CHF patients had been re-admitted within 12 weeks of discharge and 14% of patients died between admission and 12 weeks follow-up (Cleland *et al.*, 2003). Given the high rate of re-admissions, even small improvements in care can have a substantial impact on cost and patient quality of life (Lee *et al.*, 2004).

Hypertension or high blood pressure is the most common chronic condition of adult populations. Its global prevalence in the adult population was estimated to be over 26% in 2000 (Kearney *et al.*, 2005). In itself, hypertension rarely causes symptoms but it is a risk factor for a variety of cardiovascular diseases, such as stroke, heart failure, and renal insufficiency. It is also associated with other cardiovascular risk factors, such as diabetes and hypercholesterolemia.

Admissions with a primary diagnosis of hypertension typically indicate hypertensive crises, a condition characterised by very high blood pressure with high risk of acute complications such as heart failure or hemorrhagic stroke. However, hypertension admissions are largely avoidable and are an indicator for the quality of primary care (Tisdalea *et al.*, 2004).

Figure 5.3.1 shows that Poland and the United States record the highest CHF admission rates with over 440 admissions per 100 000 population, about twice the OECD average of 234. The United Kingdom and Korea, on the other hand, have only about a fourth of the highest level of admissions. The gender gap is particularly large for the Nordic countries of Iceland, Denmark and Sweden where the male rate is about double the female rate, whereas on average in OECD countries admissions for men are only about 50% more frequent than for women.

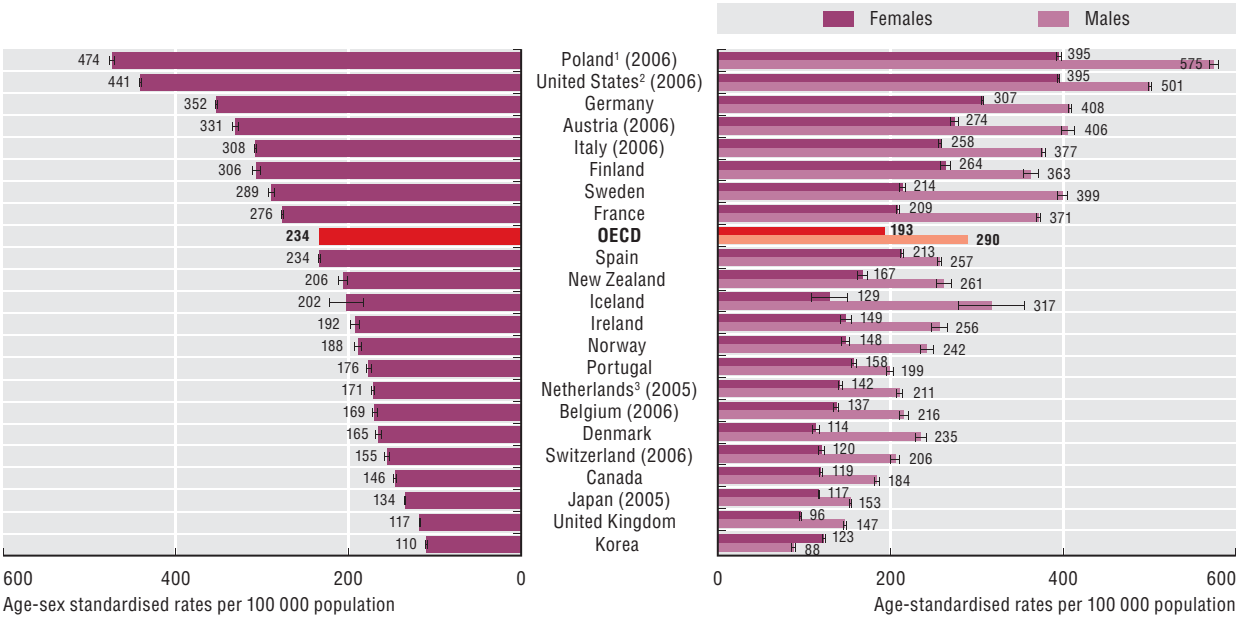
Just over 80 admissions for hypertension are reported per 100 000 population in OECD countries on average (Figure 5.3.2), but Austria and Poland show over four and three times this rate, respectively. Conversely, countries such as the United Kingdom and Spain only report a fraction of the average rate.

The overall use of admitted patient care is closely correlated with admission rates for hypertension (Figure 5.3.3). About two-thirds of the variation in admission rates for hypertension is associated with the variation for admissions for any cause. Countries like Austria have both above-average rates for hospital admissions for any cause and for hypertension, whereas countries like Canada and Spain have low rates for both.

Definition and deviations

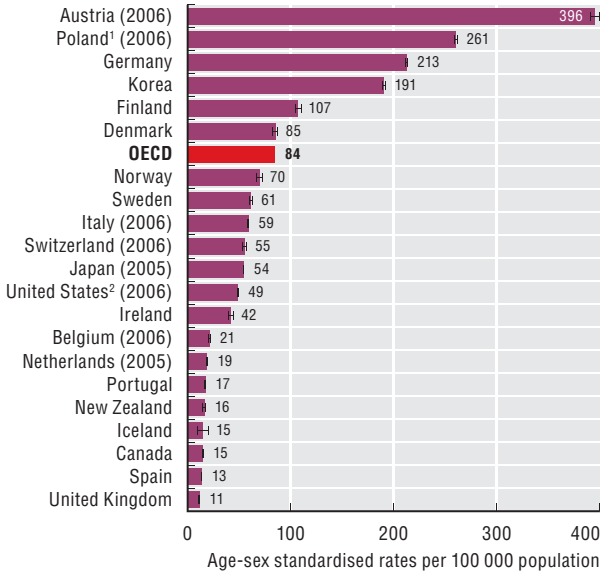
The avoidable CHF and hypertension hospital admission rates are defined as the number of hospital admissions of people aged 15 years and over per 100 000 population in that age group per year. The rates have been adjusted to take account of differences in the age and sex composition of each country's population. Given the technical definition of these indicators includes the specification of procedure codes, the different classification systems in use across countries may impact on the comparability of the data.

5.3.1 CHF admission rates, population aged 15 and over, 2007



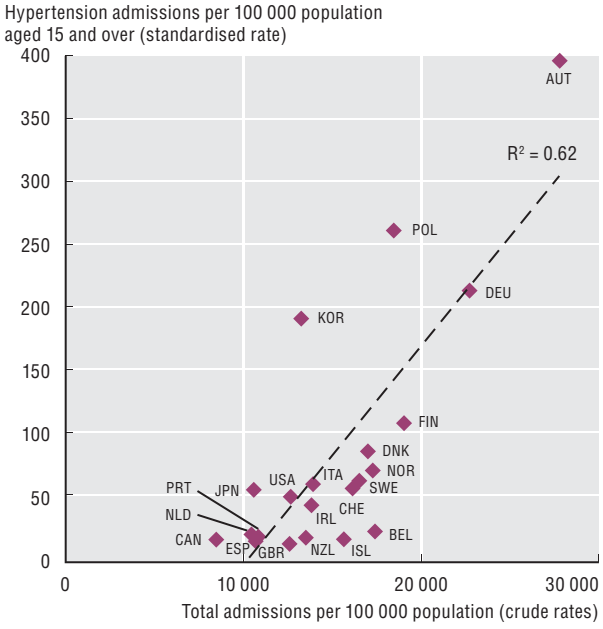
1. Includes transfers from other hospital units, which marginally elevates rates. 2. Does not fully exclude day cases.
3. Includes admissions for additional diagnosis codes, which marginally elevates rates.

5.3.2 Hypertension admission rates, population aged 15 and over, 2007



1. Includes transfers from other hospital units, which marginally elevates rates. 2. Does not fully exclude day cases.

5.3.3 Hypertension admission rates and total admission rates, 2007 (or latest year available)



Source: OECD Health Care Quality Indicators Data 2009. Rates are age-sex standardised to 2005 OECD population. 95% confidence intervals are represented by ⊢⊣.

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