### 6.4. Geographic distribution of doctors

Access to medical care requires an adequate number and proper distribution of physicians across the country. Shortages of physicians in a geographic region can lead to increased travel times for patients and higher caseloads for doctors, which may result in increased waiting times to receive care. Measuring disparities in the "density" of physicians among regions within the same country gives some indication of the accessibility of doctor services. Regions, however, may contain a mixture of urban and rural populations, so that although a region may have high physician density, persons living in geographically remote areas of that region may still face long travel times to receive medical care. In addition, the services that physicians offer should match need, whether these are for GPs or specialists.

OECD countries display very different levels in the number of practising physicians per 1 000 population, ranging from lows of less than two in Turkey, Korea and Mexico, to highs of four and more in Belgium and Greece (see Figure 3.2.1 for Indicator 3.2 "Practising physicians").

In many countries, there is a greater number of physicians per capita in the national capital than in other regions (Figure 6.4.1). In the Czech Republic for example, Prague has a density of physicians almost twice the country average. The regional distribution of physicians is fairly even in Japan and Poland (OECD, 2009e). There is also disparity in the density of specialists, with a greater concentration evident in capital cities in a number of countries, such as Mexico, the Slovak Republic and Turkey (Figure 6.4.2).

The density of physicians is greater in regions with a high urban population, due to the concentration of services such as surgery and specialised practitioners in metropolitan centres (Figure 6.4.3). In Canada, just under 16% of "family physicians" (mostly general practitioners) and only 2% of specialists were located in rural areas and small towns in 2006, whereas 24% of the population resided in these areas (Dumont et al., 2008). In the United States, 17% of the population lived in non-metropolitan areas in 2004, but only 9% of practising patient care physicians were located in these areas. There also tends to be fewer specialists outside cities - almost 50% of US counties had no obstetricians or gynaecologists providing direct patient care in 2004 (NCHS, 2007). The situation is similar in France, with 22% of general practitioners and 4% of specialists practising in towns of up to 10 000 population in 2007, whereas 36% of the population resided in these areas (DREES, 2008).

In Australia, primary care physicians (mostly general practitioners) are fairly evenly distributed, ranging from an estimated 100 full-time equivalent per 100 000 population in major cities in 2005, to 88 in inner regional, 84 in outer regional and 92 in remote/very remote regions. Specialists, however, ranged from 122 in major cities, to 56 in inner regional, 38 in outer regional and only 16 in remote/very remote regions (AIHW, 2008c).

A number of factors are likely to affect the distribution of physicians. These include the population size and economic development of a region, the regions' professional climate and the extent of social amenities in a region (Huber *et al.*, 2008).

Experience shows that a mix of policies are needed to address maldistribution issues (Simoens and Hurst, 2006). In Canada, for example, foreign-trained doctors comprised an average of 30% of the labour force in rural and remote areas in 2006. Incentives have also been developed to train health professionals with rural background and exposure (Dumont *et al.*, 2008). In Turkey, significant numbers of new health staff have been assigned to areas with low physician density in recent years, although the challenge remains to match staff with areas of greatest need (OECD and the World Bank, 2008).

#### Definition and deviations

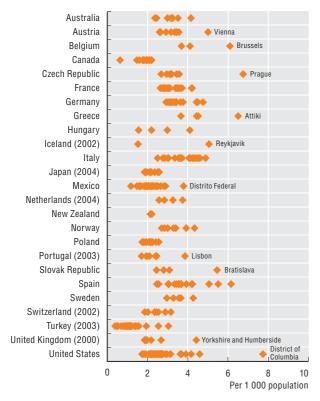
Practising physicians include general practitioners and specialists who are actively practising medicine. For more detail, see Indicator 3.2 "Practising physicians".

Since countries use a variety of different geographical classifications, the OECD has classified regions within each member country into two territorial levels. The higher level (Territorial Level 2) consists of 335 large regions within the 30 member countries. For the most part, these correspond to national administrative regions.

Further sub-regional analysis may be necessary to obtain a more complete picture of geographic distribution of physicians. A number of countries have developed schemes to classify populations into urban-rural categories, although these are not standard, making cross-national comparisons difficult.

#### 6.4. Geographic distribution of doctors

## 6.4.1 Physician density, by Territorial Level 2 regions, 2005

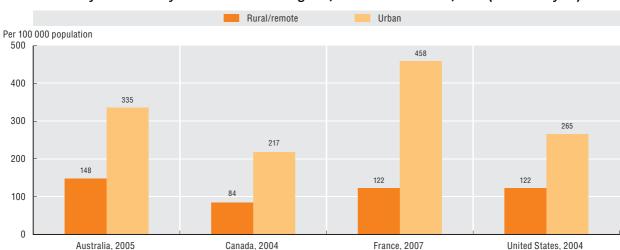


6.4.2 Specialist density, by Territorial Level 2 regions, selected OECD countries, 2004



Source: OECD Regions at a Glance 2009.

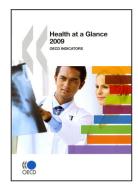
#### 6.4.3 Physician density in rural and urban regions, four OECD countries, 2005 (or nearest year)



Note: Classifications of rural and urban regions differ between countries.

Source: AIHW (2008c); CIHI (2005); DREES (2008); NCHS (2007).

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