

The delivery of safe, high-quality medical services requires among other things an adequate number of doctors. Even though other components of health systems (such as nurse practitioners and tele-health technology) can substitute for doctors, the variation in the number of doctors reflects differences in the design and territorial management of the health system.

Disparities in the number of doctors among regions within the same country provide an indication of the accessibility of health services and can signal areas needing an increase in access to health care. In 2008, the regional variation in the number of physicians was the widest in the United States, Italy and the Czech Republic among OECD countries and in the Russian Federation. In these countries the large variation is due to one or two agglomerated regions that have a high density of practising physicians, because they were centres for specialised medical services, compared to other regions. In the United States, the District of Columbia has a physician density three times higher than the country average; Lazio (Italy) and the region of Prague (Czech Republic) have a density of doctors almost two times higher than their country average. A more balanced regional distribution in the number of physicians is observed in New Zealand, Korea and Japan (Figure 25.1).

As expected, the density of physicians is greater in regions with a prevalence of urban population due to the concentration of higher order services (such as surgery and specialised practitioners) in metropolitan centres. A positive correlation between the number of physicians and the share of population in urban regions is found in 16 out of 24 countries. The highest values are observed in the Slovak Republic, the Czech Republic and Greece (Figure 25.2). A limited number of physicians in rural regions, as in Greece, Portugal, Sweden and Austria, may lead to delayed treatment, larger distances travelled and higher costs for care.

The mortality rate is a common indicator of a population's health status. When comparing values across countries and regions, mortality rates are adjusted for age, which is a primary factor of mortality. The resulting age-adjusted mortality rates eliminate difference across regions that are solely due to a population's age profile. Regional differences in age-adjusted mortality rates within countries were the widest in Canada, Portugal, the United States and the United Kingdom (Figure 25.3). In 2008, the regions Região Autónoma Dos Açores (Portugal), Northwest Territories and Nunavut (Canada) and Mississippi and West Virginia (United States) had an age-adjusted mortality rate that was at least 20% higher than their country average (Figures 25.5 and 25.6)

In most countries, regional disparities both in the number of doctors per capita and in the mortality rates are positively associated with high disparities in household

income, suggesting different opportunities in the access (both in terms of cost and distance) to health services. For instance, this is the case of the United States which shows the highest ratio between the richest and poorest states as well as the highest ratio between the state with the highest and lowest density of doctors. However, in other countries such as Norway, Austria and Denmark relatively low regional income disparities are accompanied by high regional disparities in health status and services (Figure 25.4).

Definition

The number of physicians is the number of general practitioners and specialists actively practicing medicine in a region during the year, in both public and private institutions.

Age-adjusted mortality rates eliminate the difference in mortality rates due to a population's age profile and are comparable across countries and regions. Age-adjusted mortality rates are calculated by applying the age-specific death rates of one region to the age distribution of a standard population. In this case the population by five years age class, averaged over all OECD regions.

The Spearman correlation coefficient measures the strength and direction of the relationship between two variables, in this case the number of doctors and the share of population in predominantly urban (PU), intermediate (IN) or predominantly rural (PR) regions. A value close to zero means no relationship (see Annex C for the formula).

Source

OECD Regional Database: <http://stats.oecd.org/WBOS>.

See Annex B for data, source and country-related metadata.

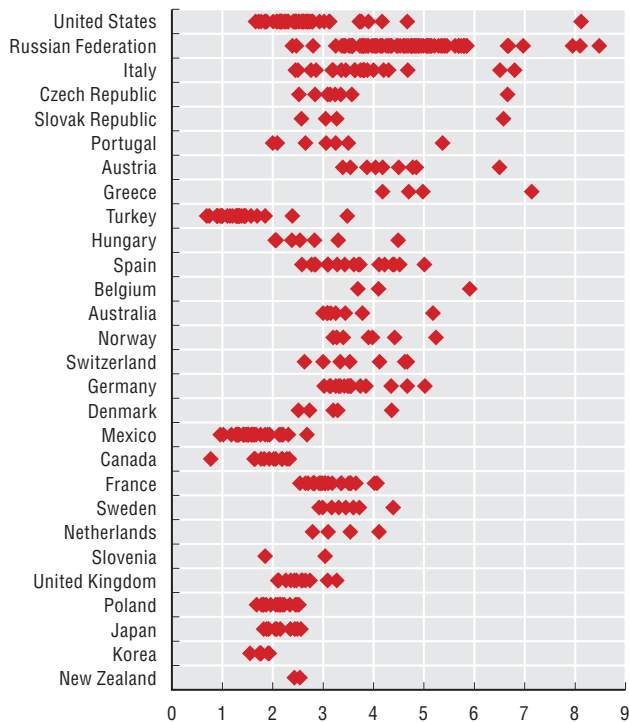
Reference years and territorial level

2008; TL2.

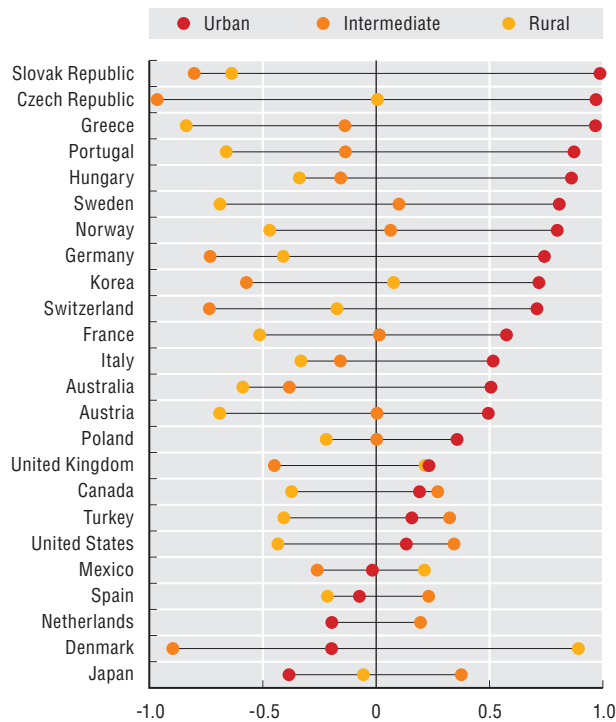
Japan and the Netherlands 2004; Portugal and Turkey 2009; Iceland and Switzerland 2002; the United Kingdom 2000.

No regional data are available on physicians in Ireland and Finland.

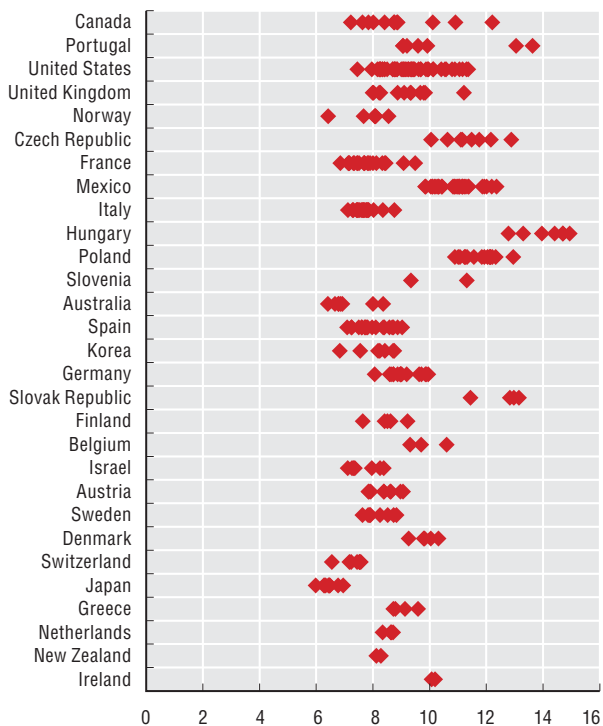
25.1. Range in TL2 regional number of physicians per 1 000 inhabitants, 2008



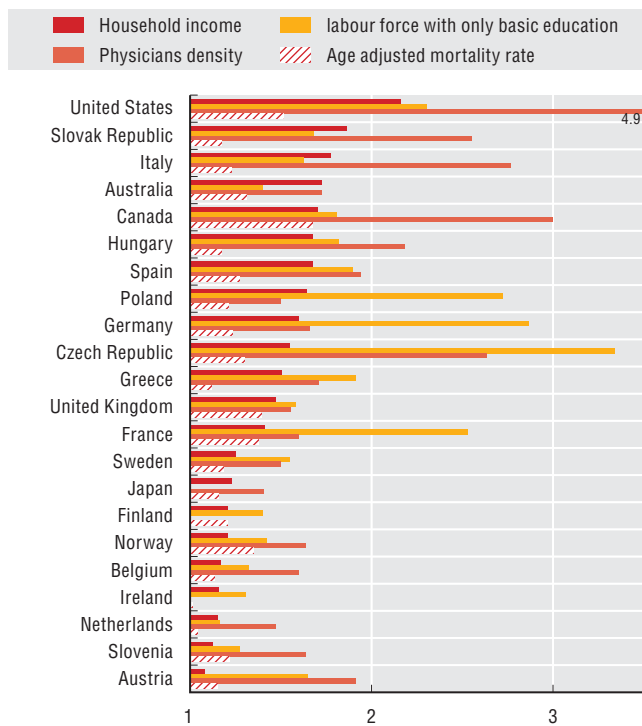
25.2. Spearman correlation coefficient between the regional physician density and population share by regional type, 2008 (TL2)



25.3. Range in TL2 regional age adjusted mortality rates, number of deaths per 1 000 inhabitants, 2008



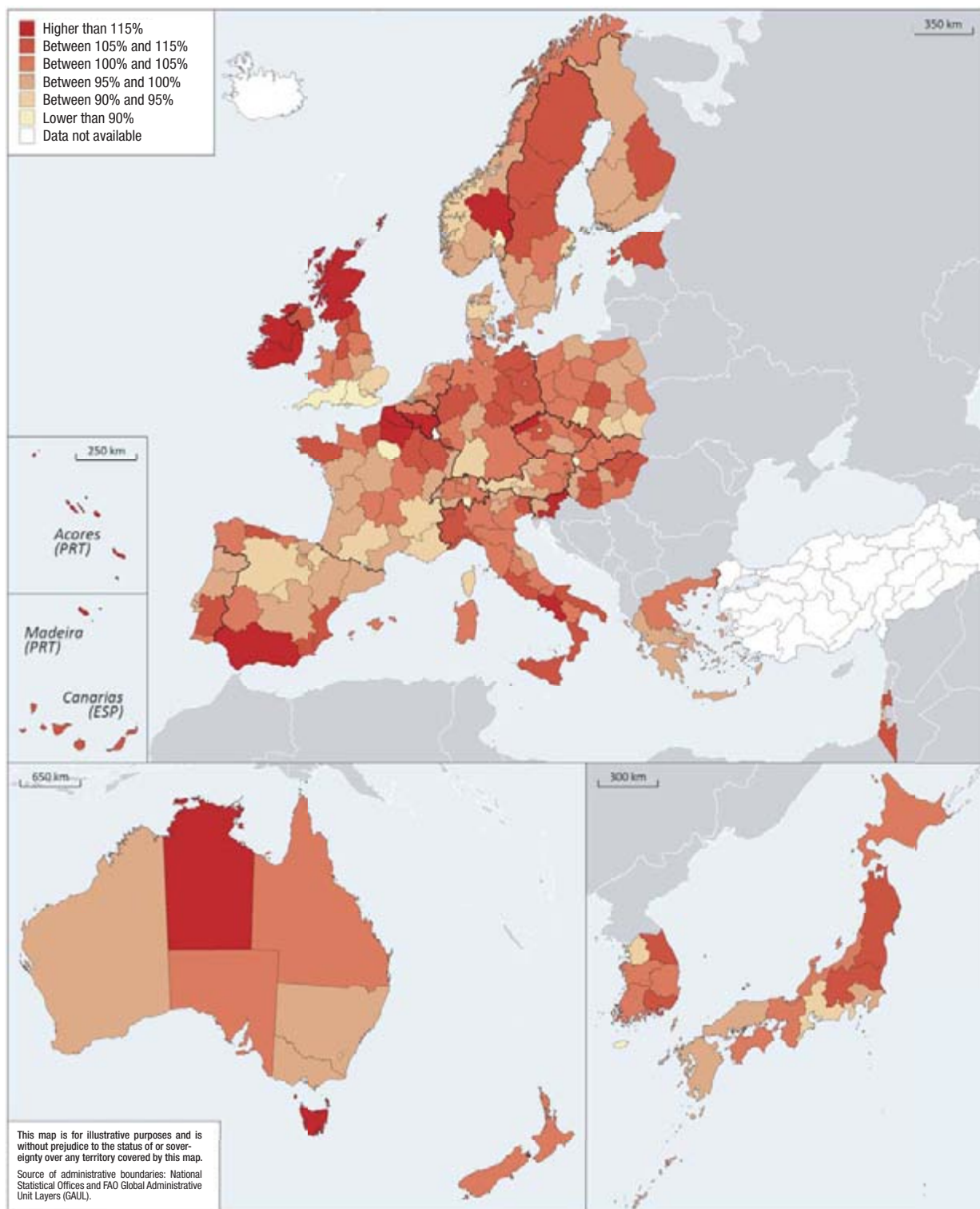
25.4. Ratio between the largest and smallest TL2 regional values: household income, age-adjusted mortality rate density of physicians and basic education, 2007



StatLink <http://dx.doi.org/10.1787/888932439862>

25.5. Regional age-adjusted mortality rates: Asia, Europe and Oceania, 2008

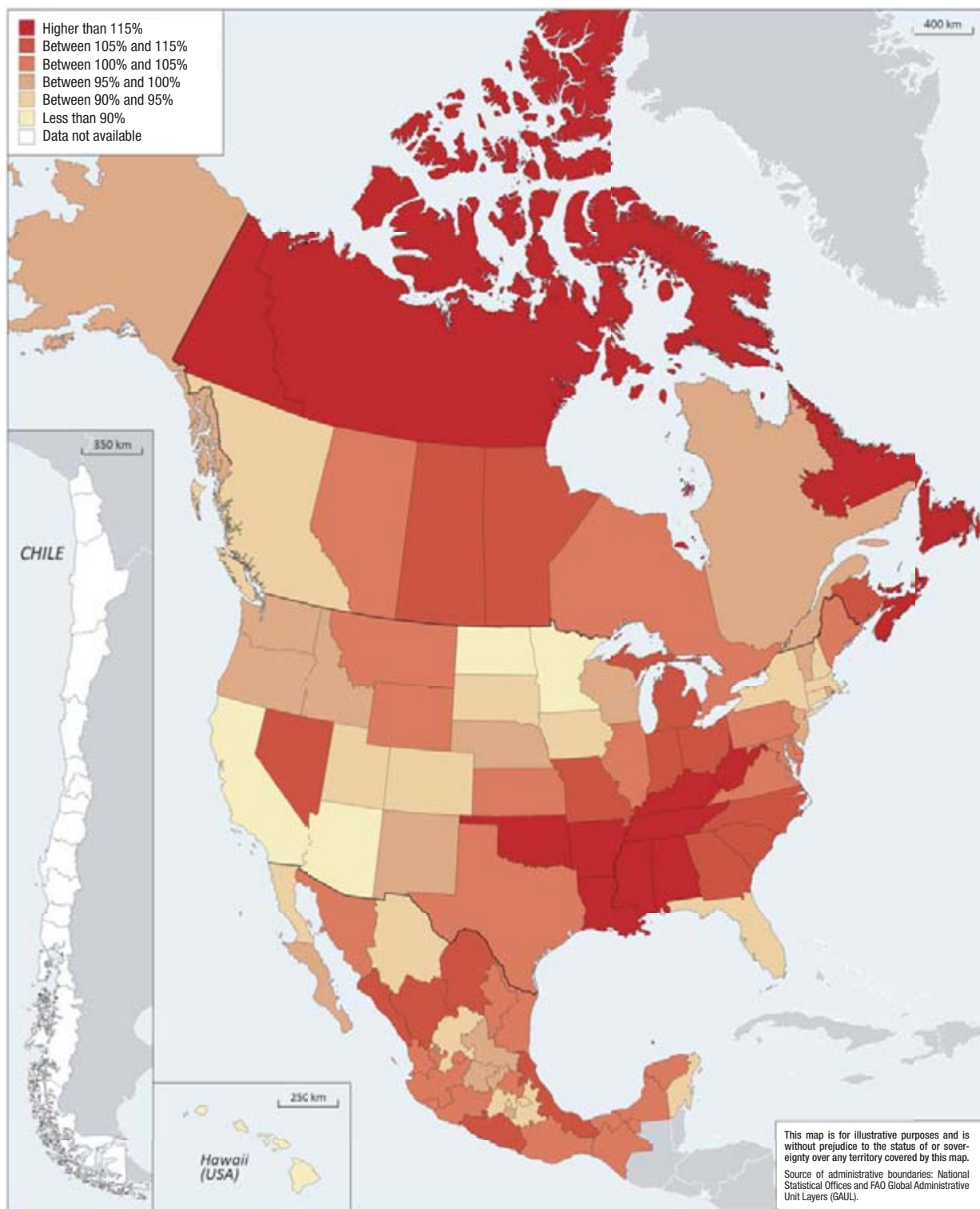
% of country average, TL2 regions




StatLink <http://dx.doi.org/10.1787/888932440223>

25.6. Regional age-adjusted mortality rates: Americas, 2008

% of country average, TL2 regions



StatLink  <http://dx.doi.org/10.1787/888932440223>



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