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THE REMUNERATION OF GENERAL PRACTITIONERS AND SPECIALISTS IN 14 OECD COUNTRIES: WHAT ARE THE FACTORS INFLUENCING VARIATIONS ACROSS COUNTRIES?

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ABSTRACT

This paper provides a descriptive analysis of the remuneration of doctors in 14 OECD countries for which reasonably comparable data were available in *OECD Health Data 2007* (Austria, Canada, the Czech Republic, Denmark, Finland, France, Germany, Hungary, Iceland, Luxembourg, Netherlands, Switzerland, the United Kingdom and the United States). Data are presented for general practitioners (GPs) and medical specialists separately, comparing remuneration levels across countries both on the basis of a common currency (US dollar, adjusted for purchasing power parity) and in relation to the average wage of all workers in each country. The study finds that there are large variations across countries in the remuneration levels of GPs, and even greater variations for specialists. Measured as a ratio to the average wage in each country, the remuneration of GPs varies from being two times greater in Finland and the Czech Republic, to three-and-a-half times greater in the United States and Iceland. The remuneration of specialists varies even more, ranging from one-and-a-half times to two times higher than the average wage of all workers for salaried specialists in Hungary and the Czech Republic, to five to seven times higher for self-employed specialists in the Netherlands, the United States and Austria. Some of the variations in remuneration levels across countries may be explained by the use of different remuneration methods (*e.g.*, salaries or fee-for-services for self-employed doctors), by the role of GPs as gatekeepers, by differences in workload (as measured by working time) and by the number of doctors per capita. However, these institutional and supply-side factors cannot explain all of the variations. Furthermore, when comparing the remuneration of GPs and specialists in each country, this study finds that in nearly all countries, the remuneration of specialists has tended to increase more rapidly than that of GPs over the past decade, thereby widening the income gap. This growing remuneration gap has likely contributed to the rising number and share of specialists in most of these countries over the past decade, resulting in rising concerns about possible shortages of GPs.

RÉSUMÉ

Ce document de travail présente une analyse descriptive de la rémunération des médecins dans 14 pays de l'OCDE pour lesquels on trouve des données raisonnablement comparables dans *Eco-santé OCDE 2007* (Allemagne, Autriche, Canada, Danemark, États-Unis, Finlande, France, Hongrie, Islande, Luxembourg, Pays-Bas, République tchèque, Royaume-Uni et Suisse). Les données sont présentées séparément pour les généralistes (omnipraticiens) et les spécialistes. La comparaison des niveaux de rémunération entre pays est faite sur la base d'une monnaie commune (le dollar américain, ajusté pour la parité des pouvoirs d'achat), ainsi qu'en rapport avec le salaire moyen de l'ensemble des travailleurs dans chacun des pays. Cette étude constate qu'il y a de fortes variations dans les niveaux de revenu des généralistes entre les pays, et que les variations sont encore plus prononcées concernant les spécialistes. La rémunération des généralistes oscille entre deux fois le niveau du salaire moyen en Finlande et République tchèque, à un niveau trois fois et demi plus élevé aux États-Unis et en Islande. La rémunération des spécialistes varie encore plus, allant de une fois et demi à deux fois le salaire moyen pour les spécialistes salariés en Hongrie et en République tchèque, à cinq à sept fois plus élevé pour les spécialistes travaillant en mode libéral aux Pays-Bas, aux États-Unis et en Autriche. Une partie de la variation dans les rémunérations entre pays peut s'expliquer par l'utilisation de différentes méthodes de rémunération (par exemple, le salariat ou le paiement par acte pour les médecins libéraux), par le rôle joué par les généralistes en tant que médecin référant, par des différences dans la charge de travail (tel que mesuré, par exemple, par les heures de travail) et par le nombre de médecins par habitant. Cependant, ces facteurs institutionnels ou d'offre ne peuvent pas expliquer toutes les variations. Par ailleurs, lorsque l'on compare la rémunération des généralistes et des spécialistes dans chaque pays, cette étude indique que dans pratiquement tous les pays, la rémunération des spécialistes a eu tendance à augmenter plus rapidement que celle des généralistes au cours des dix dernières années, creusant encore plus l'écart. Cet écart grandissant a probablement contribué à l'augmentation du nombre et de la part des spécialistes dans le nombre total de médecins dans la plupart des pays au cours de la dernière décennie, et à accroître les inquiétudes concernant une pénurie de généralistes.

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EXECUTIVE SUMMARY

1. Ensuring a sufficient number and adequate mix of different categories of doctors is an important concern in all OECD countries. Despite the fact that health systems employ a large and growing number of health professionals, there are concerns in many OECD countries about current or future shortages of doctors. Remuneration levels and other aspects of working conditions are important factors in attracting and retaining skilled workers such as doctors.

2. Payments for health professionals are one of the largest costs in the provision of health services, making remuneration a critical concern for policy makers seeking to maintain or improve efficiency, access and quality while controlling costs. In this context, there has been growing interest in many countries to improve payment systems for doctors, combining different elements of traditional remuneration methods (salary, fee-for-service, capitation) and experimenting with new types of remuneration (such as pay-for-performance), in attempts to provide a better mix of incentives to achieve these multiple policy goals.

3. This paper describes and compares the remuneration of general practitioners (GPs) and specialists (both medical and surgical specialists) in a group of 14 OECD countries for which reasonably comparable data were available in *OECD Health Data 2007*. These countries are: Austria, Canada, the Czech Republic, Denmark, Finland, France, Germany, Hungary, Iceland, Luxembourg, the Netherlands, Switzerland, the United Kingdom and the United States. Data are presented separately for GPs and specialists in 2004 (or the latest year available) as well as growth rates over the past decade where available. Remuneration levels are compared across countries, first, on the basis of a common currency (US dollar, USD) adjusted for the economy-wide purchasing power parity (PPP) and, second, as a ratio to the average wage of all workers in each country. The paper also analyses the impact of a number of factors that might explain the large variations in the remuneration levels of GPs and specialists across countries, with a focus on certain characteristics of health systems (including the type of remuneration methods and the role of GPs as gatekeepers) and supply-side factors (including the density of doctors and average hours worked). Finally, the paper examines the remuneration gaps between GPs and specialists within countries.

Remuneration of GPs

4. The findings from this study indicate that the remuneration levels of GPs vary markedly across countries, being the highest in the United States, and the lowest in the Czech Republic and Finland. In the United States, GPs earn 35% more than the average across the countries studied (excluding the Czech Republic where the remuneration of GPs is very low compared to other countries). As a ratio to the average wage of all workers in the country, the remuneration of GPs ranges from being about two times greater in Finland and the Czech Republic to three-and-a-half times greater in Iceland and the United States.

5. The remuneration of GPs has grown the fastest in the United Kingdom, where the average income of GPs increased by over 4% per year in real terms between 1995 and 2004. In recent years, the remuneration of GPs in the United Kingdom has increased even more rapidly, rising by 21% in real terms between 2003/4 and 2004/5 and by 7% between 2004/5 and 2005/6. The strong rise in the income of GPs in the United Kingdom in recent years can be attributed at least partly to the introduction of pay-for-performance

incentives in the new GP contract that was introduced in 2004 (Information Centre for Health and Social Care, 2007a). In most other countries, the growth in the remuneration of GPs has been more modest.

6. Based on a partial (bivariate) analysis not controlling for other factors, the type of remuneration method of GPs does not seem to explain much of the variations in remuneration levels across countries. There are large variations in the remuneration of GPs within the group of countries where they are mainly self-employed and paid by fee-for-services or capitation (or a combination of these two methods). Similarly, there are large variations in the two countries (Iceland and Finland) where most GPs are paid by salaries. But based on an estimation of the relative importance of selected supply-side factors and health system characteristics on remuneration variations, the type of remuneration method appears to have an impact on remuneration levels across countries: self-employed GPs being paid by mixed payment methods or fee-for-services tend to earn more than salaried GPs. In those countries where there is a coexistence of salaried and self-employed GPs, the remuneration of those who are self-employed tends to be substantially higher than for salaried GPs (*e.g.*, Luxembourg).

7. It is very difficult to assess the impact of a gatekeeping system on the remuneration of GPs, because information is lacking on the extent to which GPs do, in practice, act as gatekeepers. Based on the limited information available, the remuneration of GPs does not seem to be strongly related to the presence of a gatekeeping system. While the Netherlands and the United Kingdom provide examples of countries where a relatively strict gatekeeping system is associated with relatively high remunerations for GPs, this is not the case in other countries such as Finland and Canada where GPs also play a strong gatekeeper function.

8. One of the factors which may partly explain the lower remuneration level of GPs in countries like Finland is lower average working time. However, working time differences cannot explain the large variations in remuneration levels between self-employed GPs in the United States and those in Canada or France, for instance.

9. Differences in the density of GPs across countries do not seem to have much impact on variations in their remuneration levels. France provides an example of a country where the supply of GPs is comparatively high while their average remuneration is comparatively low. But there are examples of other countries where a low number of GPs is associated with comparatively low remuneration levels, as measured either in terms of USD PPP or in relation to the average wage (*e.g.*, the Czech Republic and Finland).

10. A more in-depth analysis of the evolution of the remuneration of GPs in France confirms that both volume of their activities and fees paid for their services determine changes in their remuneration levels, with the relative impact of the latter factor depending on the outcomes of negotiations on fee levels. Data on the fees paid for GP services, however, are not readily available in most other countries, thereby preventing a generalisation of this type of decomposition analysis.

Remuneration of specialists

11. The remuneration of specialists varies even more across countries than does the remuneration of GPs, ranging from being one-and-a-half times to two times higher than the average wage for *salaried* specialists in Hungary and the Czech Republic, to seven times higher for *self-employed* specialists in the Netherlands in 2004. The remuneration of specialists (including both *self-employed* and *salaried* specialists) was also more than five times greater than that of the average worker in the United States and Austria. Measured in USD PPP, the remuneration of specialists in 2004 (or latest year available) was highest in the Netherlands and the United States. In the Netherlands, the remuneration of *self-employed* specialists was 80% higher than the average across all countries (excluding Hungary and the Czech Republic, where the remuneration

of specialists in USD PPP is comparatively very low), while it was 46% higher in the United States (for both *self-employed* and *salaried* specialists).

12. In general, the remuneration of specialists tends to be higher in those countries where they are self-employed and paid by fee-for-services, compared with those countries where they are paid by salaries. In those countries where self-employed and salaried specialists coexist, the remuneration of self-employed specialists tends to be substantially higher than for salaried specialists (for instance, it is about two-times higher in the Netherlands, and 50% higher in Luxembourg). The United Kingdom is the only country where salaried specialists have remuneration levels that were comparable in 2004 with self-employed specialists paid by fee-for-services in several other Western European countries.

13. As was the case for GPs, the remuneration of specialists in the United Kingdom grew more rapidly over the past five to ten years than in all other countries (except the Czech Republic where it started from a very low level in 2000). Between 1998 and 2004, the remuneration of specialists in the United Kingdom increased by 4.5% per year in real terms, almost twice as fast as the growth rate of the average wage of all workers in the country. Since the introduction of the new contract in 2003 or 2004 (depending on the region), their remuneration increased even more rapidly, rising by 14% in real terms between 2004/05 and 2005/06.

14. There is some evidence that the number of specialists per capita is negatively associated with their remuneration levels across countries. The Netherlands provides the most striking example of this inverse relationship, being the country with the lowest specialist density and the highest remuneration level. But the relationship does not hold across all countries. For instance, while Finland and the United States have roughly equivalent numbers of specialists per capita, the average remuneration level of specialists in the United States (in USD PPP) is three times greater than in Finland.

15. Differences in the number of hours worked by specialists are not strongly associated with differences in their remuneration levels across countries.

Comparing the remuneration of GPs and specialists

16. The remuneration of specialists is greater than that of GPs by more than 50% in half of the countries studied. In the Netherlands and Luxembourg, the remuneration of self-employed specialists is more than twice that of self-employed GPs. On the other hand, the remuneration gap between GPs and specialists is less pronounced in countries like Switzerland, the United Kingdom and Finland.

17. While differences in the length of the training period can explain at least partly the remuneration gap between GPs and specialists in each country, they do not explain much of the remuneration gap across countries. In general, the remuneration gap between GPs and specialists is not larger in those countries with a relatively large gap in the length of their training period.

18. In all countries studied except the United Kingdom, the remuneration of specialists increased more rapidly than that of GPs over the past five to ten years, thereby widening the remuneration gap that existed in the mid-1990s.

1. INTRODUCTION

19. Health systems employ a large and growing number of medical professionals. On average across OECD countries, the number of doctors per capita increased by 15% between 1995 and 2005 (OECD, 2007a and 2007b). In most countries, this growth has been driven mainly by a rising number of specialists per capita, which has increased by over 20%, on average, across OECD countries over the past decade, while the number of GPs per capita has remained stable. On the demand side, many factors have contributed to rising demand for health services, including rising disposable income and population ageing.

20. Many OECD countries face a challenge of ensuring a sufficient number and a proper balance of different categories of doctors. Remuneration levels and working conditions are important in attracting and retaining doctors. This is particularly the case at a time when easier access to information about better job opportunities, combined with the reduction of barriers to the migration of highly-skilled workers, is leading to an increase in the international migration of doctors (OECD, 2007c). At the same time, payments for health professionals are one of the largest costs in the provision of health services, making physician remuneration a critical concern for policy makers seeking to maintain or improve access to and quality of care while controlling costs. In this context, there has been growing interest in many countries in experimenting with new payment systems for doctors, combining different elements of traditional remuneration methods (salary, fee-for-service, capitation) and introducing new types of remuneration (*e.g.*, pay-for-performance), in attempts to provide an adequate mix of incentives to achieve these multiple policy goals.

21. This paper describes the remuneration methods of doctors and the variations in remuneration levels in 14 OECD countries for which reasonably comparable data were available in *OECD Health Data 2007* [1]: Austria, Canada, the Czech Republic, Denmark, Finland, France, Germany, Hungary, Iceland, Luxembourg, the Netherlands, Switzerland, the United Kingdom and the United States. Data on the remuneration of doctors are presented for GPs and specialists separately, and compared between these two broad categories of doctors, for 2004 (or the closest year available) as well as growth rates over the period 1995-2005 where available. An additional effort has also been made to collect data for a subgroup of countries on the remuneration for certain medical specialties, including paediatricians, gynaecologists and obstetricians, surgeons and anaesthetists, to illustrate the large variations in remuneration levels that also exist across different medical specialties in each country.

22. The OECD conducted its last study on the remuneration of doctors over 15 years ago (Sandier, 1990). This earlier OECD study covered 9 countries, of which 7 countries are also covered under the present study. Based on data relating to the mid-1980s, this 1990 OECD study found that the remuneration of GPs was two to three times higher than the average wage of all workers in the economy at that time, while it was two to seven times greater for specialists, depending on the country. This earlier study also reported

[1] *OECD Health Data 2007* provides data on the remuneration of doctors for more countries, but data from some countries are not used in this study because they are not meeting the proposed definitions or are not representative of most GPs or specialists in the country.

some evidence of a growing remuneration gap between GPs and specialists in several countries during the 1970s and 1980s. In terms of potential factors explaining variations in the remuneration of doctors across countries, this 1990 study found that differences in remuneration methods appeared to play some role in practice patterns and remuneration levels of doctors, but demand-side factors such as morbidity in the population and the degree of patient co-payments for services also appeared to play an important role.

23. The present study provides more recent data on remuneration levels of GPs and specialists up to 2005, covering a larger group of countries. It also examines the impact of a number of factors that might explain the variations in the remuneration levels of GPs and specialists across countries, with a focus on supply-side factors (the number of hours worked and the number of doctors per capita) and certain characteristics of health systems (the type of remuneration methods and the role of GPs as gatekeepers).

24. However, international comparisons of the remuneration of doctors are extremely difficult because remuneration data are based on different national sources and methodologies. Despite substantial efforts to gather the most comparable data possible, there are limitations in the comparability of the data on the remuneration of doctors reported in this study arising from the diverse national data sources and estimation methods. Box 1 presents the definitions of key terms and indicators used in this study and the main data comparability limitations which should be kept in mind when interpreting variations of physician remunerations across countries.

Box 1. Definitions of indicators and data comparability limitations

Most of the data on the remuneration of doctors and other variables presented in this study come from the compilation of national data reported in *OECD Health Data 2007*. Information on the sources and methods underlying these data can be found in Annex I of this paper as well as in *OECD Health Data 2007*.

Definitions of key terms and indicators

Practising doctors are defined as GPs and specialists who provide services directly to patients. *General practitioners (GPs)* are defined as those doctors who do not limit their practices to certain disease categories and assume the responsibility for the provision of continuing and comprehensive care or referring to another health care professional.[1] *Specialists* are defined as doctors who diagnose and treat physical and mental diseases and disorders using specialist testing, diagnostic, medical and surgical techniques. They may limit their practices to certain disease categories or methods of treatment.

The *remuneration* of GPs and specialists is defined as gross (pre-tax) income from work, including taxes and social security contributions payable by the employee/self-employed worker,[2] but excluding practice expenses for self-employed doctors. Income from work should normally include all types of payments (including bonuses, overtime compensation, "thirteenth month payments", etc.) received by employees. Depending on the methodology used in different countries, the data relate to either all practising physicians or only those practising on a full-time basis (or at least above a certain minimum threshold).

Converting national data in common units

To compare remuneration levels of doctors across countries, remuneration data in national currency units are converted in a common currency, the US dollar, and adjusted for Purchasing Power Parity (PPP), as a way to measure the relative economic well-being of doctors in a given country compared with their counterparts in other countries. PPPs are the rates of currency conversion that equalise the purchasing power of buying a given 'basket' of goods and services in different countries. They provide a means of comparing the purchasing power of different remuneration levels across countries.

The remuneration of doctors is also compared to the average wage of all workers in each country, as a way to measure the economic well-being of doctors compared with people working in other occupations within the country.[3] As is the case for the remuneration of doctors, the *average wage* of all workers is defined as gross (pre-tax) wages including social security contributions payable by employees. The data are calculated per full-time and full-year

equivalent employee in the entire economy.[4]

Comparability limitations

Data on the remuneration of doctors come from different national data sources. Three main data comparability limitations need to be borne in mind in comparing the remuneration levels of doctors presented in this study:

1) the national data source often only reports the main source of income of doctors, excluding additional payments they may receive from other activities. These additional payments (such as any private practices for salaried doctors) may represent a small or a sizeable share of their total income, depending on the country. For instance, while only about 3% of salaried specialists in the Czech Republic and a small number of salaried specialists in Finland and Denmark earn additional incomes from private practices, most salaried specialists in Hungary and Iceland do so. In Hungary, informal payments are also reported to account for a large part of remunerations (Kornai, 2000), but they are not included in the remuneration data reported in this study.

2) the remuneration data for most countries relate to doctors practising on a full-time basis (or at least receiving income from their practice that exceeds a certain minimum threshold). However, the data for some countries relate to all practising doctors, including those working part-time (resulting in lower estimates).

3) In those countries where doctors are self-employed, the specific methodology to estimate and subtract practice expenses from total remuneration may vary. This may explain at least partly the large variation in the proportion of practice expenses in total income across countries. For instance, in Canada, average practice expenses accounted for 35% of gross payments by public insurance for self-employed GPs and 29% for specialists in 2002 (Canadian Institute for Health Information, 2004). In Germany, based on a cost structure analysis study, practice expenses were estimated to account for 47% of total payments for GPs in 2004, while they varied from 53% for paediatricians to 60% for orthopaedists among selected specialists. In the Netherlands, practice expenses for self-employed specialists were estimated to account for only about 10% of total remunerations in 2005.

1. In many countries, general practice is defined as a medical specialty in its own right (or a “GP specialty” can be acquired through an additional training period). However, for the purpose of this study, it is treated separately from all other medical specialties.

2. In theory, it might have been preferable to compare net income after tax and social security contributions, but such data were not readily available and would have required further estimations.

3. In *OECD Health Data 2007* and *Health at a Glance 2007*, GDP per capita was used as a measure of the average income in the economy. However, the average wage of workers is a more precise measure to compare the relative remuneration of doctors, as it only takes into account the working population.

4. Average gross wages are calculated by dividing the National Accounts-based total wage bill by the average number of employees in the economy, which is then multiplied by the ratio of average usual weekly hours per full-time employee to average usual weekly hours for all employees (*OECD Employment Outlook*, 2007d). For Iceland, the data come from the OECD publication *Taxing Wages* and only include the average wage of full-time employees working in selected industry sectors.

2. REMUNERATION METHODS OF DOCTORS

25. Doctors in OECD countries have traditionally been paid by one of the following three methods:

1. Salary is the payment of an agreed amount of money in return for working a given amount of hours. Salary payment is usually determined based on the qualification of physicians, the level of the post, or seniority. The payment is normally not affected by the number of patients treated or the price of services. Additional payments may be provided, however, for overtime work or work during the week-end or overnight. Salary scales and additional payments can be set uniformly within the country or vary by regions (*e.g.*, Austria) and by health facilities.

2. Fee-for-service is the payment of a price for each service provided. In most countries, the fees paid for different services are negotiated between health care purchasers (*e.g.*, Health Ministries or health insurers) and providers (doctors). In some countries, however, individual doctors have the flexibility to set fee levels for all or part of their patients (*e.g.*, Sector 2 doctors in France[2]). The fee schedule can either be uniformly fixed within the country or vary by regions (*e.g.*, Canada) or by insurance funds (*e.g.*, Austria). Under this payment method, the remuneration level is affected by the number and types of services provided and the fees paid for these services.

3. Capitation is the payment of a given amount of money to doctors for each patient registered with them, in return for a commitment that they will respond to the care needs of their patients over a period of time (normally a year). In this case, the remuneration of doctors is affected by the number of patients on their list and the amount provided per patient, which is normally negotiated between health care purchasers and providers (the amount is often adjusted by patient characteristics such as age and gender). Capitation payment systems have been mainly used to pay GPs.

26. In recent years, a number of countries have also experimented with new forms of payments to doctors, in particular to reward the achievement of a set of performance and quality objectives. In the United Kingdom, a new "pay-for-performance" scheme has been introduced in recent years as part of new contracts for GPs and specialists/consultants (see Box 2). In the United States, the proportion of physicians who receive payments to reward quality of care and higher patient satisfaction is increasing. In 2004/05, 20% of physicians received quality-based payments and 25% received payments based on patient satisfaction (Reschovsky and Hadley, 2007).

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[2] In 2004, 15% of GPs and 35% of specialists were in the Sector 2 category in France (Caisse Nationale d'Assurance Maladie des Travailleurs Salariés, 2006). Fees for patients are only reimbursed on the basis of Sector 1 prices.

Box 2. Pay modernisation in the United Kingdom

The United Kingdom is one of the countries where new forms of payment methods for doctors have been introduced in recent years, with the aim of increasing the supply, efficiency and quality of services, in the context of growing public spending on health.

A new contract for GPs was introduced in 2004, with the aim of increasing the supply of GPs and promoting the achievement of a range of performance and quality goals (Department of Health, 2003). While payments under the new contract remains largely based on activity (with GPs being remunerated based on the needs of their patients and their workload), their remuneration is topped-up according to the quality of services provided in areas such as child health, maternity, family planning, and chronic diseases (especially coronary heart disease, diabetes and cancer). Performance-based payments are also made for activities related to information systems (such as record-keeping) and communication with patients. The new contract also allows greater flexibility for GPs to provide services beyond essential services.

A new contract has also been used since 2003 for specialists (National Audit Office, 2007).[1] Even though the details differ by region, the new contract generally aims to increase the remuneration of specialists, especially for those making a large contribution to NHS service delivery. It intends to increase the volume of services provided within the public part of the delivery system. More specifically, overtime work is rewarded through higher remuneration. Earning progression is based on the achievement of objectives agreed by the clinical manager and the specialist in the following areas: quality and efficiency of service provision, clinical standards and outcomes, local service objectives, resources management, service development and multi-disciplinary team working. As for private practices, specialists are required to adhere to a newly-established code of conduct. For instance, in England and Scotland, specialists generally need to provide an additional four hours of services per week to the NHS (in addition to the regular 40 hours work week) in order to become eligible for private practices.

1. The contract renewal and implementation periods differ by region. In England, for instance, specialists have been employed under the new contract since 2004.

27. In theory, different types of remuneration methods provide different financial incentives to doctors that might affect their behaviour. Physicians who are paid on a fee-for-service basis generally have an incentive to see more patients and to provide more services than salaried physicians, since their income is directly linked with the volume of services provided. In practice, however, several countries have introduced a ceiling on the maximum number and types of services that fee-for-service doctors can claim in any given year (*e.g.*, Canada and Germany). Under a capitation payment system, doctors in principle have a financial incentive to have as many patients as possible registered on their list, which in the absence of alternative practitioners may lead to patients being underserved. Hence, in practice, several countries have imposed a ceiling on the total number of patients per GP (*e.g.*, the Czech Republic, Denmark and Hungary).

28. Furthermore, the incentives built into different remuneration methods may be offset partly or fully by incentives, on the demand-side, for people to use GP or specialist services. For instance, fee-for-service payments to doctors are often accompanied by some form of co-payments for patients, which may limit their demand for services despite the fact that physicians have an incentive to provide more services.

29. In recent years, several countries have introduced different combinations of mixed payment methods for doctors, in an attempt to overcome the shortcomings of traditional methods and to provide the right mix of incentives to improve efficiency, access and quality of care while keeping some control on costs. The introduction of these new forms of mixed payment methods increases the difficulty of assessing the impact of any single remuneration method on physicians' behaviours and remuneration levels.

30. In this paper, physicians are generally separated into two broad categories - salaried doctors and self-employed doctors - with doctors in the latter group being paid mainly through fee-for-service and/or

capitation. Annexes II and III provide additional information on the remuneration methods for GPs and specialists for the 14 OECD countries covered under this study.

3. REMUNERATION OF GENERAL PRACTITIONERS

31. Data on the remuneration of GPs for 2004 (or closest year) are available for 12 out of the 14 countries included in this study.[3] The data are presented, first, in a common currency (US dollar, USD) adjusted for the economy-wide purchasing power parity (PPP), which provides an indication of the economic well-being of GPs in different countries; and, second, as a ratio of the average wage of all workers in the country, which provides an indication of income differentials with other occupations in the domestic labour market. This is followed by a presentation of the growth rate of the remuneration of GPs in real terms (adjusted for inflation) over the past five to ten years, for those countries where consistent time series are available.

32. Physicians who are paid salaries are distinguished from self-employed doctors who are paid by other methods (*e.g.*, fee-for-services or capitation). In the cross-country comparisons, remuneration levels for countries where the two types of doctors exist are generally presented only for the category of doctors (salaried or self-employed) which is the most predominant. For example, in Finland, an increasing number of GPs are paid by a mixed method but salary payment still accounts for the largest part of their remuneration, so the data presented relate to salaried GPs. In the case of Austria, Switzerland and the United States, the data source does not allow a distinction between the remuneration levels of self-employed and salaried doctors. Since most GPs are not salaried in these three countries, the data are presented as referring to self-employed GPs.[4]

3.1. Remuneration levels of GPs

33. The remuneration of GPs in 2004 (or closest year available) varies substantially across countries. Measured in USD (adjusted for PPPs), the remuneration of GPs is the highest in the United States, followed by the United Kingdom and the Netherlands (Figure 1). In contrast, the remuneration of GPs is the lowest in the Czech Republic. It is also relatively low in Finland and France.

34. Self-employed GPs in the United States earned about 40% more than those in Canada. Similarly, GPs in Luxembourg earned about 30% more than those in France.

35. In the only two countries where most GPs are paid through salaries, there were wide variations in the average remuneration levels, with the income of GPs in Iceland being over 90% higher than in Finland.

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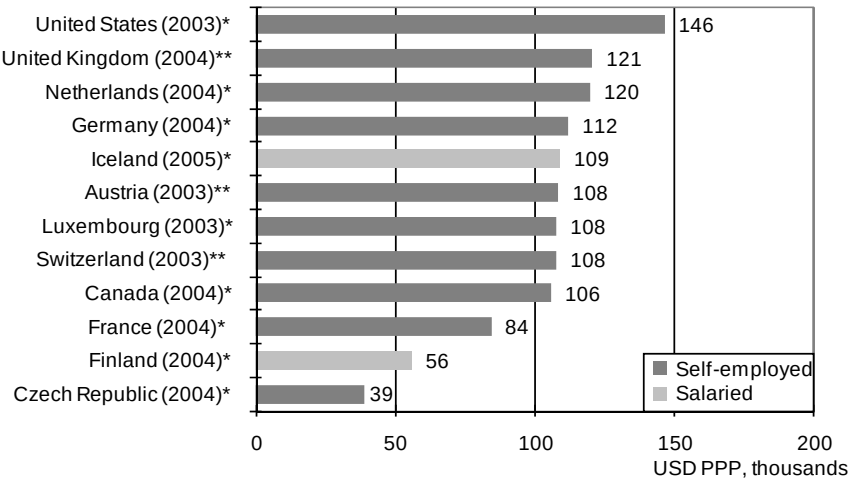
3 For Denmark and Hungary, it has not been possible to gather data representing the majority of GPs.

4 In the United States, remuneration methods vary widely among GPs, but most are paid by fee-for-services or capitation (see Annex III for more information).

Figure 1. Remuneration of GPs in USD PPP, selected OECD countries, 2004 (or closest year available)

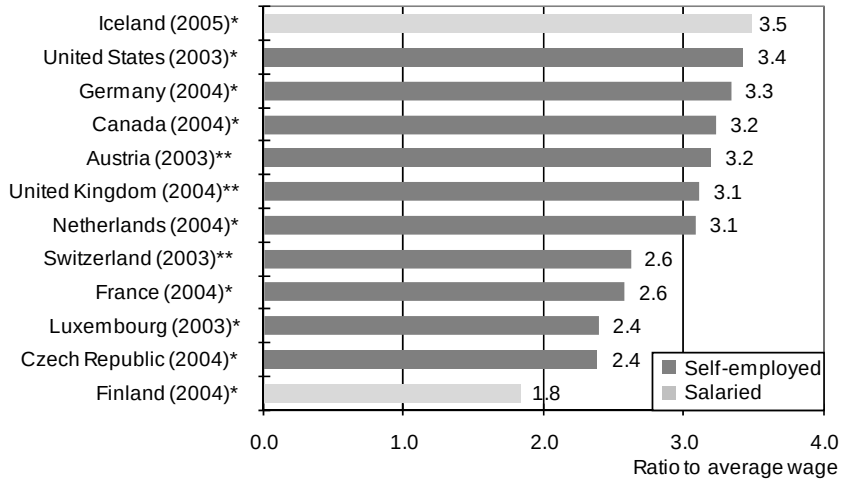


Notes: * indicates that the average remuneration refers only to physicians practising full-time and ** refers to the average remuneration for all physicians including those working part-time (thereby resulting in an under-estimation). In Austria, Switzerland and the United States, the data refer to all physicians (both salaried and self-employed), but since most GPs are not salaried in these countries, they are presented as referring to self-employed physicians. For the United Kingdom, data refer to Great Britain.

Source: OECD Health Data 2007 and for the US, Community Tracking Study Physician Survey, 2004-05.

36. Measured in relation to the average wage in the country, the relative remuneration of GPs is the highest in Iceland, the United States and Germany (Figure 2). The relative remuneration of GPs is also high (more than three times higher than the average wage) in Canada, Austria, the United Kingdom and the Netherlands. On the other hand, in Finland, it is only about twice as high as the average wage.

Figure 2. Remuneration of GPs as ratio to average wage, selected OECD countries, 2004 (or closest year available)



Note: * indicates that the average remuneration refers only to physicians practising full-time and ** refers to the average remuneration for all physicians including those working part-time.

Source: OECD Health Data 2007 and for the US, Community Tracking Study Physician Survey, 2004-05.

3.2. Changes in the remuneration of GPs over the past decade

37. The evolution over time in the remuneration of GPs is presented in real terms to remove the effect of price inflation.[5] It is presented as an index, with the first year for which data are available being equal to 100. The growth rate in the remuneration of GPs is also compared with the growth in average wages in the economy during the period.

38. The remuneration of GPs has increased at different rates over the past five to ten years across the 8 countries for which trend data are available (Figure 3).

39. In several countries, the growth of GP remuneration has been relatively modest. In Canada, the remuneration level of GPs in real terms grew by about 5% between 1997 and 2004. In Austria and the United States, the average remuneration of GPs in real terms *declined* by around 5% between the mid-1990s and 2003.[6] In Austria, the decline in average remuneration may be due at least partly to a change in the proportion of part-time practitioners during that period (since the data include both part-time and full-time GPs). In the United States, the decline of GP incomes in real terms was driven mainly by a reduction (in real terms) of fee levels paid by Medicare and private insurance (Center for Studying Health System Change, 2006). Despite this decline, GPs in the United States continued to be the most highly paid in 2003 among the 12 countries for which data are available.

40. In Finland, the remuneration of salaried GPs increased by more than 10% between 2001 and 2005, at a rate similar to the growth in average wages in the country. In the Czech Republic, the remuneration of GPs grew strongly between 2000 and 2004, followed by a decrease in 2005.[7]

41. In the United Kingdom, there has been a strong rise in the remuneration of GPs between 1995 and 2004, with remuneration increasing in real terms by 44% during this period (which is equivalent to a growth rate of over 4% per year). This growth rate was twice as fast as the average wage growth in the country.[8]

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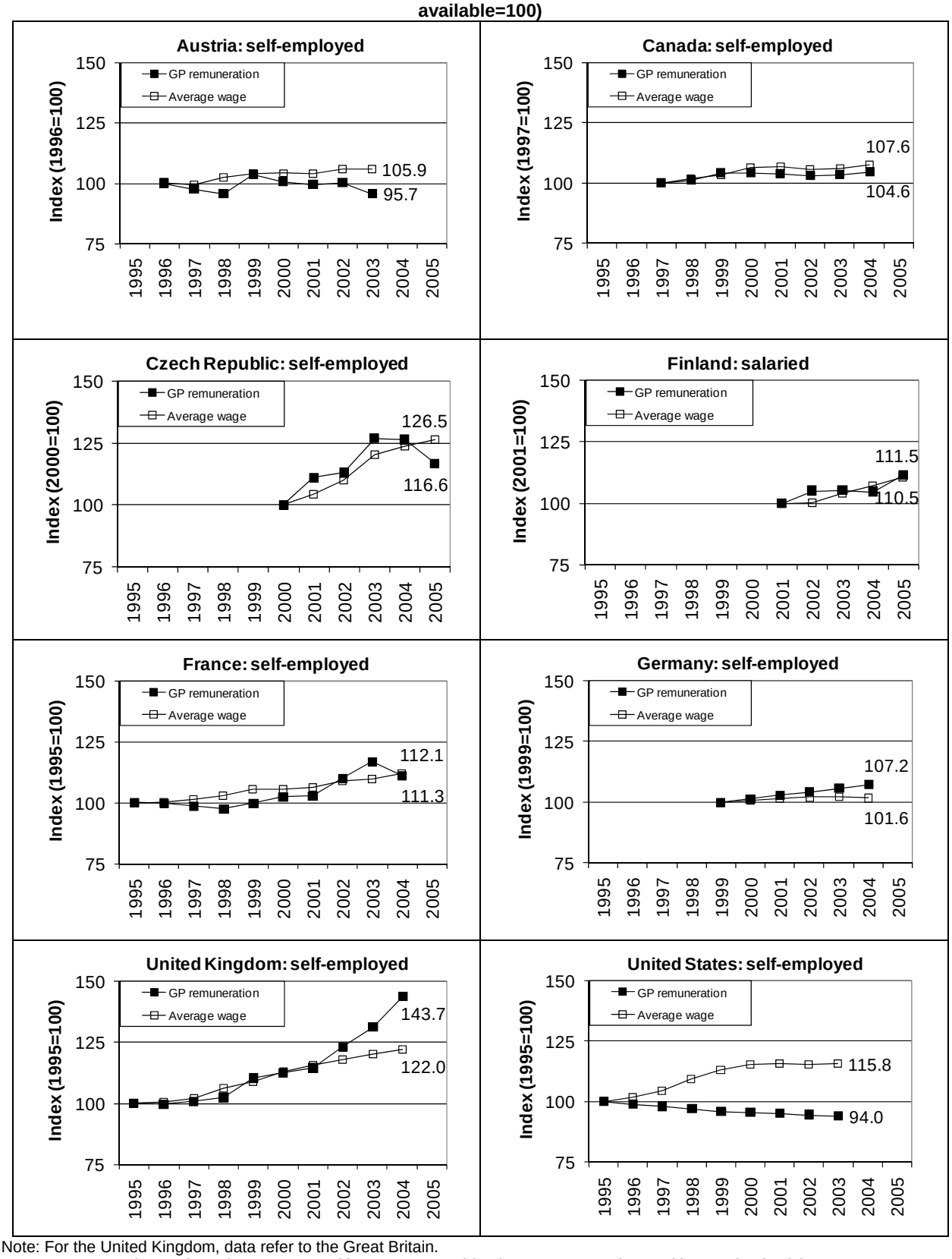
5 GDP price deflators are used from the *OECD Economic Outlook*, No. 80, December 2006.

6 In the United States, the 6% decline in real terms is estimated based on the GDP price-deflator. It is smaller than the decline of 10% calculated by the Center for Studying Health System Change (2006) due to the use of different inflation estimates.

7 In the Czech Republic, data on doctor remunerations come from an annual survey of health care facilities, whose results in any given year may be affected by sampling errors and estimation methods.

8 The remuneration data for the United Kingdom do not take into account the new performance-related payments for GPs that were introduced in 2004. According to the report on *GP Earnings Expenses Enquiries* published by the Information Centre for Health and Social Care (2007a), the average remuneration of GPs increased by 21% in real terms between 2003/4 and 2004/5 and by another 7% between 2004/5 and 2005/6 in the United Kingdom. This strong rise can be attributed at least partly to higher-than-expected payments for achieving performance goals which were introduced in April 2004. While it was expected that GPs on average would attain 75% of total points for performance-related payments, it turned out that the attainment exceeded 95% in some clinical domains in the first year following their introduction (from April 2004 to March 2005). The design of performance-related payments has been revised for 2006/07 and the monitoring and evaluation of care quality have also been strengthened (Doran *et al*., 2006).

Figure 3. Trends in the remuneration of GPs in real terms, selected OECD countries, 1995 to 2005 (earliest year available=100)



Note: For the United Kingdom, data refer to the Great Britain.
Source: OECD estimates based on OECD Health Data 2007 and for the US, Community Tracking Study Physician Survey, 2004-05.

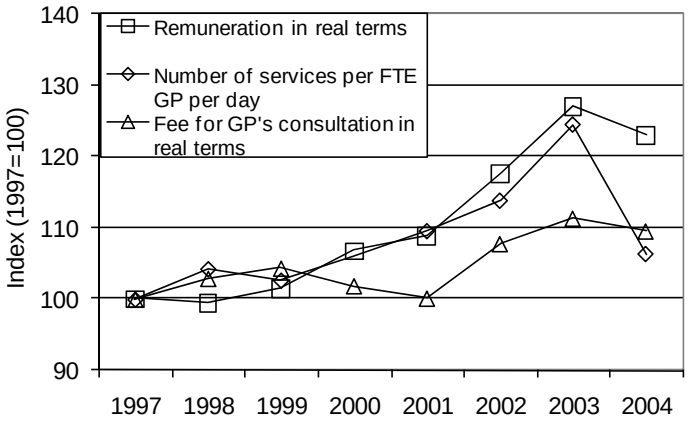
42. In France, the remuneration of GPs increased by 12% between 1997 and 2004, reflecting variations in both the volume of their activities and fee levels (Box 3).

Box 3. Analysing trends in GP remuneration in France between 1997 and 2004

In France, GPs are paid by fee-for-services, and their income is therefore linked with the volumes, types and prices of services provided. Figure 4 shows the trends in the remuneration of GPs in France between 1997 and 2004, together with trends of selected volume and price variables: the number of services per GP and fee for a regular GP consultation. The change in the fee for a GP consultation is used as a proxy for the price development of all services provided by GPs.

Both volume and price factors had some impacts on changes in the remuneration of GPs in France since 1997, although their relative impact varied from year to year. Between 1997 and 2001, the increase in remuneration level was driven mainly by an increase in the average number of services per GP, with no growth in the fees paid for GP consultations. In 2002 and 2003, increases in the fees for consultations played an important role in the strong rise of the average GP remuneration. The reduction in the average remuneration of GPs in France in 2004 was driven mainly by a reduction in the number of services provided.

Figure 4. Effects of volume and price factors on GP remunerations in France between 1997 and 2004



Note: FTE refers to full-time equivalent. Remunerations and fees for consultation are converted in 2004 constant prices. The number of acts per FTE GP per day is not available for 2000.

Source: OECD estimates based on Carnets Statistiques 1996-2006.

4. REMUNERATION OF SPECIALISTS

43. Data on the remuneration of specialists in 2004 (or closest year available) are available for 13 countries.[9] The data refer to the average remuneration of all specialists, regardless of fields of specialty, with the exception of Box 4 which presents the remunerations for certain specialties for some countries. As in the case of GPs, the data on the remuneration of specialists are presented, first, in a common currency (US dollar, USD) adjusted for purchasing power parity (PPP) and second, as a ratio to the average wage of all workers in the country to present wage differentials in the domestic labour market. This is followed by a presentation of the real growth rate in the remuneration of specialists over the past five to ten years, for those countries for which consistent trend data are available.

4.1. Remuneration levels of specialists

44. Measured in USD (adjusted for PPPs), remuneration levels of specialists are the highest in the Netherlands, followed by the United States, Luxembourg, Austria and Canada (Figure 5). In these countries, specialists are, for the most part, self-employed and paid on a fee-for-service basis.

45. The remuneration of specialists is generally lower for salaried specialists.[10] The remuneration of salaried specialists is the lowest in Hungary[11] and the Czech Republic[12]. It is also comparatively low in Finland, Denmark and Iceland where most specialists are also paid salaries. The United Kingdom is the only country where salaried specialists have remuneration levels that are comparable with those of self-employed specialists in a number of other Western European countries.

46. The remuneration of self-employed specialists was almost 50% higher in the United States than in Canada. Even though the remuneration of self-employed specialists in Luxembourg is lower than in the Netherlands, it is substantially higher than in France. In Austria, the remuneration of specialists was on average 44% higher than in Switzerland in 2003 (while the average remuneration of GPs was the same in these two countries).

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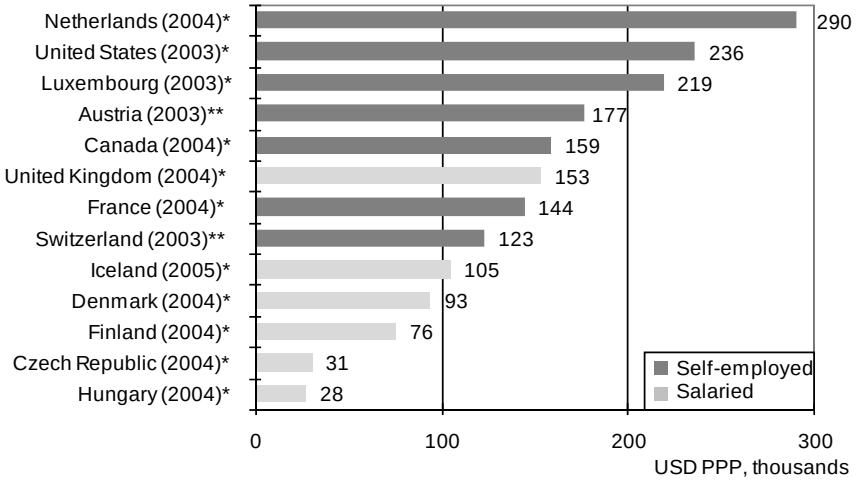
9 Data referring to most specialists are not available for Germany.

10 It is important to keep in mind that in several countries, salaried specialists can obtain additional incomes from private practices. Such extra earnings are not taken into account in the data reported by Denmark, Finland, Hungary, Iceland and the United Kingdom.

11 For Hungary, it must be borne in mind that informal payments are not included in the remuneration figures presented here.

12 In the Czech Republic, most specialists are paid through salaries. However, those specialists who are self-employed and paid on a fee-for service basis have much higher incomes than salaried specialists (their earning was about 45% higher in 2005 (OECD, 2007a).

Figure 5. Remuneration of specialists in USD PPP, selected OECD countries, 2004 (or closest year available)

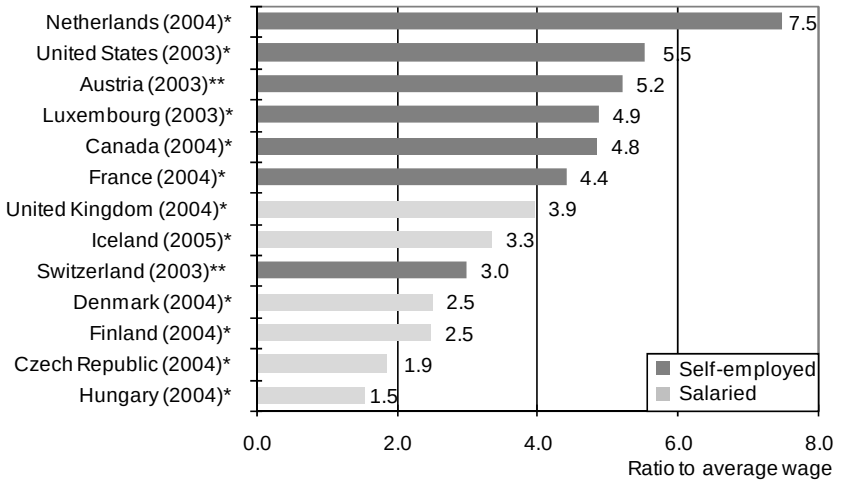


Note: * indicates that the average remuneration refers only to physicians practising full-time and ** refers to the average remuneration for all physicians including those working part-time. In Austria, Switzerland and the United States, the data refer to all physicians (both salaried and self-employed), but since most specialists are not salaried in these two countries, the data are presented as referring to self-employed physicians. For the United Kingdom, data refer to England.

Source: OECD Health Data 2007 and for the US, Community Tracking Study Physician Survey, 2004-05.

47. In comparison with the average wage in the economy, the remuneration of self-employed specialists in the Netherlands is more than seven times higher, over five times greater in the United States and Austria, and almost five times greater in Luxembourg and Canada (Figure 6). The high remuneration level in the Netherlands might be due at least partly to the relatively low specialist density in the country (see section 5.4). On the other hand, the remuneration of salaried specialists is one-and-a-half times greater than the average wage in Hungary and about two times greater in the Czech Republic (for salaried specialists).

Figure 6. Remuneration of specialists as ratio to average wage, selected OECD countries, 2004 (or closest year available)



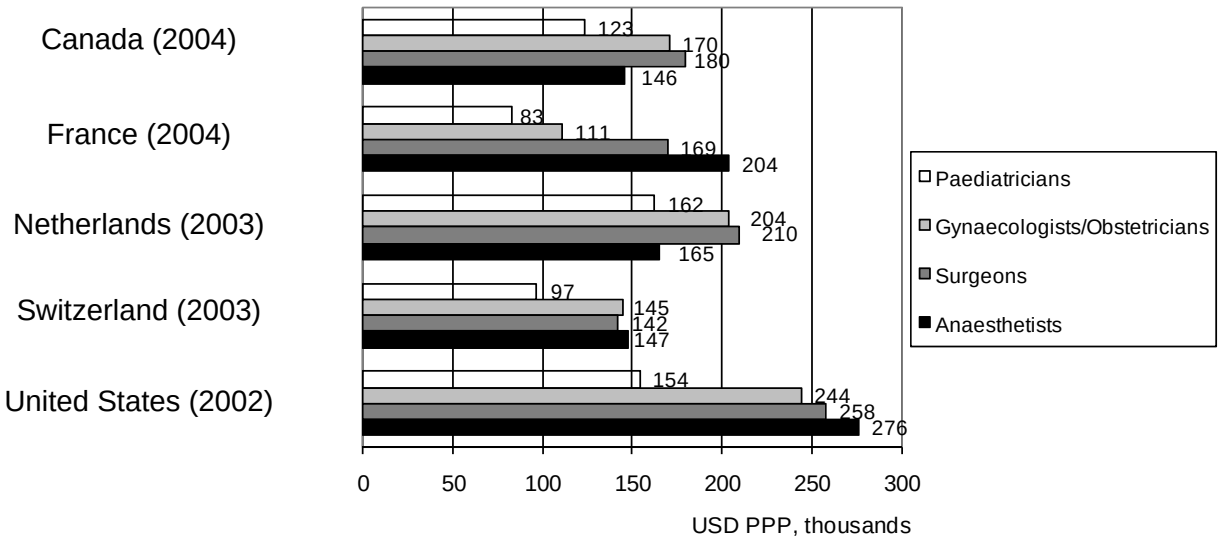
Note: * indicates that the average remuneration refers only to physicians practising full-time and ** refers to the average remuneration for all physicians including those working part-time.

Source: OECD Health Data 2007 and for the US, Community Tracking Study Physician Survey, 2004-05.

Box 4. Remuneration levels of selected medical specialties

The average remuneration level of all specialists combined conceals large variations in remuneration levels across different medical specialties in each country. As shown in Figure 7, the remuneration of different medical specialists, such as paediatricians, gynaecologists and obstetricians, surgeons and anaesthetists, varies a lot in each country. For instance, the remuneration of paediatricians tends to be much lower than that of surgeons or anaesthetists. Among the five countries for which these data have been collected, the remuneration of surgeons is around 30% higher than paediatricians in the Netherlands, around 50% higher in Canada and Switzerland, while it is about 70% higher in the United States and 100% greater in France. In all these countries, the remuneration of paediatricians is close to that of GPs, reflecting the fact that their practices are also similar.

Figure 7. Remuneration of selected medical specialists in USD PPP, selected OECD countries, 2004 (or closest year available)



Sources: Canada: OECD calculations based on Canadian Institute for Health Information (2006b), and Canadian Medical Association (2003). France: OECD calculations based on data provided in the following reports: Caisse Nationale d'Assurance Maladie des Travailleurs Salariés (CNAMTS) (2007) and Legendre (2007). Netherlands: Memo CTG/Zaio (The National Health Tariffs Authority, June 2004). Switzerland: Hasler (2006a). United States: Data Trackers, as cited in the report by the National Economic Research Associates (2004).

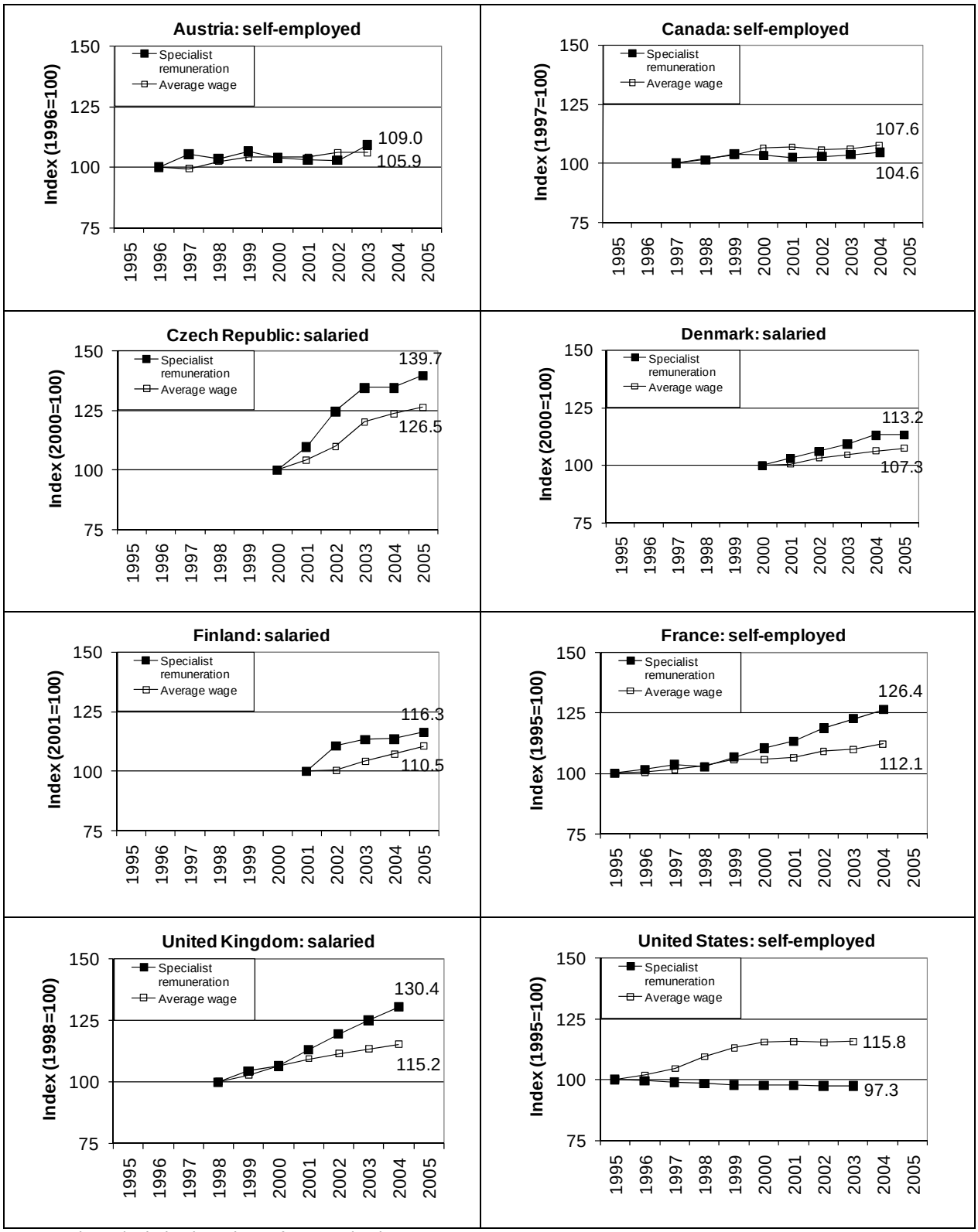
4.2. Changes in the remuneration of specialists over the past decade

48. The growth rate in real terms (adjusted for inflation) of specialist remunerations over the past five to ten years has varied markedly across the eight countries for which trend data are available (Figure 8).

49. As was the case for GPs, the remuneration of specialists in the United Kingdom grew more rapidly over the past few years than in all other countries, except the Czech Republic. Between 1998 and 2004, the remuneration of specialists in the United Kingdom increased by 30% in real terms, twice as fast as the average wage growth in the country.[13]

[13] This increase in the remuneration of specialists in England does not take into account the impact of the new contract introduced in 2004. Based on estimates from the Information Centre for Health and Social Care, the remuneration of all specialists in England (including both those under the old contract and the new contract) increased by 14% in real terms between 2004/5 and 2005/6.

Figure 8. Trends in the remuneration of specialists in real terms, selected OECD countries, 1995 to 2005 (earliest year available=100)



Note: For the United Kingdom, data refer to England.

Source: OECD estimates based on OECD Health Data 2007 and for the US, Community Tracking Study Physician Survey, 2004-05.

50. A relatively rapid increase in average remuneration was also observed for salaried specialists in the Czech Republic (since 2000) and self-employed specialists in France (since 1998). Despite the strong growth in the Czech Republic, the remuneration of specialists continued to be low compared with other countries in 2004. In France, the rise in the remuneration of specialists between 1998 and 2001 seems to have been driven more by an increase in the volume of activities than by an increase in fees paid for their services. Since 2002, rising fees have played a more important role (CNAMTS, 1997-2007).[14]

51. In the United States, the average remuneration of specialists declined by about 3% in real terms between 1995 and 2003, driven mainly by a reduction (in real terms) in the fees paid for their services during that period (Center for Studying Health System Change, 2006). Despite the reduction of their average income between 1995 and 2003, the average remuneration of specialists in the United States continued to be higher in 2003 than in all other countries apart from the Netherlands.

[14] Between 2002 and 2004, the fee schedule was revised upwards for many medical services. In addition, the total amount of *dépassement* (fees charged above the fee schedule) per specialist has grown rapidly since 2001 (Legendre, 2006 and 2007 and Ministère de la Santé, 2007).

5. POSSIBLE EXPLANATIONS FOR VARIATIONS IN REMUNERATION LEVELS OF GENERAL PRACTITIONERS AND SPECIALISTS ACROSS COUNTRIES

52. Many supply and demand factors might affect the employment and remuneration levels of doctors in different countries. On the supply side, the supply of doctor services is determined by the number of practising physicians and their activity rates (as measured, for instance, by average working hours). On the demand side, a wide range of factors affect the demand for doctor services, such as the population structure and morbidity in the population, disposable income, health insurance coverage and the degree of co-payments for health services. In addition, other characteristics of health systems, such as the extent to which GPs act as gatekeepers, also affect the demand for different types of doctor services.

53. This section examines the impact of certain health system characteristics (including remuneration methods of GPs and specialists, and the role of GPs as gatekeepers) and supply-side factors (the density of doctors and average hours worked) on the remuneration levels of doctors, starting with a partial (bivariate) analysis and concluding with an assessment of the relative importance of these institutional and supply-side factors.

5.1. Remuneration methods

54. Based on information available for the year around 2004 for the 14 countries studied, GPs are paid mainly by salary in only two countries: Finland and Iceland[15]. This reflects the fact that the public sector continues to play a dominant role in delivering health services in these two countries.

55. In other countries, most GPs are paid by other methods. Several countries (Austria, the Czech Republic[16] and the United Kingdom) use a mixed method of payment, generally combining capitation and fee-for-services, with capitation payments accounting for a relatively large part of total remuneration. In the Netherlands, prior to the reform of 2006, capitation payments were used to pay GPs providing services to publicly-insured patients, while fee-for-services were used for GPs providing services to privately-insured patients. Remuneration methods for GPs in the United States vary greatly, including capitation, fee-for-services, salary and performance-based payments. But most GPs are paid at least partly by fee-for-service. Fee-for-service is also the predominant mode of paying GPs in Canada, France, Germany, Luxembourg and Switzerland.

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15 In Iceland, GPs used to be paid by a combination of salary and fee-for-service, and on average fee-for-service payments accounted for 65% of their total remuneration in the national capital (Reykjavík) in 1996. Following a stalemate in negotiations on remuneration levels and working conditions, it was agreed in 2002 that GPs would be paid mainly through salary while leaving them the opportunity to earn additional income for services provided outside of normal working hours. To address the dissatisfaction of GPs, their remuneration was also increased by 16 to 20% at that time, according to estimations from the Ministry of Health.

16 In the Czech Republic, GPs used to be paid solely through fee-for-services but in order to control the increasing volume and cost of GP services, a mixed payment method was introduced in 1997.

56. The type of remuneration method of GPs alone does not seem to explain much of the variations in remuneration levels across countries (as shown in Figure 1). There are large variations in the remuneration levels of GPs among countries where they are mainly self-employed and paid by fee-for-services or capitation (or a combination of these two methods). Similarly, there are large variations in remuneration levels in the two countries (Iceland and Finland) where most GPs are paid by salaries. However, in the countries where salaried and self-employed GPs coexist, the remuneration of those who are self-employed tends to be substantially higher than for salaried GPs. For instance, in Luxembourg, self-employed GPs earn on average 27% more than salaried GPs in 2003 (OECD, 2007a).

57. Specialists are mainly paid on a fee-for-service basis in half of the countries covered under this study (Canada, France, Luxembourg, the Netherlands, Switzerland and the United States). In Austria, most specialists are also mainly paid by fee-for-service, on top of a fixed lump-sum payment. In other countries (the Czech Republic, Denmark, Finland, Hungary, Iceland and the United Kingdom), most specialists are paid by salary, although in all of these countries at least some specialists are allowed to earn supplementary incomes from private practices on a fee-for-service basis.

58. Unlike GPs, the remuneration method seems to be associated with variations in the remuneration levels of specialists across countries (as previously shown in Figure 5). In general, the remuneration of specialists tends to be substantially higher in those countries where they are self-employed and paid by fee-for-services, compared with those countries where they are paid by salaries. This effect might either be due to higher activity levels for self-employed fee-for-service specialists or higher prices paid for their services. The United Kingdom is the only country where salaried specialists have remuneration levels that were comparable in 2004 with self-employed specialists paid on a fee-for-service basis in several other Western European countries. In those countries where data are available for both salaried and self-employed specialists, specialists paid on a fee-for-service basis earned substantially more than salaried specialists: 45% more in the Czech Republic in 2005 and 49% more in Luxembourg in 2003 (OECD, 2007a).

5.2. Gatekeeping system

59. The use of a gatekeeping system in a country can be assessed either by the extent to which it is mandatory or optional for people to consult first a GP before consulting a specialist, and/or the extent to which, in practice, it is common or rare for people to consult their GP before seeing a specialist.

60. In several countries (such as Denmark, Hungary, the Netherlands and the United Kingdom), patients are required, or given incentives, to consult a GP "gatekeeper" about any new episode of care, with the GP then referring them to a specialist, if required. However, in practice, people in these countries can consult specialists directly (in or outside hospitals) under different circumstances, with these opportunities being used to a small or large extent depending on the specific situation in each country.

61. In other countries (such as Austria, France[17], Germany, Iceland, Luxembourg, and Switzerland), patients are free to consult a specialist directly without seeing first a GP. However, in practice, the majority of people in several of these countries do consult their GP first before being referred to a specialist, so that GPs act as entry points in health systems.

62. Hence, based on the information currently available (Table 1), it is difficult in most cases to assess precisely to what extent GPs actually play a gatekeeper role in different national health systems.

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17 In the case of France, since 2005, people consulting specialists directly without having consulted a GP first do not get the same level of reimbursement.

Table 1. Role of GPs as gatekeepers in selected OECD countries, around 2004

Country	GP gatekeeper?
Austria	No
Canada	Yes in practice, most referrals are through GPs/family doctors
Czech Republic	Yes, but in practice, gatekeeper role limited for some types of specialist care
Denmark	Yes for the vast majority of the population
Finland	Yes in principle, but not strictly enforced and no referral required for private specialist consultations
France	No (prior to 2005), but in practice most patients have a regular or family doctor whom they generally consult first
Germany	No (prior to 2004), but in practice most patients have a regular or family doctor whom they generally consult first
Hungary	Yes, but in practice, gatekeeper role limited for some types of specialist care
Iceland	No
Luxembourg	No
Netherlands	Yes
Switzerland	No, but in practice most patients have a regular or family doctor whom they generally consult first
United Kingdom	Yes (unless patients access care through hospital emergency units)
United States	Yes, for about half of the population with public/private managed care plans

Source: Van Doorslaer, Masseria et al. (2004) for all countries, except the Czech Republic (information collected by the OECD Secretariat), Iceland (Health Care Systems in Transition, 2003) and Luxembourg (Health Care Systems in Transition, 1999).

63. All else being equal (including the density of GPs and demand for health care), it might be expected that the activity rates of GPs may be higher in countries where they play a gatekeeper role, since the demand for their services may be greater. Research based on the European Community Household Panel Survey indicates that in those European countries that have a gatekeeping system, people tend to have a higher number of GP visits and a lower number of specialist visits, when controlling for some other factors such as the number of doctors per capita, the population structure and general measures of health status (Jiménez-Martín *et al.*, 2003). There is limited evidence on the impact of introducing or strengthening the role of GPs as gatekeeper on their activity rates in specific countries. Based on evidence from France, the reform to strengthen the gatekeeping system, which started to take effect in mid-2005, does not appear to have had any meaningful impact on the activity rates of GPs. A rise in activity rates in 2005 was offset by a reduction afterwards (CNAMTS, 2007).

64. Based on the information available in Table 1 and in Figures 1 and 2, the remuneration levels of GPs do not seem to be closely related to a gatekeeping role. Among the countries where GPs play a strong role as gatekeepers, there are large variations in their remuneration levels. In the Netherlands and the United Kingdom, two countries where a gatekeeping system is relatively strictly enforced, the remuneration levels of GPs are relatively high. But this is not the case in other countries such as Finland and Canada, where GPs also play a strong gatekeeper function. The remuneration levels of GPs also vary substantially among those countries where gatekeeping systems appear to be less developed.

5.3. Hours worked

65. Differences in workload and hours worked across countries might also provide an explanation to cross-country differences in the remuneration of GPs and specialists. All else being equal (including the fees paid for services provided by self-employed doctors, or average hourly wage rates for salaried doctors), one would expect that remuneration levels would be higher in countries where physicians have a greater workload and work longer hours.

66. Table 2 presents the average working time of doctors in eight countries around 2004. In all countries for which data are available except Finland and the United Kingdom, GPs usually work 50 hours or more per week on average. Specialists also usually work more than 50 hours per week, except in Finland.

Table 2. Hours worked per week for full-time GPs and specialists, around 2004

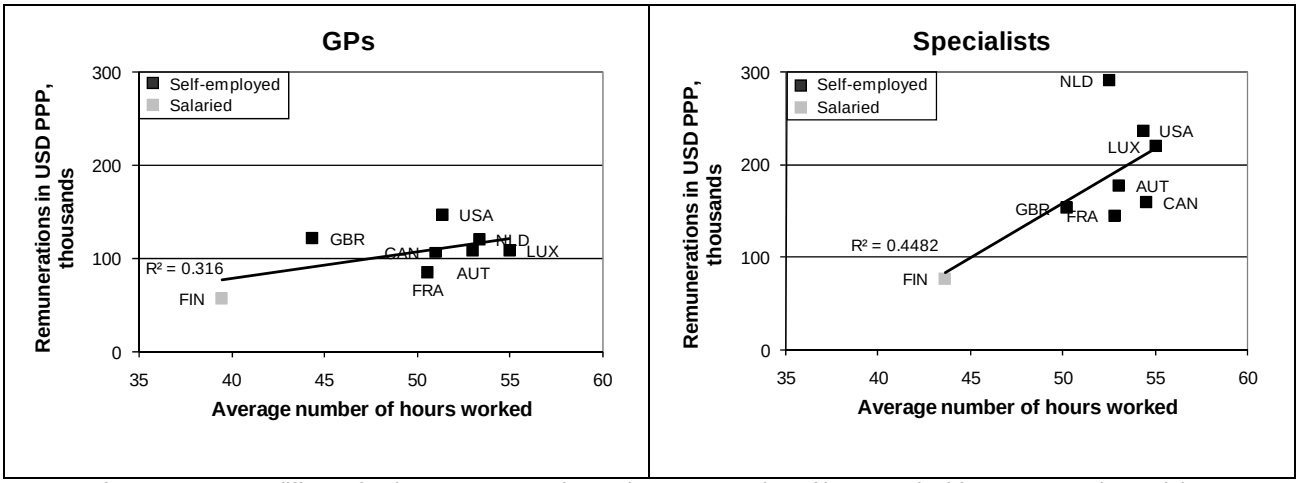
Country	GPs	Specialists
Austria (2002)	53	53
Canada (2003)	51.0	54.5-57.6
Finland (2006)	39.5	43.6
France (2001)	52.8	50.6
Luxembourg (2002)	50-60	50-60
Netherlands (2001)	53.4	50-55
United Kingdom (2006/7 for GPs, 2005/06 for specialists)	44.4	50.2
United States (2003)	51.4	54.3

Note: Austria and Luxembourg: Data refer to all physicians and they are not available for GPs and specialists separately. Canada: Data do not include hours spent on on-call duties. Medical specialists work 54.5 hours per week on average while surgical specialists work 57.6 hours per week. France: Data refer to full-time self-employed male physician and do not include additional work at nights and on weekends. United Kingdom: Data for specialists refer to those working in England.

Source: Austria: Statistics Austria, Labour Force Survey (2005). Canada: Canadian Medical Association (2003). Finland: National Research and Development Centre for Welfare and Health and Finnish Medical Association (2007). France: Breuil-Genier et al (2005). Luxembourg and the Netherlands: taken from an unpublished report of the Ministry of Health, Welfare and Sport, Netherlands (2004), "Remuneration of Medical Specialists and GPs in Europe". United Kingdom: Information Centre for Health and Social Care (2007b) and National Audit Office (2007). United States: Center for Studying Health System Change (2006).

67. Figures 9 and 10 illustrate the correlation between the number of hours worked by GPs and specialists and their remuneration levels, as measured in USD PPP and in relation to the average wage in each country. Leaving aside Finland, there does not appear to be much of a correlation between the remuneration of GPs and their average working time (left panel). In the case of Finland, at least part of the lower remuneration level of salaried GPs can be explained by lower working time. On the other hand, working time differences alone cannot explain much of the large variations in remuneration levels between self-employed GPs in the United States and those in Canada or France, for instance.

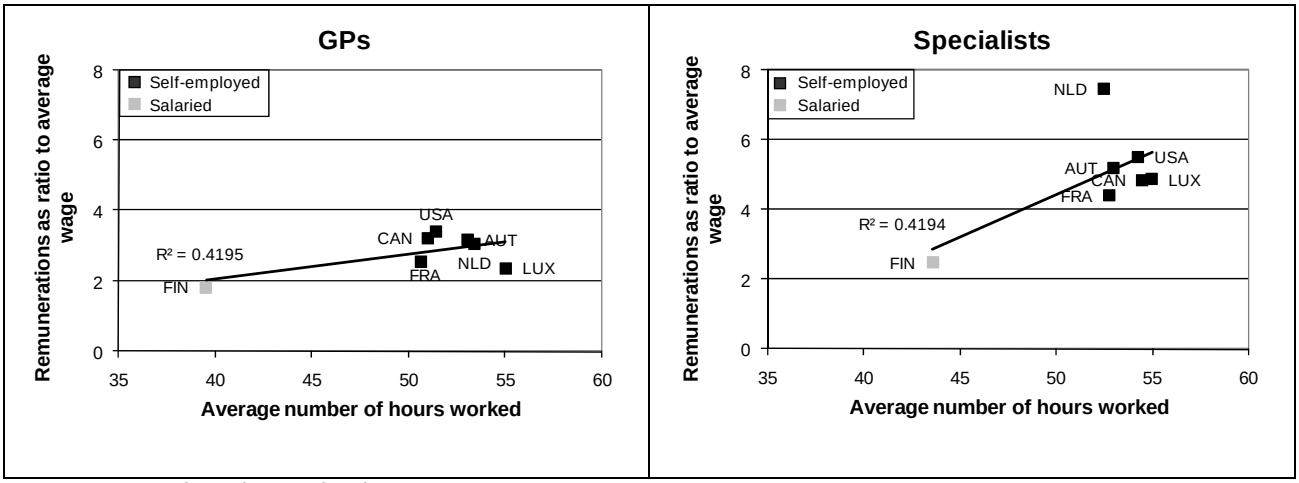
Figure 9. Remuneration levels (in USD PPP) and hours worked by GPs and specialists, selected OECD countries, 2004 (or closest year available)



Note: Reference years are different for data on remuneration and average number of hours worked for most countries and these years are indicated in Figures 1 and 5 and Table 2. When a range of average hours worked is available in Table 2, the mid-point in the data range is used as the average.

Source: *OECD Health Data 2007*, for the US, Community Tracking Study Physician Survey, 2004-05 and data presented in Table 2.

Figure 10. Remuneration levels (as ratio to average wage) and hours worked by GPs and specialists, selected OECD countries, 2004 (or closest year available)



Source: Note: Refer to the note for Figure 9.

Source: *OECD Health Data 2007*, for the US, Community Tracking Study Physician Survey, 2004-05 and data presented in Table 2.

68. Leaving aside Finland again, there is no significant association between the remuneration of specialists and their working time (right panel). As was the case for GPs, the comparatively low remuneration level of specialists in Finland can be partly explained by comparatively low working time. Apart from Finland, the average number of hours worked alone does not explain much of the differences in remuneration levels observed across countries. For example, in the Netherlands, the working time of specialists is comparable to that in countries such as France but their average remuneration is much higher. And although specialists in Canada work about the same number of hours as those in the United States, their remuneration level in USD PPP is almost 50% lower.

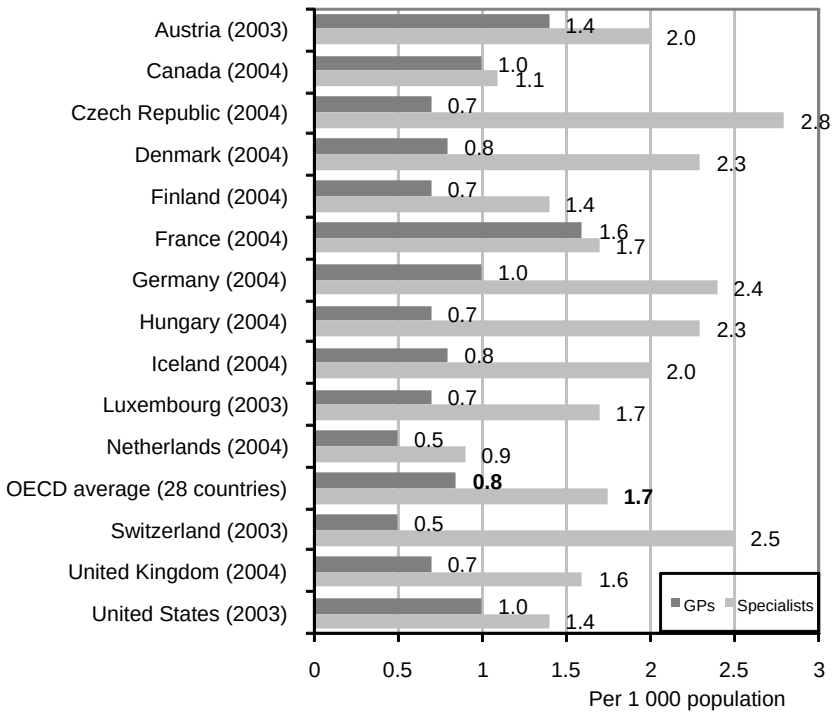
69. Thus, working time provides only a very partial explanation for some of the observed differences in remuneration levels of GPs and specialists across countries.

5.4. Number of doctors per capita (density)

70. There are large variations across countries in the number of GPs and specialists per capita, which may have an impact on their remuneration levels. According to the standard economic theory of supply and demand, one might expect that a greater supply of doctors in a country may be associated with a lower average remuneration per doctor, all else being equal (including demand).

71. Figure 11 presents data on the density of GPs and specialists in 2004 for the group of countries covered under this study as well as the average across all OECD member countries reporting these data. Specialists greatly outnumber generalists in most OECD countries. On average, the number of specialists was about two times greater than the number of GPs in 2004. Over the past ten years, the number of specialists per capita has increased by over 20% on average in OECD countries, while the number of GPs per capita has remained stable on average. Among the 14 countries covered in this study, Canada and France were the only countries that still had roughly equal numbers of GPs and specialists in 2004.

Figure 11. Number of GPs and specialists per 1 000 population, selected OECD countries, 2004 (or closest year available)

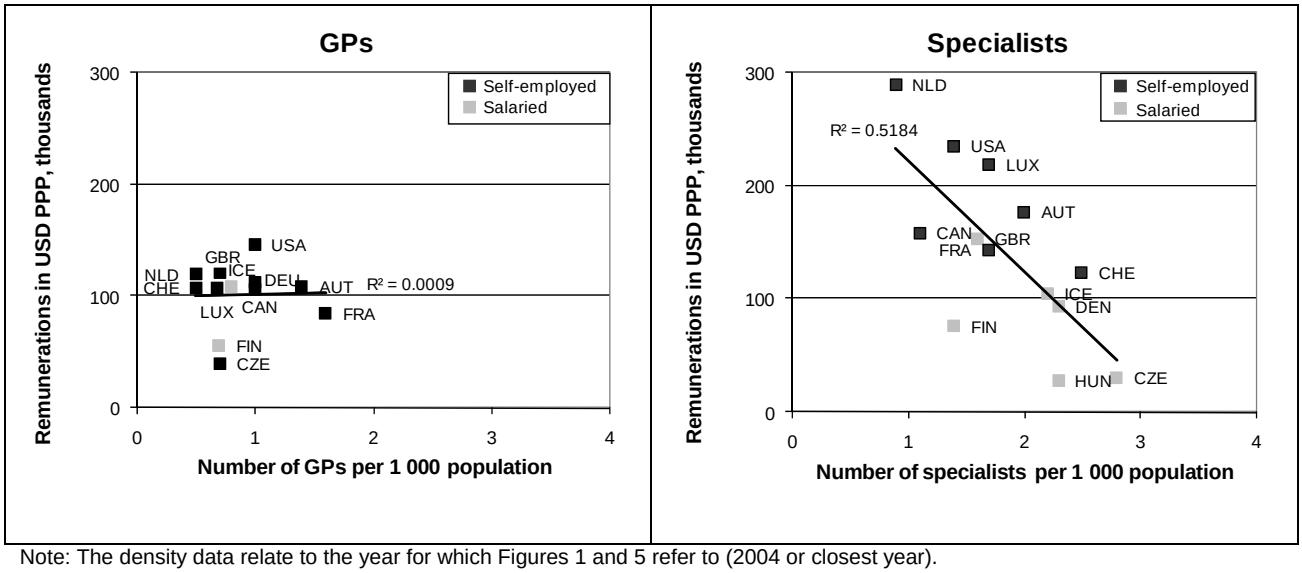


Note: Some countries are unable to report all their practising doctors in these two categories of GPs and specialists. The density data relate to the year for which the remuneration data are available in the country.

Source: *OECD Health Data 2007*.

72. Figure 12 shows the relationship between the remuneration level of GPs and specialists in USD (adjusted for PPP) and their density, while Figure 13 uses the remuneration of GPs and specialists in relation to the average wage in the country to assess the degree of association with their density.

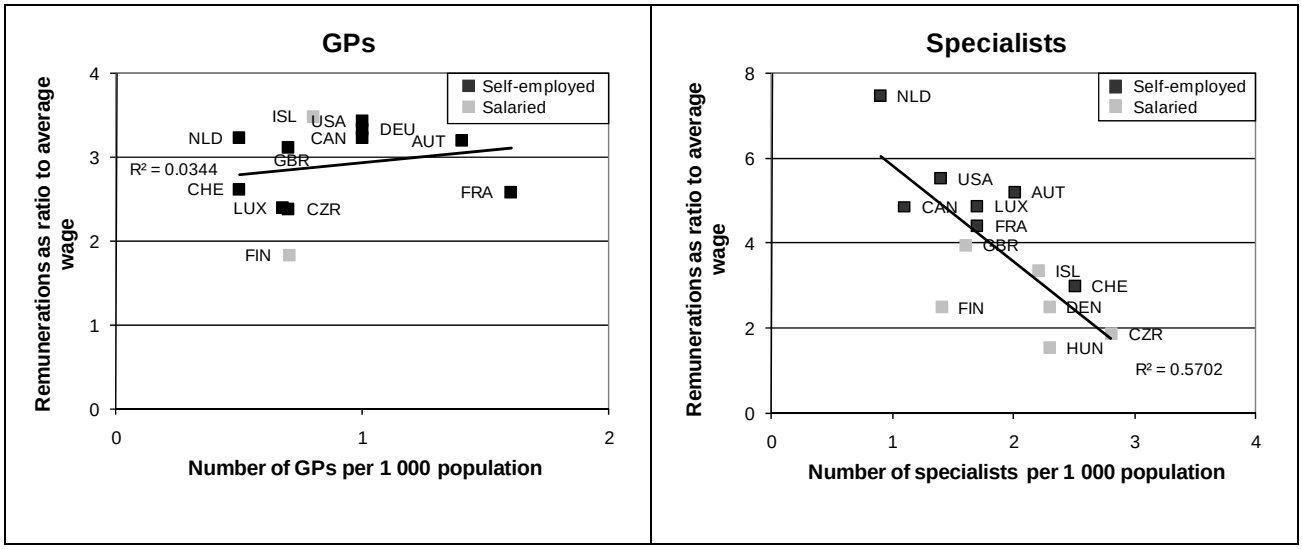
Figure 12. Remuneration levels (in USD PPP) and density of GPs and specialists, selected OECD countries, 2004 (or closest year available)



Note: The density data relate to the year for which Figures 1 and 5 refer to (2004 or closest year).

Source: OECD Health Data 2007 and for the US, Community Tracking Study Physician Survey, 2004-05.

Figure 13. Remuneration levels (as ratio to average wage) and density of GPs and specialists, selected OECD countries, 2004 (or closest year available)



Note: Refer to note for Figure 12.

Source: OECD Health Data 2007 and for the US, Community Tracking Study Physician Survey, 2004-05.

73. Both Figure 12 and Figure 13 (left panel) do not indicate any strong relationship between the number of GPs per capita and their income level across the 12 countries for which data are available. While France provides an example of a country where the supply of GPs is comparatively high and their average remuneration is lower than in several other countries, there are examples of countries such as Finland where a low number of GPs is associated with comparatively low remuneration levels. Hence, variations in the remuneration levels of GPs across countries do not seem to be influenced to any significant degree by their numbers per capita alone.

74. On the other hand, Figures 12 and 13 (right panel) show that a lower density of specialists tends to be associated with higher remuneration levels (measured either in terms of USD PPP or in relation to the average wage in the country). The Netherlands provides the most striking example of such an inverse relationship, being the country where the number of specialists is the lowest and their remuneration level the highest.[18] However, Figures 12 and 13 also illustrate that for similar levels of specialist density, there are large variations in remuneration levels. For instance, Finland and the United States have roughly equivalent numbers of specialists per capita, but the average remuneration level in these two countries varies widely. Hence, even for specialists, the density of physicians provides only a partial explanation to variations in remuneration levels across countries.

5.5. Relative importance of selected supply-side factors and health system characteristics

75. This section brings together the different factors that have been considered in the previous sections in an attempt to assess their relative importance in explaining cross-country variations in remuneration levels of doctors. The analysis is based on two slightly different OLS regression models, in which the logarithm of the remuneration of GPs and specialists in USD PPP is the dependent variable[19] and the selected supply-side factors and health systems characteristics the independent variables. The two models vary only in their treatment of the remuneration method. In the first model, GPs and specialists are only categorised on the basis of whether they are self-employed or salaried, while the second model goes a step further by separating two different types of remuneration methods for self-employed doctors (fee-for-service only versus mixed payment methods). The multivariate analysis is severely constrained by the limited number of countries for which the required data are available (8 countries only) as well as the limited number of variables taken into account. [20]

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18 The relatively low number of specialists in the Netherlands can be attributed to restrictions on medical student intakes, limiting entry in the professions (Simoens and Hurst, 2006). The Netherlands also has a relatively low number of GPs for the same reason.

19 The logarithm of the remuneration is used as a dependent variable to facilitate the interpretation of regression analysis. For an increase in the value of an independent variable by one, the estimated percentage change in the dependent variable is 100 times the coefficient of the independent variable.

20 Due to the small sample size, demand-side factors such as population structure, morbidity in the population and disposable incomes are not controlled for in the regression models, even though they can be expected to also affect the activities and remuneration levels of doctors across countries.

Table 3. Estimates of the contributions of different factors on variations in the remuneration of GPs and specialists across countries

	GPs		Specialists	
Independent variables	(1)	(2)	(3)	(4)
Hours worked	0.005	0.011*	0.024	0.024
Density (numbers per capita)	-0.095	-0.097*	-0.120	-0.153
Gatekeeping	0.038	0.086*	-0.047	-0.055
Self-employed	0.311*	-	0.077	-
Mixed payment	-	0.347*	-	0.109
Fee-for-service payment	-	0.236*	-	0.063
R^2	0.816	0.982	0.641	0.652

Note: * denotes the level of significance at 5%. The following variables are dummy variables: gatekeeping, self-employed, mixed payment, and fee-for-service payment. In the case of gatekeeping, if the population in a country, in practice, usually has a family doctor, the country is categorised as having a gatekeeping system.

Source: Authors' calculations.

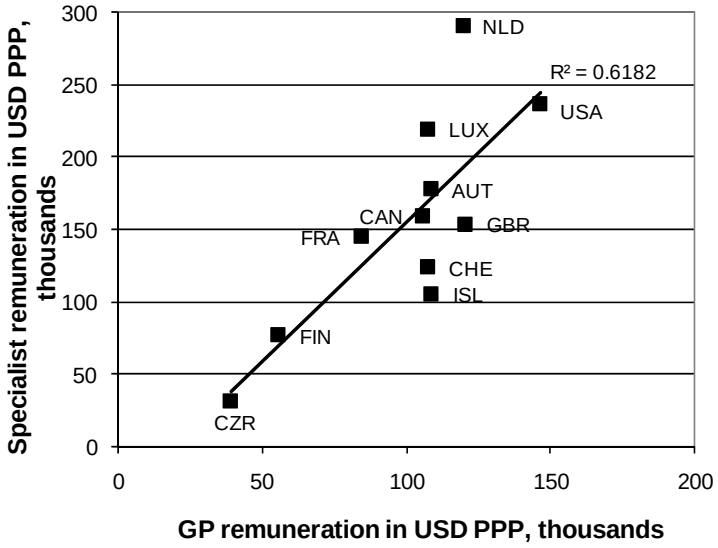
76. For GPs, the results from the multivariate analysis suggest that longer working time, a lower density (as indicated by the negative sign), and a gatekeeper role are associated with higher remuneration levels (Table 3). In addition, the type of remuneration method also has an effect on remuneration levels, with self-employed GPs generally being paid more than salaried GPs. In the first model, being self-employed is the only statistically significant factor on GPs' remuneration level. But with the inclusion of more specific types of remuneration methods in the second model, all explanatory variables become statistically significant.

77. Turning to specialists, all explanatory variables have expected positive or negative relations with remuneration levels. A higher number of specialists per capita and the presence of GP gatekeepers in health systems are negatively related to specialist remuneration levels, while self-employed specialists in general, and those either paid by fee-for-service or mixed methods, tend to earn more than salaried specialists across countries. But none of the explanatory variables are statistically significant, suggesting that other missing variables are important in explaining cross-country variations in specialist remunerations.

6. COMPARING THE REMUNERATION OF GENERAL PRACTITIONERS AND SPECIALISTS WITHIN COUNTRIES

78. In general, countries where the remuneration of GPs is relatively high also tend to have high remuneration levels for specialists (Figure 14). This is notably the case for the United States and the Netherlands. And in those countries where the remuneration of GPs is comparatively low, the remuneration of specialists also tends to be relatively low (*e.g.*, in the Czech Republic and Finland).

Figure 14. GP and specialist remuneration in USD PPP, selected OECD countries, 2004 (or closest year available)

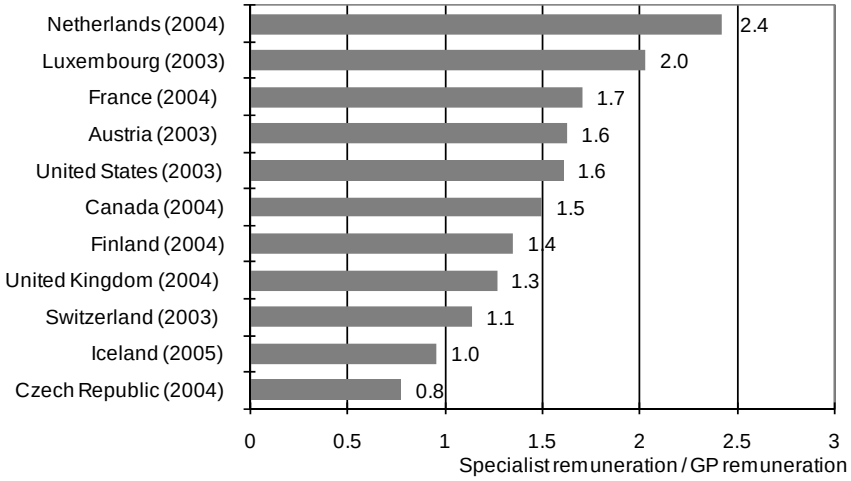


Source: OECD Health Data 2007.

6.1. Remuneration gaps between GPs and specialists, and possible explanations

79. There are, however, large differences in the average remuneration of GPs and specialists in most countries. With the exception of the Czech Republic (for salaried specialists), the remuneration of specialists is higher than the remuneration of GPs in all countries, and in most countries it is at least 50% higher (Figure 15). In the Netherlands and Luxembourg, the remuneration of (self-employed) specialists is at least twice as high as the remuneration of (self-employed) GPs. In some other countries including Iceland and Switzerland, the remuneration gap is much smaller.

Figure15. Ratio of remuneration of specialists to remuneration of GPs, selected OECD countries, 2004 (or closest year available)



Note: In the Czech Republic, the remuneration of specialists relates only to salaried specialists, the most numerous category of specialists in the country. The remuneration of specialists who are self-employed and paid on a fee-for-service is substantially higher than for salaried specialists, and therefore higher also than for GPs.

Source: OECD Health Data 2007 and for the US, Community Tracking Study Physician Survey, 2004-05.

80. A number of factors may explain the remuneration gaps between GPs and specialists in each country, including: the length of the training period, the number of hours worked, and differences in abilities or skills (Lindsay, 1973).

81. Table 4 shows the duration of training periods required after secondary education to become a GP or a specialist for students undertaking medical training around 2004 in 10 countries for which remuneration data for both GPs and specialists are available.[21] In all countries, the length of the training period is longer for specialists than for GPs. Medical education for GPs ranges from about 8 years in Finland, the Czech Republic and the United Kingdom, up to 11 years in Iceland[22], Switzerland and the United States. For specialists, medical training varies between 10 and 15 years, depending on the country and the specialty.

82. In theory, one might expect that the remuneration gap between GPs and specialists would be largest in those countries where there is a relatively large gap in the length of the respective training period. But based on the data available, the association is not very strong. For instance, even though the difference in training periods is about the same in the Netherlands as in Finland and the United Kingdom, the remuneration gap is much larger in the Netherlands than in the two other countries.

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21 Information for Luxembourg is not available since specialist medical training is not available within the country and students obtain training abroad.

22 In Iceland, students are qualified to work as GPs after 7 years of training but most students undergo an additional 4.5 years of practical training to acquire a GP specialty.

Table 4. Number of years of medical training after secondary education and ratio of remuneration of specialists to remuneration of GPs, around 2004

Country	GPs	Specialists	Training year difference	Ratio of remuneration
Netherlands	9	13-15	4-6	2.4
France	9	10-12	1-3	1.7
Austria	9	12	3	1.6
Canada	10	12-15	2-5	1.5
United States	11	11-15	0-4	1.5
Finland	8	13-14	5-6	1.3
United Kingdom	8-9	12-15	4-7	1.3
Switzerland	11	11-13	0-2	1.1
Iceland	7-11.5	13.5	2-6.5	1.0
Czech Republic	8.5	11.5-13.5	3-5	0.9

Source: Health Care Systems in Transition for the following countries (publication reference years are indicated in parenthesis): Austria (2006), Canada (2005), Czech Republic (2005), Finland (2002), France (2004), the Netherlands (2004), and United Kingdom (1999). Iceland: Ministry of Health and Social Security (2007). Switzerland: la Fédération des médecins suisses (2007). United States: American Medical Association (2005).

83. Table 2 (in section 5.3) showed that specialists are working a few more hours per week than GPs in some countries (the United Kingdom, Canada, the United States and Finland), while they are working about the same number of hours in other countries (like the Netherlands) and fewer hours than GPs in France. Contrary to what might have been expected, the remuneration gap between specialists and GPs is larger in those countries where the difference in working time is small or nonexistent, while it is smaller in those countries where working time difference is larger. Hence, other factors, beyond differences in working time, must explain the remuneration gaps between specialists and GPs.

84. Bhattacharya (2005) found that only half of lifetime income gaps between GPs and specialists in the United States can be explained by differences in training periods, working time, and skills and abilities. Bhattacharya (2005) and Nicholson (2003) suggested that barriers to entry in certain medical specialties might also explain the relatively high earnings of certain categories of specialists in the United States.[23]

6.2. Changes in the remuneration gaps over time, and possible explanations

85. In all countries for which data are available, the remuneration of specialists grew more rapidly than the remuneration of GPs over the five to ten years up to 2004 or 2005, thereby widening the income gap (Table 5). This was particularly the case for self-employed specialists in Austria and France, as well as for salaried specialists in the Czech Republic (although in this country, their remuneration level still remained comparatively low in 2005). This growing income gap is pursuing a trend that was observed in several of

[23] In the United States, the number of residency positions is restricted for each specialisation. Most medical school graduates enter a residency programme in one of the 22 specialisations before they can practice medicine. Each residency programme determines the number of positions each year (Nicholson, 2003). In the case of the Netherlands, the number of specialists is fixed by the government every year based on the needs. From 1999, a tripartite organisation representing various medical professions, training establishments and health insurance funds provides opinions on the supply of specialists to the government based on the analysis on the demand and supply of health care over 10 to 20 years. In other countries such as Austria, Germany, Spain, Switzerland and the United Kingdom, the quota for each specialisation is determined based on factors including the number of places available in practical training programmes (*e.g.*, Austria, Germany and Switzerland like in the United States) or financial resources (*e.g.*, Spain and the United Kingdom (Sénat, 2008).

these countries in the previous OECD study, based on evidence from the 1970s and the 1980s (Sandier, 1990).

86. Since 2004, the rapid increase in GP remunerations in the United Kingdom (which has exceeded the rise in specialist remunerations) has, however, reversed this trend of a growing income gap in this country.

Table 5. Annual real growth rates in the remunerations of GPs and specialists

Country	Year	GPs		Specialists		Difference in growth rate between remuneration of specialists and GPs
		Salaried	Self-employed	Salaried	Self-employed	
Austria	1996-2003	-	-0.6%	-	1.2%	1.8%
Canada	1997-2004	-	0.6%	-	0.7%	0.1%
Czech Republic	2000-2005	-	3.1%	6.9%	-	3.8%
Denmark	2000-2005	-	-	2.5%	-	-
Finland	2001-2005	2.8%	-	3.9%	-	1.1%
France	1995-2004	-	1.2%	-	2.6%	1.4%
Germany	1999-2004	-	1.4%	-	-	-
United Kingdom	1995-2004 1998-2004	-	4.1%	4.5%	-	0.4%
United States	1995-2003	-	-0.8%	-	-0.3%	0.5%

Source: OECD Health Data 2007 and for the US, Community Tracking Study Physician Survey, 2004-05.

87. In the United States, a study by Bodenheimer *et al*. (2007) suggested that a slower growth in the fee levels for GP services compared with specialist care contributed to the growing remuneration gaps between GPs and specialists between 1995 and 2005. In France, the combination of a more rapid growth in the volume of activities of specialists and a greater increase in the fees paid for their services contributed to the widening remuneration gaps between specialists and GPs over the past ten years (Ministère de la santé, 2007).

88. Since the choice of medical specialties is influenced at least partly by expected lifetime incomes (see Box 5), the growing remuneration gaps between GPs and specialists has likely contributed to the growing number and share of specialists in nearly all OECD countries over the past decade.

Box 5. Factors influencing choice of specialty

Several studies in the United States have found that expected income matters in choosing a medical specialty, although the degree of its importance differs across studies. Hurley (1991) and Nicholson (2002) found that a 1% increase in the expected lifetime earnings of a specialty was associated with more than 1 % increase in the proportion of medical students choosing the specialty, with the income elasticity being 1.05 and 1.42, in their respective studies.

Beyond financial incentives, other factors may also influence specialty decisions. In a survey conducted by the Association of American Medical Colleges in the United States, most medical students indicated intellectual content, challenging diagnostic problems, emphasis on people skills and predictable working hours as important factors in making specialty decisions, with relative income and prestige being considered less important (Nicholson, 2002). More recently, Nicholson (2006) indicated that the choice of specialty in the United States may also be affected by the risk associated with malpractice and the extent of direct patient care and barriers to entry into a specialty.

In Switzerland, Buddeberg-Fisher *et al*. (2006) found that the proportion of medical students who wanted to become GPs was declining due to lower professional prestige and lower income levels compared with specialists. They also indicated that these factors were playing a role in specialty decisions in other German-speaking countries.

7. CONCLUSIONS

89. This paper has examined the remuneration of GPs and medical specialists in 14 OECD countries for 2004 or the closest year available and described the remuneration methods of doctors in these countries. It has also explored selected factors which might affect variations in remuneration levels across countries, including differences in these remuneration methods.

90. Across OECD countries, large variations in the remuneration levels of GPs are observed and variations for specialists are even greater. The remuneration of GPs and specialists converted in USD PPPs is relatively low in Eastern European countries such as the Czech Republic and Hungary, at less than half of the remuneration levels in most other countries. On the other hand, the remuneration levels are relatively high in countries such as the United States, the United Kingdom and the Netherlands for GPs, and the Netherlands, the United States and Luxembourg for specialists. Measured as a ratio of the average wage in the country, the remuneration of GPs varies from being two times greater in Finland and the Czech Republic, to three-and-a-half times greater in Iceland and in the United States. The remuneration of specialists varies much more, ranging from being one-and-a-half time to two times higher than the average wage for salaried specialists in Hungary and the Czech Republic, to being five to seven times higher for self-employed specialists in the Netherlands, the United States and Austria.

91. Within each country, the study found that the remuneration levels vary by type of doctors. In nearly all countries, the remuneration of specialists is higher than that of GPs. This is particularly the case in the Netherlands and Luxembourg, where the remuneration of self-employed specialists is more than two-times greater than for self-employed GPs. On the other hand, the remuneration gap between GPs and specialists is less pronounced in countries like Switzerland, the United Kingdom and Finland. In addition, the study found that among specialists, remuneration levels vary greatly by specialty. For instance, paediatricians are usually paid about the same as GPs and much less than gynaecologists/obstetricians, surgeons and anaesthetists.

92. This study also found a growing remuneration gap between GPs and specialists in recent years in all countries studied apart from the United Kingdom. This growing remuneration gap can be expected to influence the composition of the medical workforce by reducing the incentive for medical students to choose general practice.

93. In general, the remuneration of doctors tends to be higher in those countries where they are self-employed and paid by fee-for-services, compared with those countries where they are paid by salaries. This is particularly the case for specialists. In those countries where self-employed and salaried specialists coexist, the remuneration of self-employed specialists tends to be substantially higher than for salaried specialists. The United Kingdom is the only country where salaried specialists have remuneration levels that are comparable with self-employed specialists paid by fee-for-services in several other Western European countries.

94. Large differences in the remuneration levels of GPs and specialists across countries may provide an incentive for doctors to migrate from countries where they are relatively low paid to countries where they are better paid. Within Europe for instance, there has been a growing emigration of doctors from Eastern and Central European countries to Western European countries. This has raised concerns about possible doctor shortages in some of the countries that have experienced net emigration.

95. There are many data limitations to this study that have prevented a more robust comparison of the remuneration of doctors. Further work is needed to improve the comparability of data on the remuneration level of doctors across countries. This involves identifying existing national sources, or developing new

ones, that would provide more comprehensive estimates of the total income of doctors, taking into account all their income sources. This is particularly important at a time when an increasing proportion of doctors are receiving income through a mix of remuneration methods. There is also a need to gather more information on the sources and methods used to estimate and deduct practice expenses for self-employed doctors, and to try to harmonise these methods as much as possible. Furthermore, there is a need to promote the use of more harmonised methods across countries to estimate the remuneration for full-time equivalent doctors, by either excluding or adjusting for part-time practitioners in a consistent manner. Some initial steps have been taken to address these issues to improve the comparability of data on the remuneration levels of doctors in the annual data collection under *OECD Health Data*. Further data collection and analysis could also focus on comparing the remuneration level for a selected set of specialties in different countries.

96. Finally, the analysis of potential explanatory factors for variations in the remuneration of doctors across countries carried out in this study has been severely constrained by the limited availability of data on key determinants of remuneration levels. Future analysis would greatly benefit from data development on the volume of doctor activities, the prices/fees paid for these services, as well as some of the factors affecting demand for their services. This study has used working time as a measure of doctor activities, but this is clearly not sufficient. More information is needed on the volumes and types of services provided by different categories of doctors. In addition, more information on the prices/fees paid for different types of doctor services is needed, to allow a fuller decomposition of the relative importance of price and volume of activities in explaining variations in doctor remuneration levels across countries. Data development on demand-side factors such as morbidity in the population would also help in analysing differences in doctor activity rates across countries.

ANNEX I. SOURCES AND CHARACTERISTICS OF REMUNERATION DATA IN 14 OECD COUNTRIES

Table 6. Types and sources of remuneration data from the 14 OECD countries

Country	Type	Source
Austria	Income tax register	*Income reports, National Audit Office*
Canada	Health insurance scheme	*National Physician Database, Canadian Institute for Health Information*
Czech Republic	Survey (health-sector specific)	For GPs: *Survey on independent out-patient care facilities, Institute of Health Information and Statistics of the Czech Republic* For specialists: *Statistical report on employees and structure of wages in health care facilities, Institute of Health Information and Statistics of the Czech Republic*
Denmark	Salary register	For specialists: *Salary and Employment Register, National Board of Health*
Finland	Survey (general)	*Structure of Earnings, Statistics Finland*
France	Health insurance scheme	*Caisse Nationale d'Assurance Maladie des Travailleurs Salariés (CNAMTS)*
Germany	Cost structure analysis	For GPs: *Cost Structure Analysis, Central Research Institute of Ambulatory Health Care*
Hungary	Not specified	*National Institute for Strategic Health Research*
Iceland	Not specified	*Ministry of Finance*
Luxembourg	Health insurance scheme	*Social Security General Inspection*
Netherlands	Macro framework analysis (for specialists)	*Ministry of Health, Welfare and Sports*
Switzerland	Register for social security contribution	*Fédération des médecins suisses*
United Kingdom	Intended average net income (for GPs) Survey (health-sector specific, for specialists)	For GPs: *Review Body on Doctors' and Dentists' Remuneration* For specialists: *Staff Earnings Survey on National Health Service consultants, Information Centre for Health and Social Care*
United States	Survey (health-sector specific)	*Community Tracking Study Physician Survey, Center for Studying Health System Change*

Source: *OECD Health Data 2007*.

Table 7. Characteristics of GP remuneration data for the 14 OECD countries

Country	Type of GPs	Type of payments not included	All or only full-time physicians	Adjustments to exclude part-time practitioners
Austria	All GPs	None	All GPs	None
Canada	Self-employed	Payments other than fee-for-service (small)	Full-time GPs	Doctors with fee-for-service reimbursements less than CAD 60 000 are excluded.
Czech Republic	Self-employed	None	Full-time GPs	NA
Denmark	NA	NA	NA	NA
Finland	Salaried	None	Full-time GPs	Doctors working less than 90% of the general working time in the collective agreement are excluded.
France	Self-employed	Payments other than fee-for-service (small)	Full-time and some part-time GPs	Doctors who begin or end working in the year or who are above the age of 65 are excluded.
Germany	Self-employed	None	Full-time GPs	Data refer to GPs working medium practice size (annual working hours of 2 748), so those working longer or fewer than 2 748 hours are excluded.
Hungary	NA	NA	NA	NA
Iceland	Salaried	Incomes from private practices	Full-time GPs	NA
Luxembourg	Self-employed	None	Full-time and some part-time GPs	Doctors earning less than the minimum social salary of EUR 16 425 are excluded.
Netherlands	Self-employed	NA	Full-time GPs	Data refer to GPs with norm practice (2 350 patients); those with more or fewer patients are excluded.
Switzerland	All GPs	None	All GPs	Doctors above age 65 are excluded.
United Kingdom	Self-employed	Incomes from private practices and working in hospitals (small)	All GPs	None
United States	Self-employed	None	Full-time GPs	Data refer to doctors spending at least 20 hours per week in direct patient care.

Note: NA refers to not available.

Source: *OECD Health Data 2007*.

Table 8. Characteristics of specialist remuneration data for the 14 OECD countries

Country	Type of specialists	Type of payments not included	All or only full-time specialists	Adjustments to exclude part-time practitioners
Austria	All specialists	None	All specialists	None
Canada	Self-employed	Payments other than fee-for-service (small)	Full-time specialists	Doctors with fee-for-service reimbursements less than CAD 60 000 are excluded.
Czech Republic	Salaried (including GPs and dentists)	Income from private practices (small)	Full-time specialists (and GPs)	NA
Denmark	Salaried	Income from private practices (small)	Full-time specialists	NA
Finland	Salaried	None	Full-time specialists	Doctors working less than 90% of the general working time in the collective agreement are excluded.
France	Self-employed	Payments other than fee-for-service (small)	Full-time and some part-time specialists	Doctors who begin or end working in the year or who are above the age of 65 are excluded.
Germany	NA	NA	NA	NA
Hungary	Salaried	Incomes from private practices and informal payments	Full-time specialists	NA
Iceland	Salaried specialists	Incomes from private practices	Full-time specialists	NA
Luxembourg	Self-employed specialists	None	Full-time and some part-time specialists	Doctors earning less than the minimum social salary of EUR 16 425 are excluded.
Netherlands	Self-employed specialists	None	Full-time specialists	NA
Switzerland	All specialists	None	All specialists	Doctors above age 65 are excluded.
United Kingdom	Salaried specialists	Incomes from private practices	Full-time specialists	Total personnel costs for specialists are divided by the number of full-time equivalent salaried specialists.
United States	Self-employed specialists	None	Full-time specialists	Data refer to doctors spending at least 20 hours per week in direct patient care.

Note: NA refers to not available.

Source: *OECD Health Data 2007*.

ANNEX II. SUMMARY TABLES ON REMUNERATION METHODS OF GPS AND SPECIALISTS IN 14 OECD COUNTRIES

Table 9. Remuneration methods of GPs in the 14 OECD countries, around 2004

Country	Salaried	Self-employed		
		Fee-for-service (FFS)	Capitation	Mixed
Austria	Some GPs: physicians working in hospitals. Some GPs working in the public health care system.	Some GPs. Salaried GPs for their private practices.	-	Most GPs: lump-sum and capitation (for basic services) and FFS (for other services). (On average, lump-sum and capitation payments accounted for 49% of total payments in 2005.)
Canada	Some GPs: physicians working as community clinic physicians.	Most GPs.	-	Some GPs: FFS with capitation or salary in some provinces. (In Ontario, 51% of the registered GPs are paid by mixed payment methods.)
Czech Republic	Some GPs: physicians working in hospitals.	-	-	Most GPs: mainly capitation and FFS (for selected services: preventive examinations and home visits) (FFS payments accounted for approximately 30% of total payments.)
Denmark	Some GPs: physicians working in hospitals.	-	-	Most GPs: capitation and FFS (for selected services: consultation, examination and home visits). (Capitation comprises about 1/3 of total remuneration.)
Finland	Some GPs: physicians working in health centres.	Some salaried GPs for their private practices.	-	Most GPs: physicians under personal doctor programme (salary (60%), capitation (20%), FFS (15%) and local allowances).
France	Some GPs: physicians working in hospitals and health centres and in preventive and social services.	Most GPs. Salaried GPs for their private practices.	-	Some GPs: physicians under gatekeeping scheme, FFS and capitation.
Germany	Some GPs: physicians working in hospitals.	Most GPs. Salaried GPs for their services to private patients.	-	-
Hungary	Some GPs (less than 10% of GPs): physicians working in the public sector.	Some salaried GPs for their private practices.	-	Most GPs: physicians with family doctor contract are paid by capitation (for registered patients), lump-sum (depends on the size and location of the practice) and FFS (for non-registered patients).
Iceland	Most GPs (and FFS for services after normal working hours (about 10% of total remuneration)).	Some GPs. Salaried GPs for their private practices.	-	-
Luxembourg	Some GPs: physicians working in Centre Hospitalier de Luxembourg.	Most GPs.	-	-
Netherlands	-	-	-	All GPs: FFS (for their services to privately insured patients) and capitation (for their services to patients registered under Sickness Fund Act (ZFW) (low income patients)).
Switzerland	Some GPs: physicians working in hospitals.	Most GPs. Salaried GPs for treating private patients.	Some GPs (those working in health maintenance organizations).	Some GPs: some physicians in group practice or under gatekeeping scheme, FFS and top-up payments (based on budgetary performance).
United Kingdom	Some GPs: physicians working in primary care trusts.	Some GPs for their private practices.		Most GPs: capitation (largest part of payments), fixed allowances (for costs related to setting up or maintaining practices), target payments (for childhood immunisation, cytology screening), FFS (for selected services: childhood immunisation), and (since 2004) pay-for-performance.
United States	Some GPs.	Most GPs: including GPs under Medicare and Medicaid programme.	Some GPs.	Some GPs. Performance payments (based on referral practices, quality of care and patient satisfaction) available in some cases.

Note: This table updates information provided in Simoens and Hurst (2006), based on different national and international reports, including *OECD Reviews of Health Systems* and *Health Care Systems in Transition* by the European Observatory on Health Care Systems.

Table 10. Remuneration methods of specialists in 14 OECD countries, around 2004

Country	Salaried	Self-employed		
		Fee-for-service (FFS)	Capitation	Mixed
Austria	Some specialists: physicians working in hospitals. (Salary scale and bonus different across *Länder*) Some specialists working in the public health care system.	Some self-employed specialists. Salaried specialists for their private practices.	-	Most specialists: lump-sum (for basic services) and FFS (for other services). (On average, lump-sum payments accounted for 34% of total payments in 2005 but the proportion of lump-sum payments differ across specialisation: 51% for paediatricians, 37% for gynaecologists and 28% for surgeons.)
Canada	Some specialists: physicians working in hospitals.	Most specialists.	-	Some specialists: FFS with capitation or salary in some provinces.
Czech Republic	Most specialists: physicians working in public hospitals. Some self-employed specialists (14% of self-employed specialists) for their part-time work in hospitals.	Some specialists. Some salaried specialists (3% in 2005) for their private practices.	-	-
Denmark	Most specialists: physicians working in public hospitals.	Some specialists. Some salaried specialists for their private practices.	-	-
Finland	Most specialists: physicians working in public hospitals. They also receive additional allowances for on-call duties. Bonuses can be paid but in practice they are not very common.	Some specialists. Many salaried physicians for their private practices.	-	-
France	About half of specialists: physicians working in hospitals. Some self-employed specialists for their part-time work in hospitals.	About half of specialists. Salaried specialists for their private practices.	-	-
Germany	Some specialists: physicians working in hospitals.	Most specialists. Salaried specialists for their services to private patients.	-	-
Hungary	Most specialists.	Some specialists. Many salaried specialists for their private practices.	-	-
Iceland	Most specialists: physicians working in hospitals. Some self-employed specialists for their part-time work in hospitals.	Some specialists. Many salaried specialists for their private practices.	-	-
Luxembourg	Some specialists: physicians working in neuro-psychiatric hospital and Centre Hospitalier de Luxembourg.	Most specialists.	-	-
Netherlands	Less than half of specialists: physicians working in university and municipal hospitals and physicians in training.	Most specialists.	-	-
Switzerland	Some specialists: physicians working in hospitals.	Most specialists. Salaried specialists for their services to private patients.	Some specialists (those working in health maintenance organizations (HMO).	Some specialists: some physicians in group practice, FFS and top-up payments (based on budgetary performance).
United Kingdom	Most specialists: physicians working under the NHS contract.	Some self-employed specialists. Some salaried specialists for their private practices.	-	-
United States	Some specialists.	Most specialists: including specialists under Medicare and Medicaid programme. Some salaried physicians.	Some specialists (*e.g.*, physicians working in the HMO).	Some specialists. Performance payments (based on quality of care and patient satisfaction) available in some cases.

Note: This table updates information provided in Simoens and Hurst (2006), based on different national and international reports, including *OECD Reviews of Health Systems* and *Health Care Systems in Transition* by the European Observatory on Health Care Systems.

ANNEX III: COUNTRY-SPECIFIC INFORMATION ON THE REMUNERATION METHODS OF GPS AND SPECIALISTS

AUSTRIA

Remuneration of GPs

Most GPs are self-employed and most of them receive incomes from fee-for-service, lump-sum and capitation payments. The proportion of these payments is different across insurance funds, but on average, fee-for-service payments account for over half of total remuneration and the rest of the payments consist of 28% by lump-sum payments and 21% by capitation payments in 2005. Generally, lump-sum and capitation payments are made primarily for basic services, while fee-for-services are made for other services including medical check-ups. In some *Länder*, payments for basic services including home visits depend on a declining scale based on the number of the registered patients per physician. For fee-for-service payments, the fee schedule is set by negotiations between health insurance funds and the physician's chambers and varies across health insurance funds. Some self-employed GPs receive payments exclusively by fee-for-service.

A small number of GPs works in hospitals and paid salaries. Salary scales and bonus are different across *Länder*. They can also treat private patients in public hospitals and earn additional incomes from these practices.

Some GPs working as medical officers in public health services are salaried civil servants. These medical officers provide services including preventive care such as vaccinations and tuberculosis precautions in the district level.

Remuneration of Specialists

Most specialists are self-employed. Most health insurance funds pay lump-sum payments for basic services and fee-for-service payments for other services, while other funds pay specialists exclusively on a fee-for-service basis. On average, lump-sum payments account for about 34% of specialist remuneration in 2005, but this share differs across specialisation: 51% for paediatricians, 37% for gynaecologists and 28% for surgeons and for neurology psychiatrists. For fee-for-service payments, the fee schedule is set by negotiations between health insurance funds and the physician's chambers and varies across health insurance funds.

A small number of specialists work exclusively in hospitals and are paid salaries. Salary scales and bonus are different across *Länder*. They can also treat private patients in public hospitals and earn additional incomes from these practices.

Some specialists working as medical officers in the public health services are salaried civil servants.

Source: European Observatory on Health Care Systems (2006), *Health Care Systems in Transition: Austria*.

CANADA

Remuneration of GPs

Most GPs are paid on a fee-for-service basis. Provincial and territorial governments negotiate the fee schedule with regional medical associations and as a result, the fee schedule differs across provinces and territories. Under the Canada Health Act, provinces are financially penalised if they allow private billing by physicians. In most provinces, there are budget ceilings for fee-for-service payments to physicians (if the total bill is over the thresholds, the budget is subsequently reduced at the negotiation in the following year).

In recent years, alternative modes of payments for doctors have been developed in different provinces and territories, and some provinces are shifting towards a mixed payment method, combining fee-for-service with a salary or capitation component. In 2004, about 20% of physicians (including both GPs and specialists) received remuneration by payment methods other than fee-for-service. In Ontario (the largest province), for instance, about half of the registered GPs were paid fully on a fee-for-service basis in 2005, while the other half were paid by an alternative method under one of the primary care initiatives (*e.g.*, Family Health Networks, Family Health Groups, Comprehensive Care Models and Family Health Teams). In Alberta and British Columbia, physicians are either paid by contract, session or salary. In Manitoba, top-up payments are made to physicians whose fee-for-service incomes are assessed to be insufficient and whose services are considered important to the population. Alternative payment methods also exist in most other provinces.

Some GPs, such as community clinic physicians, are salaried employees.

Remuneration of Specialists

Most specialists are paid on a fee-for-service basis. As described in the section for GPs, fee levels are negotiated at the provincial or territorial levels, and there are also some ceilings for budget available for reimbursing physicians in each region.

In most provinces, specialists are also paid through alternative payment methods.

A small share of specialists is salaried employees and work in hospitals.

Source: Canadian Institute for Health Information (2006b), *Average Payment per Physician Report: Fee-for-Service Physicians in Canada, 2004 – 2005, National Physician Database*, European Observatory on Health Care Systems (2005a), *Health Care Systems in Transition: Canada* and Health Canada (2005), *Canada Health Act: Annual Report 2005 – 2006.*

CZECH REPUBLIC

Remuneration of GPs

Most GPs are self-employed. They were previously remunerated solely by a fee-for-service method but capitation payment was introduced in 1997, due to the increasing volume of physicians' services (and the related growing costs). Since then, GPs are paid mainly by capitation but continue to be paid by fee-for-service for a limited set of services. The capitation amount depends on the age of registered patients. There is a ceiling for the number of registered patients per GP, and the capitation payment is reduced if the number of patients exceeds this limit. Some services such as preventive examinations and visits to patients' homes are paid by fee-for-service and the payments account for approximately 30% of total remuneration.

Some GPs are paid salaries.

Remuneration of Specialists

The majority of specialists work in state-owned hospitals and paid salaries. A very small proportion of these salaried specialists (3% in 2005) also have private practices on a part-time basis.

About one-fifth of specialists are self-employed and paid mainly by fee-for-service. Under the fee-for-service method, specialists can claim reimbursements only up to a ceiling. In addition, fee reimbursements depend on the number of hours worked per day (for working time longer than 9 hours, the monetary value for each point is reduced). In 2005, 14% of self-employed specialists also had a salaried position in hospitals.

Sources: European Observatory on Health Care Systems (2005b), *Health Care Systems in Transition: Czech Republic* and OECD (2007), *OECD Health Data*.

DENMARK

Remuneration of GPs

Most GPs are paid by a mixture of capitation and fee-for-service. The capitation payment comprises about a third of the GP remuneration and the number of registered patients per physician is limited. Fee-for-service payments are made for services including consultation, examination and home visits. The fee schedule for GP services is negotiated between the Organisation of General Practitioners and the National Health Security System. The benefit schedule includes items focusing on preventive care and GPs are given financial incentives to provide consultations on smoking cessation, dietary habits and weight control.

Some GPs are paid salaries and work in public hospitals.

Remuneration of Specialists

Most specialists work in public hospitals and paid salaries. A small group of hospital specialists are also allowed to have private practices for three hours per week in the hospital, and these services are paid by a fee-for-service method. There is no restriction on the number of hours for private practices outside hospitals but few hospital specialists engage in such practices.

Some specialists are self-employed, and those licensed by counties are remunerated by health insurance funds on a fee-for-service basis. The fee schedule is negotiated between counties and professional associations. A few specialists without county licenses practice privately and their incomes come from direct payments by patients.

Source: European Observatory on Health Care Systems (2001), *Health Care Systems in Transition: Denmark*.

FINLAND

Remuneration of GPs

Most GPs work in municipal health centres and mainly paid by salary. Salary is based on the level of the post and length of the career. GPs also receive additional allowances for on-call duties.

An increasing number of health centres participate in the personal doctor system which aims to improve access to care and continuity of care. Under this system, a team of physicians and nurses are responsible for a population of between 1 500 and 5 000 patients in a specific geographic area. Physicians under the system are paid by a mixed method: salary (60%), capitation (20%), and fee-for-service (15%) and local allowances (5%). Capitation was introduced to establish a durable relationship between doctors and patients and to encourage doctors to provide preventive care. The capitation fee is adjusted by age and gender of the registered person. Therefore, the remuneration method relates to the workload, expertise and experience of physicians, and the demographic structure of the registered population.

Some salaried GPs also have private practices on a part-time basis and earn supplementary incomes on a fee-for-service basis.

Remuneration of Specialists

Most specialists are salaried employees and work in hospitals. Salary is based on the level of the post and length of the career. They also receive additional allowances for on-call duty. Various bonuses can be paid but in practice these payments are not very common. Many salaried specialists also have private practices on a part-time basis and are remunerated on a fee-for-service basis.

Some specialists are self-employed and paid mainly on a fee-for-service basis.

Sources: European Observatory on Health Care Systems (2002), *Health Care Systems in Transition: Finland* and OECD (2005a*), OECD Reviews of Health Systems – Finland*.

FRANCE

Remuneration of GPs

Most GPs are self-employed and paid on a fee-for-service basis. Some of them in the so-called Sector 2 category physicians can charge fees that are higher than statutory fees. In 2004, 15% of GPs were in the Sector 2 category. Following the 2004 reform, they can choose to limit excess charges in return for a reduction in their social security contributions.

Some GPs participate in a gatekeeping scheme and receive a capitation per registered patient in addition to fee-for-service payments. The system was introduced in 1998 and, due to low participation, the government doubled the capitation amount to 2.6 times the fee for an ordinary consultation in 2000. Despite the financial incentive given for doctors to enrol in the referral scheme, as of 2004, only 10% of GPs and 1% of the population participated in this gatekeeping system. However, in practice, most people have a regular family doctor.

Some GPs are salaried employees (29% of GPs in 2000). 45% of salaried GPs work in hospitals, 20% in preventive services (occupational health, specialised care for pregnant women and children at the department level, etc.) and others are employed elsewhere including in health centres. Salaried GPs usually also have private practices in hospitals. For these practices, fee-for-services are usually paid to the hospital, which then pay physicians (after deducting expenses related to their use of facilities and equipments).

Remuneration of Specialists

About half of specialists are mainly salaried employees. They usually receive salary based on seniority and additional payments related to the time worked and on-call duties. Salaried specialists can have private practices during their working hours in hospitals under certain circumstances. These services are paid by a fee-for-service method but incomes from private practices cannot exceed 30% of their total incomes. Hospitals withhold a certain amount of the compensation for physicians such as expenses related to the use of facilities and equipments.

University hospital doctors are state employees and paid salaries for their teaching responsibilities and fee-for-service for their direct patient treatments.

Self-employed specialists are paid by fee-for-service. Some of them including Sector 2 physicians can charge fees higher than statutory fees. In 2004, 35% of specialists were in the Sector 2 category. Following the 2004 reform, they can choose to limit excess charges in return of reduced social security contributions. Some self-employed specialists also provide care in public hospitals, and they are paid salaries based on the number of sessions and allowances for on-call duties.

Sources: Caisse Nationale d'Assurance Maladie des Travailleurs Salariés (2006), *Carnets Statistiques 2006*, n°112, European Observatory on Health Care Systems (2004a), *Health Care Systems in Transition: France* and OECD (2005b), *OECD Economic Survey of France*.

GERMANY

Remuneration of GPs

Most GPs are self-employed and paid based on fee-for-service with budget ceilings. For services to patients covered by Social health insurance funds (SHIs), the fee-for-service reimbursement is subject to some controls. SHIs and regional physicians' associations negotiate the total amount to be distributed to physicians under the fee-for-service payments. SHIs make the payment to regional physicians' associations for all their affiliate physicians, and physicians' associations distribute the payments among affiliated physicians based on the Uniform Value Scale and other additional rules. The Uniform Value Scale assigns points to all approved medical procedures and lists certain requirements for claiming points. Physicians earn a number of points for each service based on the Uniform Value Scale, if they meet the requirements and invoice the total number of points to their physicians' association. The monetary value for each point is determined in each physicians' association based on the total payment made from SHIs divided by the total number of points invoiced by affiliated physicians. Physicians' associations reimburse physicians based on the multiplication of the number of reimbursable points and the monetary value per point. The number of points may be adjusted by the Remuneration Distribution Scale which aims to adjust for a large variation in remuneration levels across specialisations and regulates the minimum and maximum numbers of points for each specialty and/or service category. Between 1997 and 2003, the number of points per patient was also regulated. The 2007 reform abolished the prospective fee-setting mechanism, and a fixed fee schedule with top-ups for high quality care is expected to come into effect in 2009. For services to private patients, physicians are paid by private health insurance and out-of-pocket payments on a fee-for-service basis.

Some GPs are salaried employees and work in hospitals. Salaried GPs can also treat and bill private patients based on a fee schedule for private patients but reimburse hospitals for using the facilities and equipments.

Remuneration of Specialists

Most specialists are self-employed and paid on fee-for-service basis. For services to patients covered by SHIs, the fee-for-service reimbursement is subject to some controls as mentioned above for GPs. For services to private patients, physicians are paid by private health insurance and out-of-pocket payments on a fee-for-service basis.

Some specialists are salaried employees and most of them work in hospitals. They can also treat and bill private patients based on a fee schedule for private patients but reimburse hospitals for using the facilities and equipments.

Source: European Observatory on Health Care Systems (2005c), *Health Care Systems in Transition: Germany*.

HUNGARY

Remuneration of GPs

The majority of GPs are self-employed and have family doctor contracts with the National Health Insurance Fund Administration. Family doctors are paid by capitation for registered patients and by fee-for-service for non-registered patients. They also receive lump-sum payments depending on the size and location of their practice. Capitation payments depend on the number of points that physicians accumulate. The number of points is accumulated based on the age of patients and the qualifications and experiences of physicians. There are ceilings for the number of points in order to maintain the quality of care and only partial capitation payments are made once the number of points exceeds 2 400 for adult or child practice and 2 600 for mixed practice. If a team of physicians practice together, different ceilings are applied.

Less than 10% of GPs are salaried employees and work in the public sector. Private practices are allowed on a part-time basis and some salaried physicians have these practices.

Informal payments are common and may constitute an important part of total remuneration.

Remuneration of Specialists

Most specialists are salaried public servants working in hospitals with their salary based on qualifications and years of experiences. Many salaried specialists also have private practices and operate outside of the national health insurance system. These services are paid by patients directly on a fee-for-service basis.

Informal payments are common and often constitute an important part of total remuneration.

A few specialists are mainly self-employed and remunerated by a fee-for-service method.

Source: European Observatory on Health Care Systems (2004b), *Health Care Systems in Transition: Hungary*.

ICELAND

Remuneration of GPs

Most GPs are salaried employees. Before 1996, salaried GPs also received fee-for-service payments and these payments comprised a large part of their incomes. Since 1996, GPs have been paid mainly by salaries and may receive additional payments for services outside of the normal working hours. On average, the additional payments account for approximately 10% of total remuneration. Salaried GPs can also provide private practices and earn supplementary incomes based on fee-for-service.

Only a few GPs are self-employed and paid by fee-for-service.

Remuneration of Specialists

Most specialists are salaried employees and work in hospitals. Many salaried specialists also have private practices and earn supplementary incomes based on fee-for-service.

Some specialists are self-employed and paid by fee-for-service. Some of them also work as salaried employees in hospitals on a part-time basis.

Source: European Observatory on Health Care Systems (2003), *Health Care Systems in Transition: Iceland*.

LUXEMBOURG

Remuneration of GPs

Most GPs are self-employed and paid on a fee-for-service basis.

Some GPs are salaried employees, including those working in the Centre Hospitalier de Luxembourg. At the Centre Hospitalier de Luxembourg, GP services are paid on a fee-for-service basis but payments are pooled and redistributed to employees as salaries.

Remuneration of Specialists

Some specialists are salaried employees, including those working in the Centre Hospitalier de Luxembourg and in a neuro-psychiatric hospital.

Most specialists are self-employed and paid on a fee-for-service basis.

Source: European Observatory on Health Care Systems (1999a), *Health Care Systems in Transition: Luxembourg*.

NETHERLANDS

Remuneration of GPs

Most GPs are self-employed. Prior to 2006, the remuneration of GPs depended on the type of insurance of the patient. For publicly-insured patients, GPs were paid by capitation, with the capitation fee dependent on the age of registered patients (higher fees provided for patients aged over 65) and where they live (higher fees provided for patients living in deprived areas). For privately-insured patients, GPs were paid on a fee-for-service basis, with fixed fees. Approximately 70% of the population was publicly insured and 30% privately insured. Both the amount of capitation and the fee schedule were negotiated with the Central Body of Tariffs in Health Care (*Centraal Orgaan Tarieven Gezondheidszorg (CTG)*). GPs could also obtain additional income by administering influenza vaccinations recommended for certain population groups (for instance, in 2000, GPs received the equivalent of 8.45 USD (PPP) for each vaccination).

Since January 2006, the system of privately- and publicly-insured persons has been abolished and a new system including a basic insurance for all was introduced.

Remuneration of Specialists

Most specialists are self-employed and paid on a fee-for-service basis. However, specialists working in university or municipality hospitals and physicians in training are paid salaries. They supplement their incomes by working at night or during the weekend.

Source: For GPs, Kroneman et al. (forthcoming). For specialists, European Observatory on Health Care Systems (2004c), *Health Care Systems in Transition: Netherlands*.

SWITZERLAND

Remuneration of GPs

Most GPs are self-employed and paid on a fee-for-service basis. Prior to 2004, a different fee schedule existed in each canton. Since then, a uniform point system has been introduced. In the private sector, fees can be set freely, although in practice they are usually based on the fees applied in the public sector.

GPs working in health maintenance organisations (HMO) are paid by capitation. GPs providing group practice with budgetary responsibility and participating in a gatekeeping scheme receive incomes based on fee-for-service and a top-up payment, which depends on budget and profit performance.

Some GPs are salaried employees and work in hospitals. They can also receive fee-for-service payments for services provided to patients with supplementary health insurance; in these cases, GPs pay back part of these additional revenues to hospitals for the use of facilities and equipments.

Remuneration of Specialists

Most specialists working in the ambulatory sector are self-employed and paid on a fee-for-service basis.

Specialists working in HMO are paid by capitation and those providing group practice with budgetary responsibility receive incomes based on fee-for-service and a top-up payment, which depends on budget and profit performance.

Some specialists are salaried employees and work in hospitals. They receive fee-for-service payments for services provided to patients with supplementary health insurance; in these cases, specialists pay back part of these additional revenues to hospitals for the use of facilities and equipments.

Sources: European Observatory on Health Care Systems (2000), Health Care Systems in Transition: Switzerland, and OECD (2006a), OECD Reviews of Health Systems – Switzerland.

UNITED KINGDOM

Remuneration of GPs

Most GPs are self-employed and paid mainly by the National Health Service (NHS) under a contract negotiated with the Department of Health. The contract sets out the terms of services and payment details for GP contractors to the NHS. Traditionally, GPs have been paid by a mix of capitation fees, fixed allowances and fee-for-services, with the capitation payment representing the largest part of their income, followed by fixed allowances (paid to reimburse the costs of setting up or maintaining practices) and fee-for-service payments (paid for selected health promotion activities such as childhood immunisation).

Up to 2004, General Medical Service (GMS) contracts included an "intended average net income" (an annual benchmark of remuneration level), based on recommendations from the Review Body on Doctors' and Dentists' Remuneration. The "intended income" was calculated based on a complex set of allowances, including basic allowances according to the number of patients on the list, patient-age specific allowances, payments for registered patients living in a deprived area, out-of-hours work, night and emergency visits, extra payments for seniority, and several preventive activities. The *ex ante* "intended average net income" amount could differ from the actual (*ex post*) amount in a given year. For instance, in 2000, the intended average income of GPs was £ 54,220 while the actual average payment was £ 56,406. (In this study, the data reported refer to the "intended average income" rather than the actual remuneration.)

In 2004, a new payment system was introduced for GPs. The role of the Review Body on Doctors' and Dentists' Remuneration in proposing a target "intended average income" was restricted to the limited number of GPs working in Primary Care Organisations and paid by salary. The new General Medical Services contract continues to pay for core services based on the characteristics of the population on the list (with adjustments for age, gender, morbidity and mortality), and GPs working in underserved geographic areas receive additional payments. GPs can also receive additional payments based on the quality of services provided in designated areas such as child health, maternity, family planning, and chronic diseases (especially coronary heart disease, diabetes and cancer). Performance-based payments are also made for activities related to information systems (such as record-keeping) and communication with patients. The extent to which a specific quality indicator is met is rewarded with points.

Remuneration of Specialists

Most specialists are salaried employees. Up to 2003 or 2004 (depending on the region), specialists received a salary based on years of experiences, merit awards, overtime and out-of-office hour payments. Full-time specialists were also allowed to earn 10% of their incomes from private practices, for which they were paid on a fee-for-service basis.

Since the introduction of a new contract for specialists in 2003 or 2004, overtime work for specialists working for the NHS is rewarded through higher wage rates, and earning progression is based on the achievement of objectives agreed by the clinical manager and the specialist in the following areas: quality and efficiency of service provision, clinical standards and outcomes, local service objectives, resources management, service development and multi-disciplinary team working. The specific details of the new contractual arrangements differ by region. With regard to any additional private practices, specialists are required to adhere to a newly-established code of conduct. For instance, in England and Scotland, specialists generally need to provide an additional four hours of services per week to the NHS (in addition to their regular 40 hours work week) in order to have private practices.

Sources: For GPs, Department of Health, *Investing in General Practice: The New Medical Services Contract* (accessed online on 23 January 2008). For specialists, National Audit Office (2007), *Pay Modernisation for Consultants in the NHS*.

UNITED STATES

Remuneration methods of doctors in the United States have evolved over the past decade, reflecting changes in physician practice settings. A survey from the US Center for Studying Health System Change indicates that while slightly more than half of doctors continued to practice in solo or small groups in 2003, there has been a move into large group practices and institutional settings, such as hospitals (see Table 11).

Table 11. Distribution of physicians by practice type in the United States, 1995-2003

Practice Arrangement	1995	1999	2003
Solo or Two Physicians	40.7%	35.3%	32.5%
Small Group (3-10 Physicians)	18.9%	20.6%	18.9%
Medium Group (11-50 Physicians)	6.4%	7.0%	8.4%
Large Group (50+ Physicians)	2.9%	2.7%	4.2%
Staff/Group HMO	5.0%	3.8%	4.5%
Hospital-Owned, Medical School or Other	26.2%	30.7%	31.4%

Source: Community Tracking Study Physician Survey, 2004/5

As physicians move into larger practices, an increasing number of doctors is paid by other payment methods than fee-for-service, including combinations of capitation and negotiated fee schedule as well as bonus incentives. Whereas there is still payment per service, it is often discounted or adjusted in some ways through incentive or quality improvement programmes.

Remuneration of GPs

Remuneration methods for GPs vary widely across payers and types of practice, although most of them are paid at least partly by fee-for-service. Capitation is also a common payment method and a few GPs are also paid salaries. A growing number of GPs also receive performance-based payments based on referral practices, quality of care and patient satisfaction. The Medicare and Medicaid programmes pay physicians on a fee-for-service basis.

Remuneration of Specialists

Remuneration methods for specialists also vary widely across payers and types of practice, although most of them are paid at least partly by fee-for-service. Some specialists are salaried physicians, which is more likely for pathologists, radiologists and other typically hospital-based specialties. Some of these salaried specialists may also receive additional incomes on a fee-for-service basis. A growing number of specialists receive performance-based payments based on quality of care and patient satisfaction. The Medicare and Medicaid programmes pay physicians on a fee-for-service basis.

Sources: Docteur, E., H. Suppanz and J. Woo (2003), "The US Health System: An Assessment and Prospective Directions for Reform", *OECD Economic Department Working Papers* N° 350. Center for Studying Health System Change (2006), *Losing Ground: Physician Income, 1995-2003*.

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