



Primary care in Europe

Policy brief

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Summary

The aging population, the growing prevalence of people with chronic conditions, as well as changes in supply of care pose significant challenges for primary care. In many countries, the supply of health care is often fragmented, with little coordination between providers and between levels of care. Those most affected by poor co-ordination are older people and people with chronic conditions. Since most patients enter the health system at primary care level, primary care is frequently seen as key to improving the coherence and coordination of care.

The organization and financing of primary care differ widely across the EU, but recent reforms have led to greater convergence. Patients have access to a broad range of services including preventive, diagnostic and curative care outside hospital almost everywhere. Primary care providers offer the first point of contact in most countries and are often responsible for guiding patients in their health care journey. There is a trend towards group practice or multidisciplinary care, with nurses increasingly involved in care delivery. Most countries use gate-keeping or financial incentives to regulate access to specialist care. Few patients face significant financial barriers to accessing primary care. In most countries GPs are self-employed and are paid through a mix of capitation and fee-for-service systems, although there are notable exceptions. Financial incentives to ensure and improve quality of care are used in many European countries.

However, changes in the supply of care might overburden primary care providers and affect the quality and effectiveness of care. Less serious conditions are nowadays redirected towards outpatient care being a less costly option of care than inpatient care, but financial resources are not reallocated accordingly and information is not disseminated and shared efficiently.

The use of information technology in health care is increasing everywhere and is an essential tool for enhancing quality, continuity and co-ordination of care. More countries are moving toward databases for performance measurement and electronic records with capability for electronic prescribing and electronic referral and booking systems.

Despite increasing efforts at improving care coordination in the majority of the countries, coordination is still reported as a key problem throughout Europe. Improving coordination requires providers to rethink the provision of care.

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I. Introduction

There is a renewed interest in the role of primary care both in national and international settings (WHO, 2008; Hofmarcher et al. 2007). 'Globalization is putting the social cohesion of many countries under stress, and health systems, as key constituents of the architecture of contemporary societies, are clearly not performing as well as they could and as they should. People are increasingly impatient with the inability of health services to deliver levels of national coverage that meet stated demands and changing needs, and with their failure to provide services in ways that correspond to their expectations. Few would disagree that health systems need to respond better – and faster – to the challenges of a changing world. Primary Health Care can do that' (WHO, 2008).

In many places, the supply of health care is fragmented. Patients are allowed to seek different health care services for each single care episode. No or scarce coordination is seen between ambulatory care, acute hospital care and long-term care. Better coordination is essential for achieving not only a cost-efficient delivery of care but also for managing the challenge posed by an ageing population and a growing prevalence of chronic disease (Hofmarcher et al. 2007; Lafortune and Balestat, 2007). Such lack of coordination and coherence of care might harm the patients and result in duplication of treatments as well as provision of unnecessary treatments.

Since most of the patients enter the health care system at the primary care level as suggested by our country-expert questionnaire² and the results of an OECD questionnaire³ (Hofmarcher et al. 2007), it seems logical to put primary care behind the steering wheel of care provision to improve coherence and coordination of care.

However, what is primary care? Primary care can be defined as the range of services between informal care and hospital care (Boerma, 2006) and it 'provides a place to which people can bring a wide range of health problems... [being] a hub from which patients are guided through the health system. Primary care opens opportunities for disease prevention and health promotion as well as early detection of disease. It requires teams of health professionals... [and] adequate resources and investment' (WHO, 2008). The services

² A three-page questionnaire on the structure and financing of and reforms in primary care was sent to 18 country experts in March 2009; completed questionnaires were returned in June 2009. A list of country experts is given in the Appendix.

³ In 2006 the OECD sent a questionnaire on care coordination to 38 OECD and EU countries, with 26 responses.

provided should include diagnostic treatments as well as curative, rehabilitative and palliative care (WHO, 2008; Boerma, 2006).

There is evidence to show how strong primary care systems can contribute to overall health system performance (Starfield, Shi et al. 2005). Key characteristics of primary care include the following: it should be people-centred, accessible and comprehensive, offer continuity of care and provide a regular entry point to the health system. People-centredness allows improving treatment intensity and patients' quality of life (Ferrer, 2005) as well as treatment compliance (Fiscella, 2004). A comprehensive approach to health problems comes with better quality of care and better outcomes (Forrest, 1996; Chande, 1996; Starfield, 1998), increased uptake of preventive care (Bindman, 1996), and therefore fewer patients admitted to hospital for preventable conditions (Shea, 1992). Continuity of care is associated with lower mortality in all the various causes (Shi, 2003; Franks, 1998; Villalbi, 1999; PAHO, 2005), better access to care (Weinick, 2000; Forrest, 1998), less re-hospitalisation (Weinberger, 1996), fewer need for specialists care (Woodward, 2004), less use of emergency care (Gill, 2000), and better detection of medical adverse effects (Rothwell, 2005; Kravitz, 2004). Primary care as a regular entry point is also important since it results in increased patient satisfaction (Weiss, 1996; Rosenblatt, 1998; Freeman, 1997; Miller 2000), better compliance and lower hospitalisation (Weiss, 1996; Rosenblatt, 1999; Freeman, 1997; Mainous, 1998), less use of specialists and emergency care (Starfield, 1998; Parchman, 1994; Hurley, 1989; Martin, 1989; Gadomski, 1998), more efficient use of resources (Forrest, 1996; Forrest, 1998; Hjortdahl, 1991; Roos, 1998), better understanding of the psychological aspects of patients' problems (Gulbrandsen, 1997), better uptake of preventive care by adolescents (Ryan, 2001), and less risk of over-treatment (Schoen, 2007).

Various disciplines are involved in the delivery of primary care, although general practitioners (GPs) are often the main primary care actors (Boerma, 2007). Gynaecologists, pediatricians, ophthalmologists, dentists, and other physicians as well as nurses, pharmacists, physiotherapists, and midwives can also be involved at various levels. The involvement of these various disciplines varies widely across countries and somehow defines the characteristics of each primary care system.

The aim of this brief is to describe the role of primary care in the EU and its future challenges. The brief begins with some descriptive statistics and a description of primary

care systems –organisation and financing- in various European countries. Accessibility, comprehensiveness, continuity and co-ordination of care are then examined to compare country performance. The brief then concludes by discussing current themes in primary care and offering policy recommendations. The brief uses the results of the OECD survey on primary care as well as of our expert questionnaire. Moreover, some of the results are obtained from a project founded by the Commonwealth Fund on primary care.

II. Resources for primary care

Various health care reforms during the 1990s reorganised the balance between primary and secondary care, increasing the role of the former while reducing the role of the latter (Boerma and Dubois, 2006). Primary care is increasingly responsible for managing the entry to and the exit from secondary care and it accounts for approximately 90% of all health activities (Hobbs, 1995). However, the vast majority of health care expenditure is still spent on inpatient care while the amount of resources allocated to primary care has not changed substantially in the last 10-20 years (OECD data, 2008). The number of beds and hospital lengths of stay have decreased, but GP density has remained unchanged, although with large variations across Europe (Table 1).

Table 1. Health care employment, and expenditure, WHO Health for all and OECD Health data

	Primary health care centres per 100000 ¹		Hospital beds per 100000 ¹		Average length of stay ¹		Physicians per 100000 ¹		GP per 100000 ¹		Nurses per 100000 ¹		Hospital services % TEH ²		Ambulatory care % TEH ²	
	1994	2006	1994	2006	1994	2006	1994	2006	1994	2006	1994	2006	1994	2005	1994	2005
Austria	...	...	849.6	764.9	10.0	6.9	254.1	365.8	120.8	150.8	482.2	628.4	...	...	...	...
Belgium	...	...	745.0	528.5	11.7	8.4	373.6	422.8	151.2	177.3 ⁿ	1063.3	1341 ^m	35.3 ^l	29.9	28.6 ^l	...
Bulgaria	...	22.0	1019.6	622.1	13.6	7.5	332.7	366.5	76.3	66.8	601.3	411.9	...	...	...	...
Croatia	2.8	72.8	590.9	545.9	13.8	9.9	201.1	253.4	75.9	66.4	411.9	526.0	...	...	...	...
Cyprus	...	...	508.3	371.5	...	...	239.1	252.9	...	...	426.6	435.9	...	...	...	...
Czech Rep.	190.5	234.5	982.2	825.1	13.9	10.8	293.2	356.4	69.2	70.5	874.9	846.4	48.0 ^g	43.7	22.8 ^g	23.4
Denmark	...	...	497.4	364.5	6.4	5.3	247.0	319.7	74.5	77.5	894.2	961.3	47.0	42.3	18.2	19.8
Estonia	47.3	62.2	856.1	564.8	14.2	7.8	320.0	328.5	46.9	63.5	632.3	655.2	...	...	...	...
Finland	4.8	4.4	809.4	696.1	13.3	10.0	269.2	328.6	138.7	95.9	469.7	855.2	36.6 ^b	34.2	26.8 ^b	28.6
France	...	...	891.8	716.8	11.7	11.7 ^l	319.0	337.8	162.2	165.1	594.1	764.4	44.4	34.7	25.2	26.5
Germany	...	...	971.3	829.1	14.0	10.1	299.9	345.0	121.2	99.1	726.4 ^d	781.2	32.1	29.0	28.7	28.6
Greece	...	...	490.7	481.7	9.0	7.9 ^m	383.6	534.6	...	...	255.3 ^z	326.8	...	...	...	...
Hungary	2.6	4.4	930.3	791.7	11.3	7.8	294.1	303.6	62.9	65.1	782.5	904.1	35.3 ^e	32.9	19.0 ^e	20.6
Ireland	...	...	707.0	533.9	7.7	7.1	198.8	287.4	46.4	69.4	1149.8	1542.9	...	...	...	...
Italy	31.1 ^l	30.8	596.7	393.9	10.8	7.6 ⁿ	371.2	365.4	80.9	91.6	522.4	700.7	...	...	...	...
Latvia	39.7	112.6	1205.5	760.8	16.4	9.6	306.0	314.7	3.0	56.1	640.3	541.9	...	...	...	...
Lithuania	11.0	29.4	1128.4	798.8	15.9	10.0	409.1	398.0	38.9	76.6	947.4	741.5	...	...	...	...
Luxembourg	...	...	1100.3	...	15.5	15. ^c	215.4	290.0 ⁿ	77.3	92.5 ⁿ	680.0	1023.1 ⁿ	...	...	...	...
Malta	...	...	562.1	754.8	...	...	...	384.8	...	...	374.8 ^h	560.9	...	...	...	...
Netherlands	...	...	537.6	445.8	14.5	10.8	...	382.3	45.6	51.9	902.5 ^z	1479.3	35.2 ^e	34.9 ^m	23.9 ^e	22.3 ^m
Norway	...	...	419.5	411.8	8.4	7.2	278.5	374.1	75.3	75.3	1494.7	1553.6	37.3 ^d	35.5	24.5 ^d	25.4
Poland	...	...	634.2	516.2	11.1	6.4	227.6	203.2	...	...	541.1	468.8	27.1 ^l	27	28.2 ^l	26.5
Portugal	24.4	21.9 ⁿ	430.5	345.4	9.5	8.7 ⁿ	290.2	342.7 ⁿ	61.9	56.1 ⁿ	319.8	481.4	36.3 ^g	35.8	30.7 ^g	31.7
Romania	26.4	54.5	769.5	654.3	10.3	7.8	176.5	192.1	74.8	68.7	433.8	397.4

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	1994	2006	1994	2006	1994	2006	1994	2006	1994	2006	1994	2006	1994	2005	1994	2005
Slovakia	100.1	163.3 ⁿ	861.3	681.0	13.2	8.8	281.6	313.3 ^m	37.1	43.3 ⁿ	706.5	631.7 ⁿ	29.9 ^f	27	24.3 ^f	22.3
Slovenia	3.6	3.2	577.9	476.3	10.6	7.1	219.0	237.3	36.9	48.8	597.8	764.8		
Spain	402.1	337.0	10.5	8.3	...	368.6	71.8 ^m	73.8	429.5 ^a	743.7	41.7 ^f	37.1	27.2 ^f	28
Sweden	10.7	11.3	651.1	522.0 ^e	8.1	6.4	279.5	357.9	54.0	60.4	868.9	1083.4	42.4 ^g	45	20.7 ^g	20
Turkey	28.5	44.4	248.3	269.5	6.5	5.1	108.6	145.3	49.4	71.2	202.3	256.1	40.2 ^f	40	23.1 ^f	18.4
UK	468.6	...	10	9.8 ^e	173.0	212.6 ⁱ	59.5	67.3 ^m	56.4 ^f		15.3 ^f	

¹ WHO Health for All data, 2008. ² OECD Health Data 2008. TEH = total expenditure on health

^z data source 1992; ^a data source 1993; ^b data source 1995; ^c data source 1996; ^d data source 1997; ^e data source 1998; ^f data source 1999; ^g data source 2000; ^h data source 2001; ⁱ data source 2002; ^j data source 2003; ^m data source 2004; ⁿ data source 2005

Primary care organisation

As highlighted by the OECD report (Hofmarcher et al. 2007) and our country experts (Table 1; Appendix), primary care is the preferred entrance to health care services in most of the countries (Table 1; Appendix). GPs refer patients to ambulatory care specialists in 58% of the countries, and to hospital outpatient services in 46% of the countries (Hofmarcher et al. 2007). Rarely can patients contact specialists without a referral: only 4% of the patients in the OECD countries seem to refer themselves. In Sweden, patients tend to go directly to specialists, because of an historical access pattern and a shortage of GPs. While the different structure of the Belgian health care system allows patients to choose across all specialities for their first contact care, recent reforms in Belgium as well as in France and Germany encourage patients to obtain a referral to specialist care through reduced patient co-payments. Patients in Austria also have direct access to outpatient clinics, but the trend towards GP gate-keeping has been seen there in the last years.

Moreover, the results of the OECD questionnaire (Hofmarcher et al., 2007) show that in the majority of countries primary-care providers often guide patients through the health-care system. The role of primary care physicians is particularly relevant when patients move between primary and specialist care (in three quarters of the countries primary care physicians are often responsible for coordination of care); and between either primary or specialist ambulatory care and outpatient specialist care. However, their role becomes less relevant as patients move towards hospital and long-term care.

From our expert questionnaire it emerges that on average countries fall into two broad groups: those that generally require patients to register with a GP and obtain the GP's referral to all or most specialist care (Czech Republic, England, Finland, Italy, Lithuania, the Netherlands, Romania, Slovakia, Slovenia and Spain) and those that use financial incentives to encourage patients to register with a doctor and obtain referral to specialist care (Austria, Belgium, Denmark, Estonia, France, Germany, Poland, Sweden). Turkey does not yet fall into either category.

Following recent reforms, Sweden, Turkey, Poland and Austria are now the only countries without a national system of gate-keeping⁴, although different Swedish counties have formal and informal restrictions on accessing hospital-based specialists (Table 1; Appendix). In

⁴ We define a gatekeeper as a practitioner who is responsible for overseeing and co-ordinating the health needs of a patient, as well as providing care themselves (ILO 1999). The gatekeeper authorises referral of the patient to a specialist or hospital.

Germany, recent reforms aim at encouraging patients to use GPs as first contact, but for the moment only 8% of patients have a GP as gate-keeper. Moreover, in the Czech Republic although there is a gate-keeper role it seems possible to bypass the GP and contact directly the specialist without extra costs. In Estonia, on the contrary, whenever the GP is bypassed the patients need to pay any extra cost. Almost everywhere, people have free choice over the gate-keeping doctor, although patients are often restricted in the frequency with which one can change GP or the region in which one can visit their GP.

In addition to gate-keeping, there is also a trend towards introducing more group practice in the majority of the countries, although solo practice is still the norm in most countries. Group practice dominates in only a handful of countries (England, Lithuania, Spain and Sweden). GPs work in health centres in Finland, Poland and Slovenia.

According to the results of the OECD questionnaire (Hofmarcher et al., 2007), group practices or multidisciplinary care models are common in Latvia and the Czech Republic and only somewhat common in Lithuania, Romania, Slovakia, Spain, Sweden, and the UK. In many countries financial incentives are in place to incentivise group practice.

The role of nurses is another major aspect of primary care reorganization; many countries are moving toward a greater use of nurses working alongside doctors. This trend is particularly noticeable in Denmark, Poland, England, the Netherlands and Sweden (Table 2; Appendix). Nurses can now attend patients with minor health problems in England and Sweden, prescribe drugs in England, Romania and Sweden (although their prescribing role is quite limited), and provide health programs such as immunizations for children and adolescents in England, and the Netherlands. Moreover, nurses are increasingly used for coordinating the journey of chronically ill patients through the health care system in Belgium, Denmark, England, Finland, Poland, Slovenia, and Sweden. Nurse-led clinics are also becoming more common and are seen as an alternative method for supporting outpatient care after the acute phases of a disease. Sweden was one of the first European countries to create nurse-led clinics for patients with long-term conditions such as diabetes and heart failure, but nurse-led clinics are becoming popular in other countries as well (Table 2; Appendix). Nurse-led clinics are present in Denmark (municipality health clinics are mainly led by nurses and provide prevention and rehabilitation care); in England, Estonia, France, Sweden and two regions of Spain (Andalucía and Catalonia).

Financing primary care

Doctors providing first contact care are almost always self-employed, although there are exceptions (Table 3; Appendix). For example, in Sweden, most doctors are salaried employees (although there is a trend towards self employment in some regions, to encourage competition between primary care providers and to enhance patient choice), in England around a third of GPs work as salaried employees, and in Turkey, GPs are also government employees, reimbursed through a capitation scheme. In Finland GPs are mainly salaried doctors although they can either supplement the salary with additional payments (e.g. working out of hours) or with a fee per consultation. Capitation is an important form of provider payment in most of the countries, and it is usually adjusted for age and, in some cases, other need factors. It is also often combined with some fee-for-service payment. Ambulatory doctors in Belgium, France and Germany are exclusively paid on a fee-for-service basis. In Germany the value of fee-for-service points is capped by a global budget constraint. In most countries provider fees covered by the statutory health system are usually set centrally based on negotiation between the national representatives of payers (central or regional government or health insurance funds) and national provider associations. However, some physicians in France are allowed to bill patients additionally (up to 17.5% extra) and physicians in Germany can extra bill privately-insured patients (up to 170% or 230% more) (Busse and Riesberg 2004).

Financial incentives to ensure and improve the quality of care (pay for performance) are used in many European countries although evaluation of these schemes is rare (Table 3, appendix). In 2004 England introduced a pay for performance system, the Quality and Outcomes Framework, which allows GPs to earn up to 1000 points for achieving quality targets related to clinical care (e.g. for control of hypertension), practice organisation (eg. record keeping, information for patients, education and training, practice management and medicines management) and patient experience (e.g. length of consultations and patient satisfaction surveys) (IC 2007). Additional points can be earned for providing services such as screening, child health surveillance, maternity and contraceptive services. Points are then converted into financial remuneration, taking into consideration also practice size and geographical prevalence of various conditions.

In Lithuania, since 2004, various national cancer screening programs (breast, cervical and prostate cancer) have started and alongside these there are financial incentives for GPs. For example GPs can receive up to 290 Euros whenever they diagnose a cancer in its early

stages. Moreover, since 2008, the quality of work of general practitioners and nurses is assessed also according to quality criteria (e.g. the number of subscribed patients, who at least once a year visited a general practitioner for the preventive health check; the proportion of the target population that took part in the cervical cancer screening and prostate cancer early detection programme; hospitalisation rates for patients with chronic diseases, such as diabetes, chronic obstructive pulmonary disease, hypertension, asthma; etc.). About 12% of GPs' salary is pay for performance in Lithuania.

In Estonia, a voluntary pay for performance system (GPs are free to decide whether they want to participate) was introduced in 2006 with the aim of increasing the quality and effectiveness of preventive services, as well as improving chronic disease management. Priority areas are vaccinations, measurement of blood lipids and glucose levels, mammography (45-59 year old women), type II diabetes, high blood pressure, myocardial infarction and hypothyreosis; GPs also are asked to perform certain simple surgical procedures and monitor normal pregnancies. The number of GPs participating in this voluntary quality bonus premium system has increased from 63% in 2006 to 85% in 2009 (information provided by the country expert). In 2007, approximately 39% of the GPs who participated in the voluntary bonus payment system received the extra performance payment (€255 monthly on top of their usual per capita payment). The performance payment system is readjusted annually to broaden the scope of services covered.

In other countries, the aim of financial incentives is to ensure continuity of care for patients with chronic conditions (Table 3, Appendix), as well as to provide additional payments for working after hours⁵, home visits and to incentivise GPs to move to under-served, rural areas.

III. Accessibility

The EU Charter of Fundamental Rights states that 'Everyone has the right of access to preventive health care and the right to benefit from medical treatment under the conditions established by national laws and practices'. Indeed, in all European countries, there is insurance coverage for basic health care services. Most patients do not face significant financial or other barriers to accessing first contact care in most of the countries although out-of-pocket payments are high in countries such as Portugal, Latvia, Lithuania, and Greece. Cost sharing for doctor visits and outpatient prescription drugs varies across

⁵ After hours care encompasses weekends, holidays, and non-business hours on weekdays.

countries, and variation is also seen in the extent to which patients can access specialist care without referral (Table 1; Appendix) or additional payment. However, in most of the countries, there is free or almost free access for children, poorer adults, and high users of health care, either through exemptions from cost sharing, annual caps on out-of-pocket spending, or the availability of voluntary health insurance. In France and Slovenia, for example, over three quarters of the population have voluntary health insurance covering user charges (Thomson and Mossialos 2009). In France voluntary health insurance is provided free of charge by the government for low-income groups.

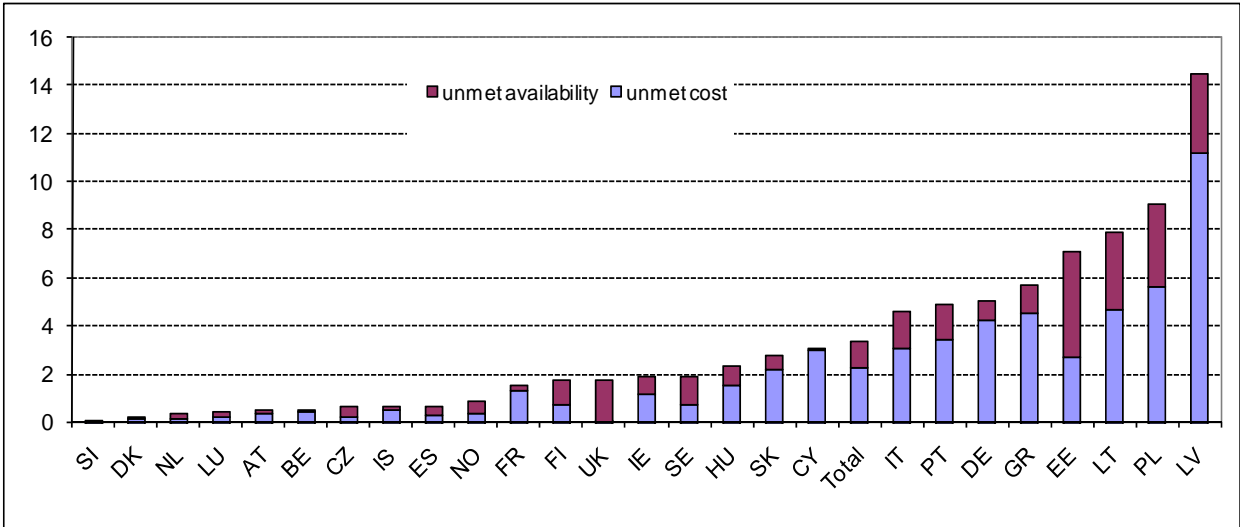
According to the Eurobarometer survey 2008 on health and long-term care (Eurobarometer, 2008), availability to GP care is considered very or fairly easy by 88% of the European respondents and particularly so in Belgium, Malta, Cyprus, Denmark, Spain, Austria, France, Ireland, the Netherlands, and Poland. However, in Portugal and Sweden less than 70% of the respondents considered access to GP care easy (which is worrying given that this is the primary access to care). Moreover, although on average only 11% of Europeans considered GP care not very affordable, with higher rates were recorded in Greece (43%), Cyprus (39%), Portugal (37%), Ireland (33%). Countries with better financial affordability of primary care (less than 5%) are in the Czech Republic, Latvia, Luxemburg, UK, Sweden, and Denmark.

The probability of reporting unmet need for medical examination or treatment was on average around 3.3% in Europe (using SILC data) when only reasons related with affordability and availability (waiting time and reason related with means of transportation) were considered but with large differences across countries (Figure 1.). The country with the highest level of unmet need was Latvia (11.2% of interviewers reported unmet needs because of costs, and 3.4% because of availability), followed by Poland (6.6% because of costs, and 3.4% because of availability), Lithuania (4.7% costs, and 3.2% availability), and Estonia (4.5% costs, 4.4% availability). Among the older EU member states the highest level of unmet need was recorded in Greece (4.5% costs, and 1.2% availability), Germany (4.2% costs, 0.8% availability), Portugal (3.4% costs, and 1.5% availability) and Italy (3.0% costs, and 1.6% availability). The country with the lowest level of unmet needs was Slovenia (0.07% in total), followed by Denmark (0.15%), and the Netherlands (0.3%). For Germany, the high percentage of people reporting unmet needs because of costs could be related to the introduction of user-charges in 2004, since there is some evidence showing that the introduction of user charges for doctor visits in Germany in 2004 causes some

financial barriers to access (Hesse and Schlette 2005); on the other hand, in France, the introduction of free coverage of user fees for low-income people in France has improved their access to care and reduced inequalities (van Doorslaer et al. 2006).

In other countries, access problems maybe caused by GPs’ shortages or regional variations in the GPs’ supply. Large variation in GP supply is for example present in Italy, France and Germany. Moreover, France, Finland, Belgium, Austria, and Germany have the highest number of GPs per 100,000 people (with more than 120 GPs per 100,000); Slovakia, Slovenia, the Netherlands, Latvia, Portugal, and Sweden, the lowest with less than 60 GPs per 100,000 (Table1). This low number of GPs is reflected in the relatively large size of the average GP patient list (Table 1; Appendix). The shortage of GPs in Sweden forces people to rely more heavily on hospital outpatient clinics for first contact care, which are more expensive for patients than health care centres (OECD 2005). In England, reforms aimed at lowering waiting times for GP made it even more difficult for patients to book appointments in advance (Dobson 2008). The new GP contract with payment for performance has reduced further the number of after-hours care provided by GPs.

Figure 1. Proportion of the population reporting unmet need due to health care cost and availability in the European Union, 2006



Source: SILC data, 2006.

With regard to equity, economic analysis indicates that the probability of using a GP is significantly pro-poor in Greece, Spain, and Germany, neutral in Austria, Belgium, Denmark, UK, Hungary, Italy, the Netherlands, Ireland and France, but pro-rich in Portugal and

Finland. (van Doorslaer, Masseria et al. 2006). For total number of GP visits in more countries inequity is pro-poor in Ireland, Belgium, Spain, the UK, the Netherlands, Greece, Denmark and Italy, while it is significantly pro-rich only in Finland. The same study finds that the use of specialists favours richer people in every country.

IV. Comprehensiveness

GPs provide a variety of services, from basic curative care to prevention and palliative care, although the range of services varies widely across countries. For example in Estonia GPs act as fund holders in a limited manner and they provide a wide range of services on top of basic curative care (minor surgeries, immunisation for children, screening for adults, family planning, dispensing of pharmaceutical prescriptions, care for children, obstetric care, perinatal care, nursing care for acute and chronically ill patients, diagnostic services, etc.) and, if necessary, they can purchase services from other providers (e.g. x-rays or CT scans). On the contrary, in Italy the amount of services provided by GPs is quite limited and child care is provided separately by paediatricians. Based on the results of a 1994 survey, Boerma and Dubois (2006) mapped the comprehensiveness of the services provided by European countries. It emerged that the western and north-western European countries provided more comprehensive care (e.g. Austria, Denmark, France, Germany, Ireland, and the UK), while countries such as Italy, Spain, the Czech Republic, Poland and Romania performed poorly on comprehensiveness.

Kroneman et al (2007), by collecting data from country experts, measured the level of comprehensiveness of primary care in the older EU member states plus Norway, Iceland and Switzerland. They find that direct access to primary care services (17 different services ranging from GP, paediatrician, gynaecologist, home care, speech therapist, etc.) varies from as low as 13% in Portugal, and 19% in Italy to as high as 76% in Greece and Sweden. Other countries where direct access to services was high were Germany, France and Belgium. However, GPs, that act as gate-keepers, are more likely to provide services for children, gynaecological care, and preventive care (Boerma, Groenewegen et al. 1997; Boerma, Fleming et al. 1998). From Kroneman et al. (2007) it emerges that direct access to services is more common in countries without a gate-keeping system, but their analysis does not take into consideration the patients' costs. Indeed, in countries without a gate-keeping system some patients may only be able to access most specialist care directly if they are willing to pay additional user charges. The results of the Eurobarometer 2008 on health and long-term care in Europe find that the quality of family practitioners is

considered good or very good in all European countries. Over 90% of the respondents considered the quality of GP care good in Malta, Belgium, Austria, Cyprus, France, Denmark, Ireland and Luxemburg. However, only between 60% and 66% of the respondents rated GP care as good in Portugal, Sweden and Bulgaria. No clear pattern between quality of care and gate-keeping model can be seen.

The trend towards 'one-stop shop' clinics in many EU countries, where patients can access both GPs and specialists and some diagnostic and laboratory services, will enhance the range of services available to patients outside hospital. Sweden has encouraged large 'one-stop shop' clinics since the 1970s, while Germany has only recently amended its laws to allow more co-operation between GPs and specialists in policlinics. In 2007 Germany had over 800 policlinics (covering 3% of all doctors), employing on average four doctors, with at least two medical specialties and other health professionals (Blum 2007). In Estonia, according to the Primary Care Development Plan 2009, GP practices should become multidisciplinary and their service be integrated with mid-wives, pediatricians, rehabilitation specialists, mental health nurses etc. Group practices in England, the Netherlands and Sweden typically involve between four and eight GPs, as well as administrative staff, district nurses, specialist nurses, physiotherapists and occupational therapists.

V. Continuity and coordination of care

Continuity of care is an essential determinant of both quality of care and health outcome. Continuity and fragmentation of care can be seen as opposite ends of a spectrum, such that the need for co-ordination grows as the degree of continuity falls (Bodenheimer 2008). Good indicators of continuity of care include the likelihood of having a regular doctor, and the organisation of referral and feedback among providers at the same level of care and between levels of care. Countries with a gate-keeping model are clearly better positioned for guaranteeing continuity of care. On the contrary, in countries without a gate-keeping model, the proportion of patients registering with a GP or a primary care centre might vary considerably. For example, in Sweden it ranges from 15% to 98% (Anell 2007).

Continuity is essential and indispensable for guaranteeing co-ordination of care. Care that is co-ordinated can prevent wasteful duplication (for example of diagnostic tests), potentially harmful use of different drugs and confusion among patients (Bodenheimer 2008). In the last years, co-ordination across care settings and over time has improved significantly in many European countries thanks to considerable efforts aiming at providing patients with

appropriate and coherent services (Hofmarcher, et al. 2007). Lack of co-ordination mostly affects people with higher needs for care, such as those with chronic conditions and older people (Hofmarcher et al., 2007). Given the increasing burden of chronic diseases and the presence of co-morbidities a single patient might move from one provide to the next without any coordination, and therefore a high risk of duplicating tests and harmful prescriptions of drugs. The patient may also feel confused and bombarded with information from multiple sources. Therefore, a fast ageing population and a growing prevalence of chronic disease therefore require more efforts to improve coordination and continuity of care.

Primary care role in the overall coordination of care is critical. Countries where access to secondary and/or tertiary care is through primary care are less concerned with care coordination than countries where access is direct (Hofmarcher et al. 2007). However, co-ordination problems are more frequently reported in countries with greater frequency of referrals back to primary care. This might imply that primary care is over-burdened in many countries and therefore GPs refer the most difficult cases to specialists and have problems managing discharges from hospitals. Policies oriented towards a shift of demand from hospital care to ambulatory care (OECD, 2005a), and a reduction in hospital care expenditure (with consequent reduction of length of stay and hospital beds, see Table 1) might have exacerbated or caused this problem. Expenditure in ambulatory care has not increased overall. Indeed, referrals from hospital to primary care are lower in countries with higher bed density (Hofmarcher et al., 2007), implying that in these countries patients receive better follow-up in hospitals and require less ambulatory care after hospital discharge. Moreover, in countries with weak ambulatory care there is higher use of hospital emergency care, and coordination problems are more predominant. Therefore, co-ordination problems might be caused by an inappropriate balance of resources between ambulatory care and inpatient care, and maybe also by a primary care sector unable to manage the complex needs of people with chronic conditions, particularly as levels of co-morbidity are increasing (Pomerleau, Knai et al. 2008). The need for better co-ordination reflects fragmented delivery by providers working in solo practices, particularly in the countries without a gate-keeping model, where continuity of care is limited.

The grouping of providers, as mentioned previously, is an increasingly common approach across most of the countries, but progress towards multi-disciplinary practices has been slow and varies substantially across countries. However, the growing importance of GPs

group practice might also have a negative effect on continuity since patients might not have access to the same GPs all the time.

In systems characterised by a high degree of fragmentation – for example, where solo practice dominates and patients have traditionally had direct access to specialists – integrated care contracts and disease management programmes (DMPs)⁶ can create more established communication between providers and benefit patients. DMPs are growing in importance across many countries. Evaluation of DMPs in Germany shows some evidence of improvements in the quality of care and DMPs are popular with patients (Busse and Mays 2008). However, their disease-specific focus is a source of concern.

The availability of electronic medical records and discharge summaries helps providers to make the best possible decisions for the patients avoiding unnecessary medication and treatments and allowing a more efficient and effective organization of referrals (Hofmarcher et al., 2007; WHO, 2009 report; Smith et al., 2005). From the OECD analysis of the 2006 questionnaire it emerges that there is a positive relationship between use of medical records and rates of referrals from hospitals back to primary care, and that good exchange of information is a key element for a good coordination of long-term care and of the overall governance of the health care sector. In almost all countries it is recognized that poor transfer of information between providers leads to duplication of tests, and it is a limiting factor in introducing more coordinated care (Hofmarcher et al., 2007). Although the information technology necessary for implementing electronic medical records is available (Elwyn, 2004), and in almost all countries there is a regular or frequent debate on issues related to poor access of information (Hofmarcher et al., 2007), medical records are 'frequently' used only in 46% and 'seldom' used in 31% of OECD countries (Hofmarcher et al., 2007). Our country questionnaires show that in most of the analyzed countries many GPs have electronic medical records, but these records are often not linked to other parts of the health care system (e.g. hospitals, laboratories, etc.). For instance, hospital appointments are booked electronically only in a few countries (Table 4; Appendix). Financial incentives for using electronic medical records more intensively are in place in a handful of countries (Belgium and Denmark).

⁶ Chronic disease management programmes and integrated care contracts generally involve a team of various professionals (often, GPs, specialists, other medical staff and administrative support) to manage patients' conditions and co-ordinate their movement through the health sector and, in some cases, the social care sector. These programmes generally also include clinical guidelines, recommendations and quality checks on the management and outcomes of these conditions, as well as a financial/reimbursement system, depending on the financing mechanism.

Another prominent obstacle to continuity and co-ordination of care is the financing system (WHO, 2008). There appears to be an association between payment for specialist care and co-ordination. Countries with a mixed payment scheme have a lower risk of having co-ordination problems than those with fee-for-service payments of specialists. An increasing number of countries are offering financial incentives for providers to co-ordinate care. Explicit payments for care co-ordination at the primary care level are often available in the Czech Republic, Denmark, England, Estonia, France, Germany, Italy, Latvia, Slovakia, and Turkey (Hofmarcher et al., 2007), while France, Germany, Latvia, Slovakia and Turkey also report financial incentives at the level of specialist or hospital care. In Latvia and Slovakia primary care physicians are given a budget to purchase services for their patients.

VI. Discussion and recommendations

Although cost containment was a central policy objective across EU countries during the 1990s (Mossialos and Le Grand 1999), more recently there has been a shift in policy in many countries from controlling expenditure on health care to ensuring access and enhancing health system value. Controlling health care expenditure is still a major objective, but governments are now more reluctant to cut health care budgets at the expense of equity, efficiency and quality. Moreover, population ageing, the growing prevalence of people with chronic conditions and consequent changes in the demand for and supply of health care require primary care to play a stronger role in the health system. The increasing burden of chronic diseases and the presence of co-morbidities implies that different providers may treat a single patient with policies aimed at specific diseases or specific parts of the health care system falling short of comprehensive and continuous care. The patient may also feel confused and bombarded with information from multiple sources. Despite the fact that the organisation and financing of primary care vary across the European Union, there are points of convergence. Patients generally have access to a broad range of preventive, diagnostic and curative care outside hospital. Primary care providers offer the first point of contact in most countries and are often responsible for guiding patients in their journey through the health system. In some countries there is a trend towards group (as opposed to solo) practice, and nurses are increasingly involved in care delivery as well. Thanks to universal or near universal coverage, in most countries few patients face significant financial barriers in accessing primary care. Most countries use gate-keeping or financial incentives to regulate access to specialist care. Gate-keeping contributes to continuity of care over time and co-ordination of care, which is particularly important for patients with chronic and/or complex conditions.

The supply of care in other parts of the health system has also changed. Less serious conditions are redirected towards outpatient care instead of inpatient care as being a less costly option of care. However, the existing model of primary care provision might be unable to meet these changes in supply and demand. The shift to outpatient care might overburden primary care providers and affect the quality and effectiveness of care if financial resources are not reallocated accordingly and information is not disseminated and shared efficiently. Continuity and co-ordination of care are better achieved in primary care models where the physician acts as a gate-keeper, works in group practice and is paid through a mixed payment system. The role of the payment system is crucial because when doctors are remunerated under a fee-for-service scheme there are no incentives for services such as counselling, education and guidance and they may be reluctant to share work with other practitioners if this lowers their income. Therefore provider contracts should be adjusted to provide the right incentives for better co-ordination.

The use of IT in health care is increasing everywhere and more countries are moving toward databases for performance measurement as well as electronic records with capability for electronic prescribing and electronic referral and booking systems. Systematic data collection and dissemination are central to improving quality, continuity and co-ordination of care. However, while greater use of electronic information systems in health care may contribute to efficiency gains in the longer term, their introduction has encountered opposition from both patients and providers in some countries due to concerns about privacy and the high short-term, fixed costs. Providers are often reluctant to implement records because the benefits may not be seen for years, while patients may be sceptical of changes that do not directly contribute to issues that matter the most to them (Commonwealth Fund 2007) such as prompt attention (reasonable distance and travel time to the provider), confidentiality of information, and the quality of communication (having the provider listen and explain and having the time to ask questions) (Valentine, Darby et al. 2008).

Despite increasing efforts at improving care coordination in the majority of the countries, coordination is still reported as a major problem throughout Europe. Improving coordination requires policy makers to rethink the provision of care. This report highlights some key areas for action.

- What about encouraging or requiring patients to register with a GP? This is a clear trend across the EU and policy makers clearly hope it will improve co-ordination of care, particularly for patients with chronic conditions. But it also isn't sufficient and needs to be supported (in my view) by GP practices employing dedicated personnel to take responsibility for co-ordinating patients' journeys through the health system.
- Encouraging providers to work in groups and multidisciplinary teams instead of solo practice may help providers delineate roles more clearly and share patient information, and facilitate co-ordination through smoother interactions. However, if care outside hospital becomes too centralised, this may create barriers to access for some patients.
- Investing in better IT infrastructure (electronic health cards, electronic referrals etc) and encouraging peer-to-peer communication are essential strategies for enhancing quality, continuity and co-ordination of care. Electronic information systems allow a quick flow of information across providers and help providers make the best possible decisions for patients. They also allow more efficient and effective organization of referrals. Feedback mechanisms help providers identify critical areas and adjust coordination models accordingly.
- Payment mechanisms also play an important role in care co-ordination; systems where doctors are remunerated under a fee-for-service scheme report more co-ordination problems than those with a mixed payment system.

APPENDIX: Information from country experts

Table 1. Organisation of first contact care

Country	Sources of FCC	Gate keeping	Choice of gate keeper	Need referral for specialist services	Need referral for non-emergency hospital care	Dominant practice organisation	Average number of patients per GP	Involvement of other health care staff
Austria	GPs, outpatient clinics, hospital outpatient clinics; paediatricians, gynaecologists, dentists, ophthalmologists	To some extent; more so for GPs with social insurance contracts	Yes (with some restrictions)	Generally yes for GPs with social insurance contracts; otherwise not needed for most specialties	Yes	Mostly solo practices, although some work in outpatient clinics and some outpatient clinics	800 (estimate)	GPs working in group settings also generally work alongside nurses, specialists and physiotherapists
Belgium	Any physician, hospital care	No	N/a	No	No	Mostly solo (75%), group practice (16%) and primary care centres (9%)	588-1056	In primary care centres administrative, nurses, physiotherapists, psychotherapists or other primary care workers (e.g. pharmacists, nursing care, speech therapists, etc.)

Country	Sources of FCC	Gate keeping	Choice of gate keeper	Need referral for specialist services	Need referral for non-emergency hospital care	Dominant practice organisation	Average number of patients per GP	Involvement of other health care staff
Czech Rep	GPs, paediatricians, gynaecologists, dentists and emergency care	Yes (not fully enforced)	Yes	Yes but patients can bypass	Yes	Solo (80%)	1613 per adults, 952 per children	No
Denmark	GPs, health centres	Yes	Yes (within area of residence)	Group 1(10km from home): yes, for most; Group 2 (full choice): no	Yes	Solo	1400-1500	Nurses, dieticians, physiotherapists
England	GPs, health centres	Yes	Yes (within area of residence)	Yes, for all	Yes	Group (81%)	1200-2200	Nurses, pharmacists

Country	Sources of FCC	Gate keeping	Choice of gate keeper	Need referral for specialist services	Need referral for non-emergency hospital care	Dominant practice organisation	Average number of patients per GP	Involvement of other health care staff
Estonia	GPs, ophthalmologists, dermatologists, gynaecologists, psychiatrists, venerologists, dentists, pulmonologist (in case of TB) and all needed specialist care in case of trauma	Yes partially	Yes	Yes for most specialist (extra payment)	Yes	Either solo or in group practice	1200-2000	Nurses. According to the Primary Care Development Plan 2009 GPs practices should be integrated with mid-wife, pediatricians, rehabilitation specialist, mental health nurse etc
Finland	GPs	Yes, in the public sector	Yes	Yes, in the public sector	Yes	GPs work in municipal health centres	1500-2000	Dependin on size and type of municipality, health centres include general practitioners, sometimes medical specialists, nurses, public health nurses, midwives, social workers, dentists,

Country	Sources of FCC	Gate keeping	Choice of gate keeper	Need referral for specialist services	Need referral for non-emergency hospital care	Dominant practice organisation	Average number of patients per GP	Involvement of other health care staff
								physiotherapists , psychologists and administrative personnel
France	GPs, specialists	Yes (85%)	Yes	Yes, for some	Yes	Solo	1000-1500	Little involvement of other professionals
Germany	GPs, specialists, polyclinics	yes (8%)	Yes	Yes, for some	Yes	Solo (68%)	1500-2000	Nurses, midwives, physiotherapists , dieticians
Italy	GPs, paediatricians , and emergency care	Yes	Yes	Yes	Yes	Solo	1800 GPs 1000 pediatricians	
Lithuania	GPs, specific specialist	Yes	Yes	Yes for some	Yes	Group practice (90%)	1800	primary health care nurse, gynecologists
Netherlands	GPs (in health centres)	yes (100%)	Yes	Yes, for all	Yes	Solo (72%)	2250	Nurses, dieticians, physiotherapists
Poland	GPs, paediatricians , internists	Not formally. but through mechani	Yes, can change twice a year with no extra	Yes, with some exceptions such as gynaecologis	Yes	1.Solo practice 2.Group practice 3.Primary	4161	Solo practices have 1-2 support services, usually including a nurse; group

Country	Sources of FCC	Gate keeping	Choice of gate keeper	Need referral for specialist services	Need referral for non-emergency hospital care	Dominant practice organisation	Average number of patients per GP	Involvement of other health care staff
		such as financing structure	charge	ts, dermatologists, psychiatrists and others		health units		oraces have larger staff, including 2-3 nurses, technical and administrative staff; Primary health centres provide a wider scope of primary and ambulatory care, with larger staff
Romania	GPs	Yes	Yes (can only switch after 6 months)	Yes for most	Yes	Solo, with 1 nurse	1200-1500	Nurses

^a Proportion of services that a patient can directly access without a doctor's referral. The services considered include: GP, emergency department, dentist, paediatrician, gynaecologist, midwife, ambulatory specialist, hospital-based specialist, community nurse, home care, other psychotherapists, psychiatrist, hospital, speech therapist, physical therapy/exercise therapy, occupational therapist and rehabilitation clinic (Kroneman, Maarse et al. 2006).

Table 2. The role of nurses in delivering primary care

Country	Can nurses prescribe?	Can pharmacists prescribe?	To what extent are nurses responsible for managing:			Are there nurse-led clinics?	Other
			chronic care?	older people?	mental health?		
Austria	No	No	Yes, in hospital; have a teaching role in the DMP for diabetes	Yes, in hospital	Yes, in hospital	No	
Belgium	No	No	Nurses are responsible for diagnostic support, care plan support and support/evaluation/adjustment of situation-bound care process.	Responsible for nursery care, assistance in body hygiene, nourishment and excretion of elderly, diagnosis of symptoms, evaluation of delivered care, supervision of physical comfort and safety, ensuring therapeutic environment.	Nurses plan the total care supply around the patient, organise, coordinate and monitor the continuity. Includes regular consultations with the nursing team and with other specialists (psychiatrist, psychologist etc.). Nurses also regularly speak with the patient and family; make the patient more independent and in that way improve the quality of their life.	No	
Czech Rep	No	No	No	No	No	No	

Denmark	No	No	Yes, via municipal health centres	Yes, via municipal health centres		Municipalities are not allowed to employ physicians; there has been an increase in the role of municipalities in prevention and rehab, which led to the creation of municipal health centres. There are generally run by nurses
England	Yes, but limited	Yes, but limited	Yes, practice nurses work within GP practices to manage chronic care; district nurses provide home care	Yes, practice nurses work within GP practices to manage chronic care; district nurses provide home care	Mental health nursing is a sub-speciality; may be combined with social care/social work depending on situation	Limited, for example some in sexual health clinics

Estonia	No	No	Increasing role of nurses	Overall increasing role of nurses, but the role of PHC nurses is decreasing and more patients are seen by long-term care nurses	Increasing role of nurses	Yes, to lead some home care services	Nurses can advise, run basic diagnostic tests and provide caring services. More recently, nurses can also provide individual consultations for the patients on the GP's patient list; There are approved guidelines for nurses (2008) which details what family nurses can do.
Finland	No, although there is currently a change in legislation being planned	No	Nurses are responsible for the planning and follow-up of care, design and scheduling of medicinal treatment, monitoring of vital functionin	Nurses are responsible for the planning and follow-up of care, design and scheduling of medicinal treatment, monitoring of vital functioning and undertaking treatment procedures and examination	Nurses are responsible for the planning and follow-up of care, design and scheduling of medicinal treatment, monitoring of vital functioning and undertaking treatment procedures and examination	Not as such, but nurses have the right to work as self-employed entrepreneurs while holding another paid position (e.g. in a health centre).	Nurse have an essential role in many health centre activities. They may have their own consulting hours for giving injections, removing sutures, etc. Public health nurses largely responsible for child &

			g and undertakin g treatment procedure s and examinati on				maternal health. Also work in family planning, school health care, occupational health and home nursing; however for major decisions, nurses still work under physicians
France	Yes, but limited	No	Yes, under the supervisio n of a physician; self- employed nurses provide home visits to diabetics	Yes, manage some home care services	Yes, provide home visits	No, but there are nurse group practices which mainly provide home care	Agreement signed between national sickness fund and nurses union in 2007 that increases role and position of nurses
Germany	No	No	No	No	No	No	Health care management is generally the responsibility of physicians
Italy	No	No	Provide home care in some regions	Provide home care in some regions		No	
Lithuania	No	No				No	Nurses can provide procedures, but

responsibility
lies with
physician

Netherlands	No	No	Increasingly, yes, but GPs still responsible for prescribing and treatment decisions	Yes, but are supervised by GPs and GPs are accountable	Yes, but are supervised by GPs and GPs are accountable	No	
Romania	Could legally prescribe OTC medication, but not generally done	No	Generally not, but some "home care" services by nurses are covered by insurance	Generally not, but some "home care" services are covered by insurance	No	No	All GPs required to have 1 nurse; some nurses/midwives can provide antenatal services
Poland	No	No	Usually community or community-family nurses, rather than primary care nurses	Usually community or community-family nurses, rather than primary care nurses	Usually community or community-family nurses, rather than primary care nurses, but have fewer mentally ill patients than chronic and elderly	Yes, but mainly for long-term care services, working in multidisciplinary teams, providing community care, nursing homes and some institutions and day centres for chronically ill patients; however only community & community-family nurses work alone	

Slovakia	No	No	Physicians responsible for managing cases	As part of home/community care	As part of home/community care		Patients managed by physicians, although some home and community care delivered by nurses – increasingly so as part of the 2003 amendment to the Act on Health Care Delivery
Slovenia	No	No	Yes, including the organisation of support services and services for the family when it is part of the wider health and related services	Yes, including the organisation of support services and services for the family when it is part of the wider health and related services	Yes, including the organisation of support services and services for the family when it is part of the wider health and related services	No	
Spain	No	No	Limited role, but varies by	Limited role, but varies by region	Limited role, but varies by region	No	Andalucia and Catalonia bringing about

_____ region

reforms to make nurses primary agents responsible for home visits and care. Ex Catalonia's 2003 Primary Care Nursing Plan (Plan Estratégico de Enfermería de Atención Primaria)

Sweden	Yes, but nurses must apply for prescription right and generally requires extra training	No	Yes	Yes	They may, depending on county and provider	Yes
Turkey	No	No	Generally the responsibility of GPs	Generally the responsibility of GPs	Generally the responsibility of GPs	No

Table 3. Financing primary care

Country	Public/private mix of GPs	Provider payment	Financial incentives for:				
			Working after hours	Home visits	Working in underserved areas	Additional services	Improving quality
Austria	50% of GPs are private; others have contracts with insurance funds	Payment based on a FFS system, with supplemented capitation payments; Private physicians are reimbursed 4/5ths the fee that a contracted physician would received	Yes, reimbursement amount dependent on sickness fund	Yes, reimbursement amount dependent on sickness fund	Yes, reimbursement amount dependent on sickness fund ; typically paid per kilometre for home visits in rural areas	Yes, reimbursement amount dependent on sickness fund (for example when home visits take longer than expected, they receive additional compensation or receive points for infusions or injections)	No
Belgium	Most are self-employed; salaried in university hospitals	Fee for service, patients pay the costs and then get 75% reimbursement	Yes, availability fee is paid for guard service in weekends, holidays, and overnight.	Yes	Yes, to incentivize young doctors to start a practice in rural areas (advantageous loans, and one off premium).	annual allowance for the costs of software applications used for the electronic medical records	'Accrediting' is a quality label that doctors obtain when they follow in-service training regularly and run their practice according to certain quality standards. Accredited GPs can have an annual fixed compensation and also an increased fee for consultation or visit,

							without modification of patients' co-payment.
Czech Rep	Majority are self-employed	capitation adjusted for age and fee-for-services for some selected services	No	No	Since less patients higher capitation	Yes, for preventative services, which are FFS, rather than covered in capitation	No
Denmark	All self-employed	Fee for service and capitation (around 30% of income)	Higher payments	Higher payments	No, but supply quotas in place	Higher payments for some (eg preventive care and IT use)	No
England	Most self-employed, but a third are salaried	Capitation adjusted for age, sex and other need factors (around 50% of income) plus fee-for-service and P4P	Higher payments	None (but GPs can earn extra if they are part of an after-hours service)	Higher payments, additional fees to set up practice	Higher payments for some (eg minor surgery, cervical screening)	Yes, Quality and Outcomes Framework (QOF; see Box 2)
Estonia	Most self-employed; assistant doctors in group practices may be salaried	Capitation adjusted for patients' age. Extra capitation fee for children < 2 years old. Plus GPs additional fee-for-service payments up to a maximum of 27% of the total capitation payment. Plus monthly	No	Co-payment by patients	Higher payments to doctors practicing far from hospitals	Up to €255 per month in they meet the standard of the quality bonus system	Since 2006 GPs can freely decide whether they want to participate in the quality bonus system. Quality indicators are based on vaccinations, chronic disease management, performance of simple surgical procedures, and monitoring of normal pregnancies.

		allowance to cover fixed costs.					
Finland	Majority are public; 8% are private	Two systems: 1. Salary with additional payments 2. Salary supplemented with payment per consultation	Yes, in system 1	No	In rural areas	No	No
France	Most self-employed	Fee for service	Higher payments	Higher payments	Higher payments, additional fees to set up practice; tax rebates for after-hours services	Higher payments for some; fixed sum for co-ordinating management of chronic disease	None
Germany	Most self-employed	Fee for service points capped by a global budget	Higher payments	Additional points for home visits	From 2010: higher payments in underserved areas, lower payments in areas with oversupply Now: supply quotas in place	Additional points for some services (eg lab fees, cancer screening)	Sickness funds can technically use selective contracting to improve quality
Italy	1. Self-employed 2. National GPs	1. Capitation 2. Mainly capitation + quota for	Varies by region	Varies by region	Varies by region	Varies by region	In place to some extent, but varies significantly by region

		obtaining local/regional standards + quota for some services					
Lithuania		Capitation (88%), fee for performance (12%)	No	No	Yes	Yes, for terminally ill patients and for prevention care	Yes, 12%
Netherlands	Most self-employed	Fee for service and capitation adjusted for age and low-income districts	Higher payments	Higher payments	Higher capitation payment for low-income areas	Higher payments for some services can be negotiated	Negotiable reimbursement based on quality and efficiency indicators; some P4P experiments
Poland	Self-employed or employees of health care units, both of which types are contracted to the National Health Fund	Capitation, adjusted for age	No	No	No	No	No
Romania	Independent, but publically funded	Mix of FFS and capitation payments	No	No	Yes	No	Yes, for immunisations
Slovakia	Private, contracted by insurance companies	Capitation adjusted for patients' age plus fee-for-service for prevention	No	No	No	Yes, for prevention services	In 2009 new quality indicators were approve, which include rates of utilisation, prescribing, use of preventive measures, and hospitalizations for

								selected conditions etc. However, insurance companies can use different weighting systems
Slovenia	Salaried and financed by the Health Insurance Institute of Slovenia	50% capitation, 25% from specific curative programmes, 25% from specific preventative programmes	No	No	No	No	No	Some related to specific national programmes, i.e. screening for SVD risk factors
Spain	Most physicians are public, but many have private offices, as well	Salary plus capitation adjusted for age, health and density of the population. In Catalonia also socio-economic conditions; private physicians paid fee-for-service basis	Higher payment	No	No		For participation in special programmes	Under regulation but still not implemented
Sweden	Most public, but regional variation eg 50% self-employed in Stockholm	Capitation adjusted for age plus small fee for service	None	Higher payments in some counties	Higher capitation payment for underserved and low-income areas (varies by county)		Higher payments for additional services (eg child and maternity care, nursing home visits)	Target payments exist in some counties (eg collaboration with diabetic quality register); also based on patient satisfaction, access,

								compliance with prescribing guidelines etc; experiments with clinical targets
Turkey	Government employees	Capitation + an amount for general overheads for keeping a practice	Yes	Yes	Yes	No	No, although there are plans to do so	

Table 4. Electronic records

Country	Do physicians use electronic records?	Are hospital appointments electronically booked?
Austria	Yes, used by individual practice, but not shared nationally	No
Belgium	Yes	No, except appointments booked in-hospital
Czech Rep	Only used by about 10% of GPs	No
Denmark	Yes – all practices	Yes
England	Yes; also ongoing strategy of linking national records	Pilot schemes in place
Estonia	Yes, but there is not a common national system	Yes, in most cases, but just launched in 2008 and not all hospitals are using it
Finland	Yes, used by the majority of health centres; also currently a national system is in final stages of implementation	Yes, used by 75% of health centres for referrals, including hospital bookings
France	Yes. Use of e-health card for reimbursement purposes – used by 85% of GPs; launching of national personal medical records in 2010	No
Germany	Most use electronic records to some extent, but only about 60% use them fully	No
Italy	In many regions, yes, but no national standard	No
Lithuania	No	Generally no, although the State's

Country	Do physicians use electronic records?	Are hospital appointments electronically booked?
		e-health programme , launched 2008, allows for this in some institutions
Netherlands	Yes, used by 98% of GPs; currently implementing national electronic health records, but progress is slow	No
Poland	Mixed; except for parts in which electronic insurance cards were introduced (approx 12% of population)	No
Romania	Yes, but mainly for reimbursement purposes	No
Slovakia	Yes	Some
Slovenia	Used to some extent by about 1/3 of GPs	Not yet, but plans are in place to launch systems in 2010
Spain	Yes, but there exists little coordination amongst autonomous regions	No
Sweden	Yes, generally	Yes, generally
Turkey	Under development	No

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