European primary care

Gezondheidsraad **President**
Health Council of the Netherlands

To the Minister of Health, Welfare and Sport

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Your Excellency,

On 29 October 2003 you requested advice on primary care in a European perspective.

I am pleased to submit the advisory report entitled 'European primary care' drawn up by the Committee of the Health Council appointed for the purpose. The Standing Committee on Medicine evaluated the report.

Yours sincerely,

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European primary care

To:

The Minister of Health, Welfare and Sport

No. 2004/20E, The Hague, December 16, 2004

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Executive summary

The healthcare systems operating in the various member states of the European Union differ from one another quite significantly. However, all are under pressure from a number of pan-European developments and all are implementing reforms designed to ensure that their healthcare systems are able to cope with these developments. In view of this situation and the general trend towards European integration, it is reasonable to assume that the EU member states' healthcare systems will gradually become more and more alike.

One of the respects in which the healthcare systems operating in EU member states – both old and new – differ most markedly is in terms of the organisation of primary care. As the EU's healthcare systems converge, strategic decisions will have to be made regarding primary care.

Against this background, the Minister of Health, Welfare and Sport asked advice from the Health Council on the current level of knowledge with regard to organisation and significance of primary care. The request for advice contained three questions. In this advisory report, compiled by a Health Council committee, the Council addresses these three questions and formulates a number of recommendations for the future. This summary provides the general answers to the questions of the Minister and five key recommendations. The complete set of recommendations is included in Chapter 6.

Question 1: What are the defining characteristics of primary care and what is the significance of primary care for the general quality of healthcare provision?

The Committee considers primary care (which it regards as synonymous with primary *health*care) to be generalist care, consisting of general medical, paramedical and pharmaceutical care, nursing and supportive care, and non-specialised mental and social healthcare, together with preventive and health-educational activities linked to these forms of care. The care is aimed at patients staying at home and is provided as close to the patient's home as possible and, if necessary, at the patient's home. Furthermore, it is accessible to all, irrespective of the nature of their health problems. The system is able to respond to urgent cases, providing immediate access where necessary. The system also realises continuity in responsibility and accountability with regard to long-term care, guidance and preventive initiatives. Primary care is focused primarily on providing care for help-seeking patients, but has a proactive responsibility in relation to both individual and group-oriented preventive activities aimed at promoting health in the local (practice) population. Primary care is provided where necessary by different care providers working together on a coordinated basis within primary care and, if indicated, with secondary care.

Throughout the years, the extent to which people choose to try and cope with health problems without seeking professional assistance has remained remarkably stable. In the great majority of cases, people sort their problems out themselves. This phenomenon is apparent in all countries. Self-care and lay care generally play important roles.

When professional care is sought, an adequately functioning primary care system is capable of successfully diagnosing, addressing and treating most of the health problems presented to it. In many cases, instead of taking over the patients' responsibility for their own health, self-care can be supported by providing health information and advice. The percentage of patients that need to be passed on to specialist carers can be greatly limited. Hence, well functioning primary care is very important for the effectiveness and efficiency of the healthcare system as a whole. Primary care is also capable of showing patients the way through an increasingly complex healthcare system and providing the necessary guidance along the way, in the form of navigation, cooperation, referral where appropriate and follow-up care.

Question 2: What differences exist internationally in terms of the organisation of primary care in relation to other forms of care, and what significance do these differences have for the general quality of healthcare provision?

Across Europe, considerable differences exist in the organisation and positioning within the healthcare system of non-specialist care provided outside a hospital setting. Nevertheless, to a certain extent, all EU countries have primary care with broadly similar characteristics: relatively good access, a generalist profile, continuity of care, and multidisciplinary cooperation.

Significant points on which differences exist are the presence or absence of obligatory patient registration with a general practitioner and the gatekeeper role of primary care. International comparative research has indicated that healthcare systems that have a stronger primary care system are more effective and more efficient than those that do not.

However, the research conducted to date has certain limitations. It is therefore important that international comparative studies are given greater attention as Europe gradually moves towards a situation characterised by care provision that does not recognise internal borders. If the design of international comparative studies of healthcare systems is methodologically optimised, it will in the future be possible to draw more detailed conclusions concerning the mechanism and determinants of effective and efficient healthcare. Such research should also seek to establish how effective various incentives are in promoting quality, coherence, accessibility, efficiency and sustainability of primary care.

This comparative and evaluative research should preferably be organised on a continuous basis, so as to provide a steady flow of new insights and pointers to possible ways of achieving practical improvements. It is up to bodies representing the healthcare professions in Europe, patients' organisations, consumer organisations, insurers, national governments and the European Commission to take up this challenge.

Question 3: (a) Given current insights, what – in terms of the overall quality of healthcare provision – is the most desirable scenario for the development of primary care within the European Union?
(b) Taking EU law into account, which aspects of the preferred development scenario require attention?

In response to part (a) of this question, the following contours can be sketched on the basis of the considerations outlined above:

- As care becomes more complex, navigation and guidance of patients in line with the help they are seeking should increasingly be seen as core competences of generalist care provision.
- There should be further development of evidence-based primary care within Europe, with continuous implementation of new knowledge in the form of professional standards and (multidisciplinary) guidelines for effective, efficient and safe care, as well as education, postgraduate training and international exchange geared to this end.
- While the composition of primary care teams should be geared to local circumstances and needs, clients should have access to the following: general practitioner, practice nurse/nurse practitioner, home nursing and home care, physiotherapist, community pharmacist, midwife and dentist. In addition, it should be possible to call in a community psychiatric nurse, psychologist or social worker. In view of efficiency, opportunities have been identified for further differentiation of tasks in primary medical care. When, for example, within the responsibility of a primary care team, certain patient-related procedures are being carried out by physician assistants and nurse practitioners, general practitioners gain time. In the context of the team, it must always be clear to the patient who of the individual care providers is responsible for the care made available in connection with a given problem. It is necessary to have adequate out-of-hours coverage of medical, nursing and pharmaceutical care and crisis management in primary care, properly coordinated with secondary care. With a view to relieving care providers of administrative duties, consideration should be given to the organisational separation of management activities, possibly on a regional basis.
- Primary care teams should preferably work with well-defined populations or communities. The Committee favours a registered population of ten to fifteen thousand, with scope for variation in line with population density and local problems.
- The general introduction of electronic multidisciplinary patient records is desirable. This would also tie in with the increasing use of ICT by patients for health-related purposes.

- Primary care teams should regularly produce work plans covering periods of several years, to serve as a functional accountability tool and a basis for need-related resource allocation.
- The Committee advocates close cooperation between primary care, preventive healthcare, public health and occupational health. Consideration should be given to delivery of certain public health activities in the context of primary care.
- The development of a more differentiated system of interaction between primary and secondary care, including mental health care, should be encouraged. Those responsible for the funding of care in Europe have an important role to play in this regard.
- Building on the example of the general practice morbidity registrations in use in many European countries, steps should be taken to improve the provision of information on other disciplines.
- In view of the benefits that registration of patients with a primary care team (patient list system) has for the continuity of care, for prevention and for scientific evaluation, the possibility of eventually extending this option to all EU countries should be investigated. In European countries without a strongly developed primary care system, there should be scope for comparative experiments with different care set-ups (e.g. with or without the requirement to consult a general practitioner in order to gain access to a specialist).
- The capacity of Europe's primary care needs to be kept in line with the increasing numbers of older people, people with chronic illnesses and those in need of complex care or home care, as well as with the need for prevention and health promotion among older people. The composition of the primary care workforce can be optimised by utilising the available talent and providing adequate career opportunities.
- In addition, primary care needs to respond appropriately, in terms of expertise and care supply, to:
  - the increasing ethnic and cultural diversity in European countries;
  - growing individualisation and rising expectations;
  - rapid developments in the field of 'e-health';
  - the increasing potential of home care technology;
  - the rapid growth of new prevention and care possibilities;
  - the need to improve diagnosis and optimise treatment of mental disorders;
  - developments in the field of genetics (giving rise to 'diaprognostics' not necessarily related to symptoms or complaints);
  - the increasing demand for accountability with regard to the quality of care;
  - outbreaks of known or unknown aetiology and disasters of various kinds.

- Targeted support should be provided for practice-related primary care research and quality improvement, with the emphasis on international cooperation, by prioritisation within the EU framework programmes.

In response to part (b) of the third question, the Committee's presents the view that, as the healthcare systems in the European Union gradually converge, two priorities should be kept in mind: (1) an effective and efficient system of care for the protection, maintenance, and promotion of health in Europe, and (2) the availability of real choice to European citizens/patients in the field of primary care, based on the adequate and open provision of information regarding accessibility, quality and efficiency of care. Given these priorities and in view of the value of guidance/navigation by primary care and of the registration of patients with primary care practices, the committee holds the view that these modalities should be made generally available as options within the European care and insurance system. It is vital to have, in principle, closed circuits of facilities and services, to which the patient is referred in accordance with an integrated care model. The patient would then choose a primary care team in the context of an integrated care circuit, thereby giving up his or her complete freedom to select care providers outside the chosen circuit, in the interests of quality, continuity and efficiency of care. Each care circuit would normally need to include more than one care provider per discipline, so that a degree of choice remained. This would generally not represent any curtailment compared with the amount of choice in many existing systems, which are subject to inherent geographical constraints. If and insofar as it might be concluded that such arrangements are inconsistent with the free movement of services, it would be necessary to develop a special EU policy covering this area in order to enable the relevant modalities in the various member states. Such a policy would need to be designed to enable countries whose systems already feature the modalities concerned to continue on their existing basis. At the same time, the options in question could also be made available to the citizens of other countries, without jeopardising options currently in use. This approach would additionally provide good opportunities for prospective, comparative, evaluation research.

In terms of anticipating primary care development from a policy perspective, a significant step has been made by the Ministers of Health of the EU Member States in connection to the conference 'Shaping the EU Health Community' held in The Hague in September 2004. At the Informal Health Council considering the results of that conference, the Ministers have emphasised the importance of creating more synergy in health care policies, and have expressed the ambition to invest in primary care and community based care.

Key recommendations

In the previous sections, a number of recommendations have been implied to various stakeholders. As key recommendations, the Committee considers the following:

- Primary care must closely follow emancipatory developments in the patient's role. Information provision, effective communication, e-health, and increasing the possibilities for tailor-made homecare are some examples of challenges faced.
- In the interest of prevention, good navigation, continuity of care, and evaluation research, primary care teams and networks should be responsible for well-defined registered populations, with variation in size in line with population density and local problems.
- The Committee advocates close cooperation between primary care, preventive healthcare, public health and occupational health. Consideration should be given to delivery of certain public health activities in the context of primary care.
- Information on primary care must be transparent to all parties involved. Building on the example of the general practice morbidity registrations in use in many European countries, steps should be taken to improve the provision of information on other disciplines.
- As a concrete step in the short run to strengthen primary care on a European level, with the support of the European Commission, a European forum for primary care development should be created and given the remit of:
  - providing for the regular and systematic exchange of experiences and programs for innovation between patients, professionals, managers and policy-makers, and for stimulating the dissemination of best practices in primary care provision and policies;
  - offering consultation and support as appropriate to any country or area that has particular problems in developing a primary care system capable of serving its intended purpose;
  - designing a set of indicators for monitoring the development and quality of primary care throughout the European Union;
  - promoting and coordinating international comparative research.

Samenvatting

De gezondheidszorgsystemen van de lidstaten van de Europese Unie vertonen onderling grote verschillen. Maar allemaal staan ze onder druk door overeenkomstige ontwikkelingen en in alle EU-landen zijn hervormingen gaande, gericht op het realiseren van een gezondheidszorg die tegen deze ontwikkelingen is opgewassen. Het is aannemelijk dat daarbij gaandeweg, mede onder invloed van de voortgaande Europese integratie, de gezondheidszorgsystemen van de afzonderlijke EU-lidstaten steeds meer op elkaar zullen gaan lijken.

Eén van de aspecten waarin op dit moment de zorgsystemen van de lidstaten van de EU – de oude en de nieuwe – aanmerkelijk verschillen, is de inrichting van de eerstelijnsgezondheidszorg. Convergentie van gezondheidszorgsystemen binnen de Europese Unie zal onvermijdelijk strategische keuzen met zich meebrengen ten aanzien van de eerstelijnsgezondheidszorg.

Tegen deze achtergrond verzocht de Minister van Volksgezondheid, Welzijn en Sport de Gezondheidsraad om een advies over de stand van wetenschap ten aanzien van inrichting en betekenis van de eerstelijnsgezondheidszorg. De adviesaanvraag omvatte drie vragen. In dit advies, opgesteld door een commissie van de Gezondheidsraad, geeft de Raad zijn antwoord op deze drie vragen, vergezeld van een aantal aanbevelingen voor de toekomst. Deze samenvatting verschaft de algemene antwoorden op de vragen van de Minister en een vijftal kernaanbevelingen. De complete set aanbevelingen is te vinden in het laatste hoofdstuk van het advies.

Vraag 1: Wat zijn de kenmerken van eerstelijnsgezondheidszorg en wat is het belang ervan voor de kwaliteit van de gezondheidszorg als geheel?

Eerstelijnsgezondheidszorg is generalistische zorg en omvat algemeen medische, paramedische en farmaceutische zorg, verpleging en verzorging, niet-gespecialiseerde geestelijke en maatschappelijke gezondheidszorg, alsmede de aan deze vormen van zorg gerelateerde preventie en voorlichting. De zorg, gericht op de thuisverblijvende patiënt, wordt zo dicht mogelijk bij huis en zo nodig thuis verleend en is voor iedereen en voor ieder gezondheidsprobleem laagdrempelig bereikbaar. De hulpvrager die een beroep op de eerstelijnsgezondheidszorg doet kan zo nodig in spoedgevallen direct gezien worden. Er is sprake van continuïteit van verantwoordelijkheid en aanspreekbaarheid wat betreft langdurige zorg, begeleiding en preventieve inspanning. Eerstelijnsgezondheidszorg gaat primair uit van de hulpvraag, maar heeft daarnaast een eigen verantwoordelijkheid uit een oogpunt van zowel individu- als doelgroepgerichte preventie ten behoeve van de lokale (praktijk)bevolking. De zorg wordt waar nodig door verschillende hulpverleners op een samenhangende wijze verleend, waarbij binnen de eerstelijn en indien geïndiceerd met de tweedelijn wordt samengewerkt.

Door de jaren heen is de mate waarin mensen ervaren klachten en problemen trachten het hoofd te bieden zonder een beroep te doen op de gezondheidszorg opmerkelijk stabiel gebleven. In veruit de meeste gevallen vindt men oplossingen buiten de professionele zorg. Dit verschijnsel is internationaal waarneembaar. Zelfzorg en mantelzorg vervullen een belangrijke rol.

Waar wel een beroep op de professionele zorg wordt gedaan, kan een goed functionerende eerstelijnsgezondheidszorg de meeste aangeboden gezondheidsproblemen met succes diagnosticeren, opvangen en behandelen. In vele gevallen is het mogelijk de zelfzorg te ondersteunen door voorlichting en adviezen, in plaats van de verantwoordelijkheid voor de eigen gezondheid van de patiënt over te nemen. Het percentage patiënten dat naar de specialistische zorg moet worden verwezen kan zeer beperkt blijven. Een adequaat functionerende eerstelijnszorg is dan ook van groot belang voor de effectiviteit en doelmatigheid van de gezondheidszorg als geheel. De eerstelijnsgezondheidszorg kan bovendien patiënten de weg wijzen in het steeds complexer wordende zorgsysteem en de nodige begeleiding bieden, door te functioneren als gids voor patiënten en door samenwerking, eventuele verwijzing en nazorg.

Vraag 2: Welke verschillende wijzen van inrichten van eerstelijnsgezondheidszorg, in relatie tot andere vormen van zorg, zijn internationaal te onderscheiden en wat is de betekenis daarvan voor de kwaliteit van de gezondheidszorg als geheel?

Er is binnen Europa sprake van een ruime diversiteit in de wijze waarop de niet-specialistische gezondheidszorg buiten het ziekenhuis is ingericht en gepositioneerd in het zorgsysteem. Overal ziet men echter vormen van eerstelijnsgezondheidszorg, met tot op zekere hoogte gemeenschappelijke kenmerken: relatief goede bereikbaarheid, generalistisch profiel, continuïteit van zorg en multidisciplinaire samenwerking.

Grote variatie is waarneembaar inzake het al dan niet sprake zijn van inschrijving van mensen bij een eerstelijns voorziening en van een 'poortwachtersrol' van de eerstelijnsgezondheidszorg. Internationaal vergelijkend onderzoek laat zien dat in zorgsystemen met een sterker ontwikkelde eerstelijnsgezondheidszorg sprake is van meer effectieve en doelmatige zorg.

Het tot nu toe verrichte onderzoek kent echter diverse beperkingen. Het is daarom van belang dat internationaal vergelijkend onderzoek meer aandacht krijgt nu Europa langzaam toegroeit naar een situatie van zorg zonder grenzen. Indien internationaal stelselvergelijkend onderzoek methodologisch optimaal wordt opgezet, kunnen in de toekomst meer gedetailleerde uitspraken worden gedaan over de mechanismen en determinanten die van belang zijn voor een effectief en doelmatig zorgsysteem. Daartoe behoort ook vergelijkend onderzoek naar de effectiviteit van diverse financieringswijzen in de bevordering van kwaliteit, samenhang, toegankelijkheid, doelmatigheid en toekomstbestendigheid van de eerstelijnsgezondheidszorg.

Het is aan te bevelen dat dergelijk vergelijkend en evaluerend onderzoek continu plaatsvindt, zodat steeds nieuwe leerpunten en mogelijke praktische verbeteringen kunnen worden aangereikt. Het is aan de Europese beroepsorganisaties van de diverse disciplines, patiënten- en consumentenorganisaties, verzekeraars, nationale overheden, en de Europese Commissie om deze uitdaging op te pakken.

Vraag 3: a) Wat is op grond van de beschikbare wetenschappelijke inzichten, met het oog op de kwaliteit van de gezondheidszorg als geheel, de meest wenselijke ontwikkelingsrichting van de eerstelijnsgezondheidszorg in Europees verband?
b) Welke aspecten van deze ontwikkeling vragen aandacht gelet op het recht van de Europese Unie?

In antwoord op deel a) van deze vraag kunnen op grond van het voorgaande de volgende contouren worden geschetst:

- Het in aansluiting op de hulpvraag gidsen en navigeren van patiënten in de steeds complexere gezondheidszorg is een kerncompetentie van de generalistische zorg.
- *Evidence-based primary healthcare* dient binnen Europa verder ontwikkeld te worden, met continue implementatie van nieuwe kennis in de vorm van professionele standaarden en (multidisciplinaire) richtlijnen voor effectieve, doelmatige en veilige zorg, en de daarop gerichte scholing, deskundigheidsbevordering, en internationale uitwisseling.
- Met inachtneming van een zekere variatie naar behoefte en lokale omstandigheden, dienen als eerstelijnsdisciplines voor de zorgvrager beschikbaar te zijn: huisarts, praktijkverpleegkundige/nurse practitioner, thuiszorg, fysiotherapeut, extramurale apotheker, eerstelijns verloskundige en tandarts. Een sociaal psychiatrisch verpleegkundige, psycholoog of maatschappelijk werker moet kunnen worden ingeschakeld. Er zijn mogelijkheden om, met het oog op het verhogen van de doelmatigheid, de taken in de eerstelijnsgezondheidszorg verder te differentiëren. Wanneer, bijvoorbeeld, onder de verantwoordelijkheid van het eerstelijns team als geheel, bepaalde patiëntgebonden taken door *physician assistants* of praktijkverpleegkundigen worden uitgevoerd, dan betekent dat tijdwinst voor huisartsen. Het is van belang dat voor patiënten steeds duidelijk is wie van de leden van het eerstelijns team aanspreekbaar is voor de zorg voor een bepaald gezondheidsprobleem. Er dient een adequate 24-uursvoorziening te zijn voor eerstelijns medische, verpleegkundige en farmaceutische zorg en crisisopvang, in goede interactie met tweedelijnszorg. Ter ontlasting van hulpverleners kan gedacht worden aan een aparte – eventueel regionaal overkoepelende – organisatie van managementtaken.
- De leden van een eerstelijns samenwerkingsverband zouden bij voorkeur moeten werken voor een goed gedefinieerde populatie of gemeenschap. Daarbij denkt commissie aan een populatieomvang van tien tot vijftienduizend ingeschreven personen, met variatie naar bevolkingsdichtheid en specifieke problematiek.

- Het is wenselijk dat algemeen gebruik wordt gemaakt van het elektronisch multidisciplinair dossier, rekening houdend met het groeiend gebruik door hulpvragers van ICT op het gebied van gezondheid en ziekte.
- Eerstelijns samenwerkingsverbanden zouden met regelmaat een meerjaren-werkplan moeten opstellen. Dit zou een belangrijke rol kunnen spelen in de externe verantwoording en in de onderbouwing van de toedeling van de benodigde middelen.
- Nauwe samenwerking tussen eerstelijnsgezondheidszorg, preventieve gezondheidszorg, *public health* en arbeidsgezondheidszorg is wenselijk. Het verdient overweging om *public health*-taken uit te voeren in de context van de eerstelijnsgezondheidszorg.
- Ontwikkeling van een gedifferentieerd systeem van interactie tussen eerste- en tweedelijns gezondheidszorg dient bevorderd te worden. De Europese zorgfinanciers hebben hier een belangrijke taak.
- In navolging van de in vele Europese landen beschikbare huisartsgeneeskundige morbiditeitsregistraties, zouden stappen gezet moeten worden om te komen tot een betere informatievoorziening ten aanzien van andere eerstelijns disciplines.
- Gelet op de voordelen van inschrijving op naam bij een eerstelijns samenwerkingsverband (continuïteit van zorg, preventie, evaluatie-onderzoek), moet worden nagegaan of deze mogelijkheid op termijn ook in landen waar deze optie niet voorhanden is kan worden aangeboden. In Europese landen met een minder sterke eerstelijnsgezondheidszorg dient er ruimte te zijn voor vergelijkende experimenten met verschillende zorgarrangementen (bijvoorbeeld met of zonder verplichte raadpleging van de huisarts voorafgaand aan raadpleging van een specialist).
- De eerstelijnszorg in Europa zal qua capaciteit gelijke tred moeten houden met de toename van het aantal chronisch zieken en ouderen, en de behoefte aan complexe zorg, thuiszorg, en preventie en gezondheidsbevordering onder ouderen. De samenstelling van de *workforce* in de eerstelijnsgezondheidszorg kan worden geoptimaliseerd door gebruik te maken van beschikbare talenten en voldoende loopbaankansen te bieden.
- De eerstelijnsgezondheidszorg zal qua expertise en hulpverleningsaanbod adequaat in moeten kunnen spelen op:
  - de toenemende etnische en culturele diversiteit in de Europese landen
  - de individualisering en de stijgende verwachtingen
  - de snelle ontwikkelingen op het gebied van *e-health*
  - de toenemende mogelijkheden van thuiszorgtechnologie
  - de zich in hoog tempo aandienende nieuwe preventie- en zorgmogelijkheden
  - de noodzaak om diagnostiek en behandeling van psychische stoornissen te verbeteren
  - de ontwikkelingen op het gebied van de genetica, die leiden tot steeds meer niet

per se aan klachten gerelateerde 'diaprognostiek'
  - de toenemende vraag om publieke verantwoording inzake de kwaliteit van de geleverde zorg
  - uitbraken van ziekten van al dan niet bekende etiologie en calamiteiten van verschillende aard.
- Wetenschappelijk onderzoek en kwaliteitsbevordering gericht op de eerstelijnsgezondheidszorg dienen gestimuleerd te worden, met nadruk op internationale samenwerking, door prioritering hiervan binnen de EU-kaderprogramma's.

In antwoord op deel (b) van de derde vraag, betoogt de commissie dat twee prioriteiten in het oog gehouden moeten worden, te weten, ten eerste, het belang van een effectieve en doelmatige zorg ter bevordering van de volksgezondheid in Europa en, ten tweede, het beschikbaar zijn van reële keuzemogelijkheden voor de Europese burgers/patiënten op het gebied van de eerstelijnsgezondheidszorg, op grond van adequate en open informatie, wat betreft toegankelijkheid, kwaliteit en doelmatigheid van de zorg. Gegeven deze prioriteiten en gezien de waarde van de gidsfunctie van de eerstelijnsgezondheidszorg en van de inschrijving bij een eerstelijns praktijk, meent de commissie dat deze modaliteiten algemeen beschikbare opties zouden moeten zijn in het Europese zorg- en verzekeringsaanbod. Essentieel is dat sprake is van in beginsel gesloten circuits van voorzieningen en diensten, waarnaar de patiënt wordt verwezen in overeenstemming met een model van integrale zorg. De patiënt kiest dan voor een eerstelijns praktijk die deel uitmaakt van een integrale-zorgcircuit en geeft aldus – ter wille van kwaliteit, continuïteit en doelmatigheid van zorg – zijn of haar vrijheid om voor hulpverleners buiten het gekozen circuit te kiezen in beginsel prijs. Binnen elk zorgcircuit zal in de regel per discipline meer dan één zorgverlener beschikbaar zijn, zodat een bepaalde keuzevrijheid behouden blijft die niet ongunstig hoeft af te steken bij die in vele bestaande systemen, gegeven inherente geografische beperkingen. Indien en voor zover zou worden geoordeeld dat een en ander op gespannen voet zou staan met het vrije verkeer van diensten, zou op dit punt specifiek EU-beleid moeten worden ontwikkeld om in de verschillende lidstaten de relevante modaliteiten mogelijk te maken. Doel daarvan zou moeten zijn dat landen, die systemen met dergelijke modaliteiten kennen, deze kunnen blijven aanbieden. Tegelijkertijd zouden deze opties ook beschikbaar komen voor burgers in andere landen, zonder aan de thans vigerende opties afbreuk te doen. Deze benadering biedt bovendien goede mogelijkheden voor prospectief vergelijkend evaluatieonderzoek.

Vanuit een beleidsperspectief, anticiperend op de verdere ontwikkeling van de eerstelijnsgezondheidszorg, is onlangs door de ministers van Volksgezondheid van de EU-lidstaten een belangrijke stap gezet, aansluitend bij conferentie *Shaping the EU Health Community* die in september van dit jaar in Den Haag gehouden werd. Tijdens de 'Informele Gezondheidsraad', waar de resultaten van deze conferentie besproken wer-

den, benadrukten de ministers het belang van het creëren van synergie tussen het gezondheidszorgbeleid van de lidstaten en gaven zij uiting aan de ambitie om te investeren in eerstelijnsgezondheidszorg en *community based care*.

Kernaanbevelingen

In het bovenstaande is impliciet een aantal aanbevelingen geformuleerd aan het adres van diverse betrokken partijen. De Commissie beschouwt als haar kernaanbevelingen:

- De eerstelijnsgezondheidszorg moet de emancipatoire ontwikkelingen in de rol van de patiënt op de voet volgen. Informatieverschaffing, effectieve communicatie, *e-health* en toenemende mogelijkheden voor op het individu toegesneden thuiszorg zijn slechts enkele van de gebieden waar grote uitdagingen in het verschiet liggen.
- Ter wille van preventie, gidsfunctie, continuïteit van zorg en evaluatieonderzoek verdient het aanbeveling dat teams en netwerken van eerstelijns zorgverleners verantwoordelijkheid dragen voor welomschreven, geregistreerde populaties, in grootte variërend naar gelang bevolkingsdichtheid en lokale problemen.
- De Commissie acht nauwe samenwerking wenselijk tussen eerstelijnsgezondheidszorg, preventieve gezondheidszorg, *public health* en arbeidsgezondheidszorg. Het verdient overweging om bepaalde *public health*-taken uit te voeren in de context van de eerstelijnsgezondheidszorg.
- Informatie over eerstelijnsgezondheidszorg moet transparant zijn voor alle betrokken partijen. Gebruikmakend van de ervaringen die in vele Europese landen zijn opgedaan met huisartsgeneeskundige morbiditeitsregistraties, zouden stappen gezet moeten worden om te komen tot een betere informatievoorziening over andere eerstelijns disciplines.
- Als een concrete stap, op de korte termijn, ter versterking van de eerstelijnsgezondheidszorg op Europees niveau, dient, met steun van de Europese Commissie, een Europees forum voor de ontwikkeling van de eerstelijnsgezondheidszorg te worden opgericht, met als taken:
  - regelmatig en systematisch uitwisselen van ervaringen en innovatieprogramma's tussen patiënten, beroepsveld, management en beleid en bevorderen van de verbreiding van *best practices* in de eerstelijnsgezondheidszorg en het daarop gerichte beleid;
  - het desgewenst bieden van ondersteuning aan landen en gebieden met bijzondere problemen ten aanzien van de ontwikkeling van een adequaat functionerende eerstelijnsgezondheidszorg;
  - het ontwikkelen van indicatoren voor het bepalen en volgen van de kwaliteit van de eerstelijnsgezondheidszorg in de Europese Unie;
  - stimuleren en coördineren van internationaal vergelijkend onderzoek.

Chapter 1

Introduction

1.1 Request for advice

The healthcare systems operating in the various member states of the European Union differ from one another quite significantly. However, all are under pressure from a number of pan-European developments: population ageing, scientific and technological progress, the growing burden of chronic diseases, individualisation, increasing patient participation and involvement of the public, increasing cultural and ethnic diversity and a trend towards delivery in the home environment of forms of care that have traditionally been provided in hospitals. Furthermore, all European countries are implementing reforms designed to ensure that their healthcare systems are able to cope with these developments while also being affordable and universally accessible and providing an appropriate standard of care. In view of this situation and the general trend towards European integration, it is reasonable to assume that the EU member states' healthcare systems will gradually become more and more alike.

One of the respects in which the healthcare systems operating in EU member states – both old and new – differ most markedly is in terms of the organisation of primary care. Some countries have well developed primary care systems, while other countries place less emphasis on primary care. As the EU's healthcare systems converge, strategic decisions will inevitably have to be made regarding primary care, at both the national and international levels.

Against this background, the Dutch Minister of Health, Welfare and Sport wrote to the Health Council of the Netherlands in October 2003, asking the Council to prepare a

report on the current scientific insights concerning organisation and significance of primary care (Annex A). The Council was asked to address the following questions in particular:

- What are the defining characteristics of primary care and what is the significance of primary care for the general quality of healthcare provision?
- What differences exist internationally in terms of the organisation of primary care in relation to other forms of care, and what significance do these differences have for the general quality of healthcare provision?
- Given current insights, what – in terms of the overall quality of healthcare provision – is the most desirable scenario for the development of primary care within the European Union? Taking EU law into account, which aspects of the preferred development scenario require attention?

On 9 October 2003, the President of the Health Council of the Netherlands appointed a committee, which has since drawn up the report now before you (Annex B).

1.2 Interpretation of the request for advice and structure of the report

The Minister puts his question on current scientific insights concerning organisation and significance of primary care against the background of the strategic decisions which have to be made regarding primary care, as the EU's healthcare systems converge. In this perspective, the crux of the ministerial request seems to be the question on 'the most desirable scenario for the development of primary care within the European Union'. Consequently, the Committee has centred its discussion primarily on this third question of the minister.

Because of the huge scale of the subject in proportion to time and resources at its disposal, the Committee decided not to aim at giving a systematic overview of all relevant scientific studies. Instead, it formulates in the next chapter, based on available overviews and analyses[1-6] and its own expertise, its view on the phenomenon of primary care. The chapter is concluded with a summary of the characteristics of primary care. In this way, the Committee answers the first part of the first question of the minister.

In the subsequent chapter, the Committee provides an overview of the studies about the relationship between primary care system design features and population-level outcomes. The available studies indicate that a healthcare system with a primary care system which exhibits the characteristics identified in chapter 2 is associated with a better population health status and lower healthcare costs than a system with a less well developed primary care system. Thus the Committee answers the second part of both the first and second question of the minister.

In response to the first part of the second question, the fourth chapter describes, as far as possible on the basis of the available data, similarities and dissimilarities of primary care systems in the EU-countries.

Subsequently, in the next two chapters, the Committee addresses the third question of the Minister. Chapter 5 provides an overview of some important developments, which may be expected to have major implications for primary care in Europe. Finally, in Chapter 6, the Committee presents what it sees as the characteristics that primary care should possess in order to be able to meet the challenges the future will bring.

Chapter 2

Primary care: background and definition

The purpose of healthcare is to help people avoid health problems, to remedy those problems that nevertheless arise, and to support people in coping with them. Primary care,* as it developed in Europe in the second half of the twentieth century, starts from the responsibility people have for their own health. The role of professional care is to help people to care for themselves. Where a person is unable to care for him/herself a demand for care arises.

In this chapter, the Committee summarises the health problems affecting the European population and the demand for healthcare associated with these problems. The evolution of modern primary care is sketched and the means by which primary care systems meet the demand for care are described in general terms. The chapter is concluded with a section devoted to the definition of primary care.

2.1 Health problems and the demand for care

People regularly experience health problems, most of which they are able to deal with without turning to the healthcare system for assistance. For the last four decades, the split between problems that do lead to a demand for professional care and those that do not has remained broadly stable in Western countries. In a given period of between two and eight weeks, 65 to 95 per cent of people will experience one or more health prob-

* The Committee regards 'primary care' and 'primary healthcare' as synonyms.

lems. However, professional help is sought for only 10 to 25 per cent of the problems concerned.[7-16]

When deciding whether or not to seek professional help with a health problem, people are influenced by a variety of interrelated somatic, psychological, social, cultural and healthcare-related factors.[17] While the nature, severity and duration of the problems are significant determinants, numerous other factors are involved in the decision-making process, including the interpretation and perception of the problem, the extent to which the sufferer thinks he/she can deal with the problem independently and the financial, organisational and geographical accessibility of healthcare.[18-20] The problems that are *not* brought to the attention of healthcare professionals are not necessarily insignificant at all. One study revealed that a considerable percentage of problems that were potentially indicative of serious morbidity, such as chest pains, shortness of breath, swallowing problems, weight loss and abnormal blood loss, was not reported to professional carers.[9]

The health problems about which healthcare professionals are consulted are very varied. In the Netherlands, where nearly all health problems are initially brought to general practitioners, family doctors participating in a recent study reported 680 different categories of symptoms and disorders.[16] Most of the health problems brought to the attention of professional carers for the first time – like most problems occurring in the community as a whole – are not severe and generally self-limiting (see Table 1). However, a small proportion of cases require urgent attention or, while non-urgent, involve serious conditions that are at an early stage of development and characterised by less

Table 1 The ten health problems presented to general practitioners with the highest incidence, classified according to the International Classification of Primary Care,[22] broken down by gender, per thousand patients per year (Netherlands, 2001).[16]

	ICPC code	Incidence (per 1000)		
		Men (N=186727)	Women (N=189172)	Total (N=375899)
Acute upper respiratory tract infection	R74	45.6	57.0	51.3
Cough	R05	29.5	38.7	34.1
Cystitis/urinary tract infection	U71	7.7	58.5	33.3
Dermatomycosis	S74	30.4	31.4	30.9
Localised lumbar pain	L03	27.0	26.2	26.6
Contact eczema/other eczema	S88	21.0	31.8	26.4
Excess cerumen	H81	26.5	23.9	25.2
Acute/chronic sinusitis	R75	15.2	28.8	22.1
Acute bronchitis/bronchiolitis	R78	19.9	23.0	21.5
Fatigue/weakness	A04	12.5	24.3	18.5

specific signs and symptoms. It is quite common for somatic, psychological and social aspects to be intertwined, obscuring the nature of the problem both from the client and from the care provider. Indeed, the nature of a problem often remains unclear even after having been considered by a professional: roughly a third of all physical problems presented to the healthcare system remain medically unexplained.[21]

Many of the health problems presented resolve themselves quickly or are resolved quickly by intervention. However, patients also present long-term or chronic somatic or psychological conditions, some of which have an important social dimension. Generally speaking, the incidence of such conditions is not particularly high, but the (point) prevalence can reach significant levels because they are so prolonged (see Table 2). As the European population continues to age, chronic conditions will become a lot more common in the decades ahead.[23]. For instance, assuming a forecast of 10 per cent population growth from 2000 to 2020, it may be expected that the prevalence of conditions such as coronary heart disease, stroke, chronic obstructive lung disease, arthritis and diabetes mellitus will increase by 35 to 55 per cent in the Netherlands.[24] It is not uncommon for an individual to suffer from several chronic problems, requiring a considerable amount of care of various forms.[25] Multi-morbidity is to a large extent an age-related phenomenon; more than 70 per cent of people aged eighty or above have more than one chronic condition.[26] At any given point in time, the population includes a group of people who are affected by a complex of somatic, psychological and social problems, often involving multi-morbidity and typically requiring considerable amounts of care. This group

Table 2 The ten conditions presented to general practitioners with the highest (point) prevalence, classified according to the International Classification of Primary Care,[22], broken down by gender, per thousand patients (the Netherlands, 2003).[27]

	ICPC code	Prevalence (per 1000)		
		Men (N=40920)	Women (N=42633)	Total (N=83553)
Uncomplicated hypertension	K86	63	91	77
Asthma	R96	60	55	58
Hay fever/allergic rhinitis	R97	53	53	53
Diabetes mellitus	T90	45	46	45
Lipid metabolism disorder	T93	49	41	45
Obesity (BMI $\geq$ 30)	T82	31	42	37
Lumbar disc lesion/radiation	L86	37	32	35
Varicose veins in legs (excl S97)	K95	12	48	30
Atopic dermatitis/eczema	S87	29	31	30
Other diseases of the musculoskeletal system	L99	19	27	23

includes people who have recently received major medical treatment, children with serious disabilities, people suffering from dementia, people requiring renal dialysis or artificial respiration and people who are terminally ill. Another special patient group is formed by those with health problems that are closely related to their social context, e.g. circumstances at work, school or crèche. The care required in such cases necessitates input both from individual healthcare and from care providers in the various public health sectors.

2.2 The development of modern primary care

In the first half of the twentieth century, the history of European healthcare was characterised by the rise of medical specialisation. Numerous new medical specialisms came into being and developed into full-blown disciplines, each with its own training requirements and academic status. As specialists became more prominent, the general practitioners who had previously dominated healthcare declined both in status and in number.[28] Illustrative in this context is the shift in numeric relationship between specialists and general practitioners. In 1890 there was one specialist to every thirty general practitioners in the Netherlands; by 1950 the ratio was one to three, and by the end of the 1960s, specialists were in the majority.[29]

Around the middle of the twentieth century, it became clear that, for the tide to turn, general practice had to redefine its professional identity, to build up a better professional organisation, and to be acknowledged as an academic discipline. [30] In the 1950s and 60s, various countries established colleges and academies of general practice. The first postgraduate training programs and academic chairs were created. A new generalist came into existence, no longer characterised by not being a specialist, but by its own new professional identity, special training and a clearly defined set of qualifications.[28,31] Central to the mission of the modern general practitioner or family physician was the provision of integrated, continuous and personal primary medical care to patients in their social and family environment.[32] This new generalist was ideally placed to provide primary care for the wide variety of health problems presented by patients and to perform the integrated role for which increasing specialisation had created a need.

In the decades that followed, primary care flourished in many countries. Of particular importance in this context was the growth of an adequate knowledge base.[30,33] The health problems that the primary care system considered itself well placed to deal with were more accurately classified and defined,[22,34-36] a better understanding was developed of the effectiveness of diagnostic and therapeutic procedures in primary care,[37-41] the skills needed for effective communication between care provider and patient were identified,[42,43] insight into illness behaviour and health beliefs was acquired,[17,18] the

influence of the family and the wider social context on health and health behaviour was clarified,[44-46] and guidelines for good primary care were formulated.[47-50]

This period also saw further professionalization within the primary care professions. More and more countries introduced requirements regarding the training required to enter general practice, and the length of vocational training courses gradually increased. Nursing, a profession in which skills were traditionally learnt primarily while practising in a general or psychiatric hospital or in an institution for people with mental disabilities, developed in the latter decades of the twentieth century into a discipline with a system of well-defined secondary and tertiary vocational training routes and university chairs, which embraced several specialist fields in primary care and beyond. In addition, stricter requirements were made regarding the training of physiotherapists and other paramedical practitioners, including occupational therapists and speech therapists. In most European countries, the period of training needed to enter such professions was increased to four years. In a number of countries, university paramedical training was introduced. Various paramedical specialisms developed, some of them in primary care, including paediatric physiotherapy, sports physiotherapy and manual therapy.

Throughout Europe, more importance was attached to properly structured collaboration between the various primary care disciplines. In various EU states multidisciplinary primary care teams and health centres were introduced.[51] In addition, greater emphasis was placed on measuring and promoting the quality of the care provided.[52-54]

The number of countries within the EU which had highly developed primary care systems increased substantially: by the end of the twentieth century, the UK, Denmark and the Netherlands had been joined by Spain, Italy, Finland and Slovenia, amongst others.[55] Promising developments were also underway in various other countries and regions, such as Ireland,[56] Flanders, Malta and Crete.

2.3 Functions and principles

Numerous different national, regional and local forms of primary care developed in the second half of the twentieth century. There were differences in the importance attached to the roles played by care disciplines, in the tasks performed by different disciplines and in the position of primary care within the wider healthcare environment, in line with the regulations, insurance systems and circumstances that prevailed. Nevertheless, there are a number of functions that are more or less common to all primary care, even if they go by different titles or are not uniformly categorised. Furthermore, the different forms of primary care perform these functions on the basis of a number of common principles.

Intake management

When a patient* presents him or herself with a new problem, the first function of the primary care system is intake management: identifying the problems and demands which the patient wants to present to the system. In some cases, people approach primary carers with problems that are best dealt with by others; such cases need to be identified as quickly as possible.

Clarification of patient demands

Once intake has been taken care of, the patient's demands have to be clarified. This process should be recognised as a separate phase of care, prior to the diagnostic process, for two reasons. Firstly, it is necessary to respect the principle that the patient is essentially responsible for his or her own health. It is not always immediately clear why someone with a particular health problem seeks professional assistance, when other people with similar problems are able to cope on their own. To ensure that the healthcare system does not accept an unnecessary degree of responsibility, it is important to ascertain as accurately as possible what the patient expects from contact with professional carers. In many cases, reassurance, explanation, information or self-care advice are sufficient to meet the patient's expectations.

The second reason for regarding the clarification of patient demands as a process in its own right is that this promotes the alignment of care provision with the patient's wishes, ideas, concerns and expectations. As well as being a key determinant of the quality of care provision, such alignment is a precondition for effective and efficient care, since most treatments (whether they imply lifestyle change, pharmacotherapy, remedial therapy, therapeutic counselling, the consumption of medication at set times) entail a considerable degree of patient activity.

Information and support for self-care and lay-care

As indicated above, the provision of health information and self-care advice is one of the primary care system's most important functions in relation to health problems that require no other professional intervention. The relevance of this function is not limited

* In this report, the Committee has chosen to use the word 'patient' where various other terms, such as client or consumer might have been used instead. The word patient, being a derivation of the Latin *patiens*, or 'suffering', is understandably considered an inappropriate appellation for the modern healthcare user, who increasingly wishes not to be unnecessarily regarded as the passive object of the care process, but as the active subject. Recognising this, however, the Committee prefers to use the traditional term 'patient', because it is the only word that, without further explanation, is universally understood to refer to a person with a health problem in the particular context of healthcare.

to such problems, however. It is also an essential component of all forms of care for all kinds of health problems. Furthermore, particularly where prolonged, chronic and complex problems are concerned, the care provided by a patient's family is critical, and the primary care system has an important informative and supporting role to play in relation to lay carers.

Diagnosis

The diagnostic function of primary care depends in the first instance on arriving at an appropriate anamnesis. Where necessary, this may be followed by physical or psychological examination, an exploration of the social context of the health problem, laboratory testing or the application of other diagnostic tools, such as imaging or functional testing. Diagnosis is accompanied by the provision of information and by decision-making on the part of both carer and patient: the use of a particular diagnostic procedure will often have both positive and negative implications, which need to be taken into account in a process of joint decision-making, in the context of which the care provider and the patient have their own responsibility.[57] Often, the diagnostic process in primary care is not aimed at the determination of a particular diagnostic entity. Where a common disease of a self-limiting nature[58] is concerned, the prognosis for the patient as estimated by the doctor is much more important than the diagnosis in itself.[59] 'Watchful waiting' – monitoring a health problem to see how it develops, in the expectation that it will not become serious, while remaining alert to the appearance of unexpected symptoms – is a valuable element of the diagnostic repertoire in primary care.[59] Needless diagnostic examination has to be avoided, in order to prevent unnecessary medicalisation and somatic fixation.[60]

Whether or not a particular condition is diagnosed, it is often important to characterise the patient's problems in terms of functional disorders, practical limitations and participation problems, since these are often the focus for specific, and frequently paramedical, forms of treatment.[36] Where patients who are nursed in their homes are concerned, diagnostic activities tend also to be geared to the identification of nursing and general care requirements.

Another important aspect of primary care's diagnostic function is the need to pick out the smaller number of cases of severe illness with few specific signs and symptoms from the much more common 'ordinary' conditions with similar clinical presentations. Because only a small percentage of the health problems presented to primary carers are referred to specialists, the clinical epidemiological pattern of symptoms and disorders seen in primary care differs considerably from that in specialist healthcare. For example, only one in seven patients presenting with chest problems in the primary practice ulti-

mately prove to have heart disease, whereas one in two of those seen by specialists are suffering from such a condition.[61]

Treatment

Like its diagnostic function, primary care's treatment function is closely tied in with information provision: the treatment process initially involves giving information about the possible ways of treating the problem in question. This is followed by a decision-making process, in which patient and care provider each plays a particular role, and then by implementation of the chosen (combination of) treatments option(s): self-care (e.g. adjustment of dietary or exercise pattern, stopping smoking or the introduction of other lifestyle changes), pharmacotherapy, exercise therapy, therapeutic counselling, social support or medical intervention (e.g. ear syringing, injury dressing or the stitching of wounds). Although the word 'treatment' might tend to suggest a process in which the patient is merely a passive object, the fact is that the effectiveness of almost all the forms of treatment referred to depends upon patient action. Even in surgical interventions, the patient's cooperation is essential for implementation of the procedure and for follow-up. The active guidance of patients through the chosen therapy, anticipating possible problems, is an integral element of the treatment process.

Since treatment may involve various disciplines, proper coordination of the professionals involved is another key feature of the treatment function. The multidisciplinary character of treatment in primary care may be exemplified by pharmacotherapy. In Europe, about a half to three quarters of all primary care consultations end with a prescription.[62,63] These prescriptions are not only initiated by general practitioners, but may also be a continuation of medication initiated by a specialist. This is the case in particular for chronic diseases, where specialists and primary care doctors are both treating the patient. In some countries, such as the UK and the Netherlands, many prescriptions are repeats for chronic treatment, issued by the practice assistant. Monitoring treatment of chronic patients is an important activity of nurse practitioners. Pharmacists play an important role in the quality assurance of the medication dispensed. They inform patients, they can monitor medication use (for example for non-compliance and adverse effects), and identify possible problems, as shown in experiments with pharmaceutical care in for example Germany, the Netherlands and Scandinavian countries.

By the provision of information, self-care advice and treatment, primary care is able to deal with many of the health problems presented to it. This has been underlined by a recent study carried out in the Netherlands. Some 80 per cent of all health problems presented to general practitioners in 2001 were dealt with in the context of a single carer-patient contact. In a further 10 per cent of cases, the patient returned to the general practitioner with the same problem only once. A mere 2.5 per cent of all contacts led to

referral to a medical specialist.[63] The Committee estimates that, of all health problems presented to professional healthcare, at least 90% can be adequately dealt with in primary care, without involvement of medical specialists.

A key objective of primary care is to provide a treatment that is effective, yet no more intensive, invasive or specialised than strictly necessary. This implies that, for example, unnecessary medicalisation and somatic fixation are avoided as far as possible.[60] Within primary care, the dominant philosophy is that a minimally invasive treatment minimises the risk of side-effects and iatrogenic conditions, maximises the ratio of benefits to burdens for patients, and promotes efficiency in the provision of care.

Specialist involvement

In generalist primary care, it is vital that practitioners recognise the limits of their own expertise in relation to specific health problems and where necessary draw upon specialists expertise at the appropriate moment. This depends in turn on having a good overview of the specialist medical, pharmaceutical, paramedical and nursing experts and facilities available. It is also important that specialist expertise is utilised in the correct way: the generalist may ask a specialist for advice, the generalist and the specialist may see the patient together,[64,65] the specialist may examine the patient and report back to the generalist, the specialist may in consultation with the patient and the generalist initiate a particular form of treatment, or the specialist may take over the responsibility for treatment from the generalist. In a given case, the best approach will depend on the nature of the health problem, the patient's wishes, the preferences and capabilities of the clinicians involved and the practical circumstances.

Nursing and general care

According to Henderson, nursing entails helping patients to undertake activities that contribute to recovery or to peaceful death and which they would undertake unaided if it were not for lack of strength, will or knowledge.[66] Nursing is one of the essential functions of primary care, and an increasingly significant one, given the ongoing shift away from in-hospital care towards care in the home. Within nursing, attention is given to a broad spectrum of factors, including somatic (ADL care), psychological and social (guidance and information provision) and spiritual (encouragement and consolation) dimensions. Primary care's nursing function is performed in the home setting, in close collaboration with the patient's non-professional and professional carers, whose roles involve primarily domestic and general care activities.

Prevention

Although driven primarily by patients seeking care, primary care has always had a preventive function, which – because of an independent responsibility for the health of the practice population – can also lead to the provision of (preventive) care that has not actually been requested. In many cases, the unrequested provision of care is born out of the primary care provider's familiarity (often built up over years of frequent or occasional contact) with the risk factors associated with individual patients. The circumstantial and behavioural determinants of health that can in principle be influenced through the primary care system are both extremely numerous and very varied. They include smoking, diet, physical activity, use of alcohol and other substances, sexual behaviour, working conditions, upbringing, and road use. Often, preventive care is made available in response to the observation of medical-biological characteristics such as weight, blood pressure or serum cholesterol level, or following a cardiovascular incident. The primary care system also has an important role to play in the prevention of unwanted pregnancy and the early identification and prevention of problems during pregnancy.

The preventive function of primary care is not concerned exclusively with the individual patient. Examples of supra-individual preventive activities include the promotion and implementation of vaccination or screening programmes, as well as participation in initiatives aimed at the particular problems present in the local community, such as the hygienic quality of the housing or a high incidence of sexually transmitted disease.

Navigation, coordination, continuity

As the diagnostic, prognostic and therapeutic possibilities increase in number and diversity, there is an increasing need to navigate patients through the healthcare system. Navigation goes well beyond the mere provision of information; it is a function that consists of actively guiding the patients, particularly those with chronic complex health problems, as they seek to obtain the care that best meets their particular needs, wishes and expectations.

In many cases, patients need several forms of care, which are supplied by various care providers. Patients have a responsibility to communicate their wishes and needs as effectively as possible to individual care providers, but functional and temporal coordination of the contributions made by different care providers to the care package received by a given patient is the responsibility of the healthcare system. The coordination of care, in close consultation with patients and their non-professional carers, is an important function of primary care.

Navigation and coordination both contribute to the provision of continuity of care: the experience of a coordinated and smooth progression of care from the patient's point

of view.[67] Informational continuity, the excellent transfer of information following the patient, is an essential aspect of this experience. Another important aspect is personal continuity, i.e. the availability of one or more named individual care providers with whom the patient can establish and maintain a personal relationship.[67,68] Apart from being an important value in itself, from both the patients' and the care providers' point of view, continuity of care is a precondition for the proper fulfilment of the various functions of primary care described above.

2.4 Defining primary care

The international community of clinicians, researchers and policy-makers involved with primary care has for several decades acknowledged that it is not possible to define primary care in a way that is simultaneously concise, clear, coherent, fully comprehensive and internationally valid. The phrase 'primary care' indicates not only a level of care, between lay care and hospital care, a set of functions and activities, a means of performing those functions and activities, a set of characteristics and a strategy for the organisation of healthcare, but also a philosophy that permeates healthcare as a whole.[5,6,69-71] The concept covers a variable amalgam of all these elements, the precise make-up of which depends on the context in which and the purpose for which it is used.

By describing primary care in terms of functions and principles, the Committee has in this chapter effectively provided its own definition of the term. The Committee also supports the definition of general practice formulated in 2002 by WONCA Europe, the regional organisation of the World Organisation of Family Doctors (WONCA).[72] The Committee's adaptation of this definition to the broader concept of multidisciplinary primary care is as follows:

Primary care is that element of healthcare that encompasses various disciplines, each with its own educational content, research, evidence base and healthcare activity, and that

- is normally the point of first contact within the healthcare system, providing open and unlimited access to its users, dealing with all health problems regardless of the age, sex, or any other characteristic of the person concerned
- recognises the personal responsibility of the patient, with regard to the nature of the care and the process of care provision
- makes efficient use of healthcare resources through coordinating care, collaboration within the primary care setting, and by managing the interface with other fields of healthcare, taking an advocacy role for the patient when needed
- follows a person-centred approach, orientated to the individual, his/her family, and community
- is responsible for the provision of longitudinal continuity of care, determined by the needs of the patient and based on effective communication between care provider and patient

- has a specific decision process which takes into account the prevalence and incidence of illness in the community
- manages both acute and chronic health problems
- manages illness which presents in an undifferentiated way at an early stage in its development, which may require urgent intervention
- promotes health and well being by appropriate preventive intervention
- has a specific responsibility for the health of the community
- deals with health problems in their physical, psychological, social cultural and existential dimensions.

Furthermore, the Committee sees considerable merit in the concise definition put forward by the American Institute of Medicine in 1996:

Primary care is the provision of integrated, accessible healthcare services by clinicians who are accountable for addressing a large majority of personal healthcare needs, developing a sustained partnership with patients, and practicing in the context of family and community.[1]

Adapting and summarising the above definitions, the Committee takes the view that primary care

- consists of general medical, paramedical and pharmaceutical care, nursing and supportive care, together with preventive and health-educational activities linked to these forms of care;
- is generalist care, also encompassing non-specialist mental and social healthcare;
- is aimed at patients staying at home and is provided as close to the patient's home as possible and, if necessary, at the patient's home;
- has a low access threshold for all, irrespective of the nature of their health problems;
- is able to respond to urgent cases where necessary;
- realises continuity in responsibility and accountability with regard to long-term care, guidance and preventive initiatives;
- departs primarily from the demand for care of the patient, but has a proactive responsibility in relation to both individual and group-oriented preventive activities aimed at promoting health in the local (practice) population;
- is provided where necessary by different care providers working together on a coordinated basis within primary care and, if indicated, with secondary care.

The characteristics of primary care set out above serve as a point of departure for the following two chapters. In chapter 3, the Committee describes comparative scientific research that sheds light on how these characteristics are generally related to the effectiveness and efficiency of healthcare systems. In chapter 4, the Committee summarises

the primary care systems presently operating in the countries of the European Union and discusses them in the light of the defined characteristics.

Chapter 3

Effectiveness and efficiency of primary care: evidence

Having identified the characteristics of primary care, it is possible to say what constitutes a *strong* primary care system: one in which many of the identified characteristics are well developed. For several decades it has been assumed that a healthcare system that possesses a strong primary system is preferable to one that does not; this assumption is implicit in many of the declarations and policy statements issued by the World Health Organization, both at the global level[69,73] and at the European level,[74] as well as by governments and other authoritative bodies in many countries.[1,56,75-77]

However, it is pertinent to ask whether a healthcare system that has a strong primary system *is* actually superior to one that does not. In an era when evidence is increasingly regarded as a prerequisite for making choices at all levels of the healthcare system, including the national policy-making level, it is reasonable to ask for evidence of the benefits ascribed to well developed primary care. The evidence necessary to support decision-making is always hard to come by, but it is particularly difficult to obtain evidence regarding the relative value of alternative ways of organising healthcare systems. Numerous studies have looked into the relationships between the individual characteristics of primary care set-ups – continuity, generalism, coordination, etc – and matters such as quality of care, patients satisfaction, health outcomes and cost.[78-85] From reviews of these studies,[1-3] it is apparent that the individual characteristics are generally linked to more favourable outcomes. While this in itself makes it likely that also the combined effect of these characteristics will be favourable, these studies do not directly show whether these characteristics, collectively and in their interaction with one another and with the healthcare system as a whole, indeed produce the desired effects. In order

to draw meaningful conclusions concerning the empirical relationship between healthcare system design features and the outcomes that really matter – population health status, levels of satisfaction with and equity within healthcare and the cost of operating it – it is necessary to compare healthcare systems with one another on a macro level.

In this chapter, the Committee presents an overview of what is known from comparative studies of healthcare systems about the relationships between system design features and population-level outcomes. First, a number of introductory points are made regarding the methodology used in such research. Then the various study findings are discussed under four headings: health, cost, equity and satisfaction. The Committee's conclusion is presented at the end of the chapter.

3.1 Methodology

Studies that compare healthcare systems on a macro level have a number of inherent limitations. It is very hard to come up with a study design that is entirely sound. It would not be feasible to assign different healthcare set-ups to different countries or regions for experimental purposes. In practice, while the healthcare arrangements in a given area may differ from the arrangements elsewhere, other relevant differences will almost always exist as well. Furthermore, within healthcare systems, change normally takes place gradually, ruling out or compromising the evidential value of straightforward before-and-after studies.

The number of countries or systems that can sensibly be compared is limited, because meaningful comparison depends on broad socio-economic similarity. Since the studies involve relatively few countries or systems, whose relevant characteristics cannot always be measured by similar means, it is statistically difficult to draw conclusions regarding the contribution that a given characteristic makes to any observed differences in outcome. In addition, the characteristics of healthcare systems tend to occur in fixed combinations that have evolved over time, which makes distinguishing the effect of an individual characteristic even more complicated.

Nevertheless, significant methodological progress has been made in recent years. This progress has been based upon the availability, in the form of the *OECD Health Data Base* and other such resources, of increasingly long time-series of data for an increasing number of countries and system characteristics, opening the way for the analysis of different countries' healthcare systems in pooled time-series cross-section studies. In such studies, it is possible to distinguish between the influence of country-specific factors, such as cultural differences, which are difficult to measure but relatively stable over time (known as fixed effects), and the influence of observed variable characteristics. This in turn means that the effects of the characteristics with which researchers are primarily concerned can be estimated with greater confidence. Although the research

is still observational, the progress made in this field does mean that we now have the prospect of much more reliable information regarding the impact of healthcare system design features.

3.2 Health

In the review they compiled in 1997, Groenewegen and Delnoij concluded that the comparative studies of healthcare systems published up to that time provided no evidence of any systematic population health status differences between countries that had strong primary care systems and countries that did not. Since then, however, an important new article has been published by Macinko, Starfield and Shi, who used a time-series of data collected in eighteen OECD countries to investigate possible associations between the strength of a country's primary care system and various health outcomes. A PubMed search of related articles linked to this publication conducted by Macinko *et al*. revealed six other publications on the same subject, all but one of which were co-written by Barbara Starfield, who has been working in this field for decades (see Annex E).

The strength of a country's primary care system was operationalised by Macinko *et al*. as the sum of the scores for ten characteristics, including the degree of generalism of the predominant type of primary care provider, whether patients were registered with a primary care facility and whether the country operated a gatekeeper system (see annex F for the full list of score components). The study found that – once correction was made for gross domestic product and per capita income, physician density, percentage of people over 65 years of age, ambulant doctors' visits per head of the population and alcohol and tobacco consumption – a higher primary care system score was associated with lower standardised mortality, lower standardised premature mortality and fewer life-years lost due to (avoidable) mortality from cardiovascular disease, pneumonia and asthma. The other studies reported by Starfield and her colleagues also point to a generally positive relationship between the strength of the primary care system and public health (see Annex E).

The only one of the reviewed studies that had not been carried out by or in collaboration with Starfield, Gulliford's study, was, in fact, not a comparison of independent healthcare systems, but of different regional units within one system. It found an association between general practitioner-density and lower standardised mortality, lower avoidable mortality, lower mortality due to acute myocardial infarction, lower hospitalisation rates for acute and chronic conditions and a lower incidence of teenage pregnancy. However, the correlation between general practitioner-density and mortality ceased (by a narrow margin) to be statistically significant when correction was made for the socio-economic characteristics of the population (deprivation, ethnic composition) and for the prevalence of chronic conditions. On the other hand, general practitioner-

density did remain a statistically significant predictor of hospitalisation and teenage pregnancy even after such correction.

3.3 Cost

Docteur and Oxley recently published a review of studies concerned with the determinants of international healthcare cost differences.[86] They concluded that "the role and organisation of ambulatory care is of crucial importance in the overall efficiency and effectiveness of healthcare systems" (p. 31). Drawing mainly on the basis of the pooled time-series cross-section studies conducted by Gerdtham *et al*.,[87-89] Docteur and Oxley found that, if all other factors remain constant, the overall cost of healthcare is generally lower in countries where people do not have direct access to secondary care (i.e. where primary care performs a gatekeeper function). The national healthcare bill is similarly lower in countries where ambulatory care doctors are paid mainly on the basis of a fee per registered patient. Both characteristics tend to be associated with a strong primary care sector. The gatekeeper function enhances the position of the primary care provider as the point of first contact with the healthcare system. The payment of a capitation fee is linked to the registration of patients with a primary care provider. Both promote the continuity, comprehensiveness and coordination of care provision, three of the central values of primary care.[90] In addition, community (population oriented) care and prevention – not dependent on individual help seeking – are best covered by a capitation fee.

3.4 Equity

The degree of (in)equity within a healthcare system has usually been operationalised by researchers as the degree of inequality in the distribution of care across income groups remaining after correction (or standardisation) for differences in needs.

Details of two comparative studies have recently been published, which sought to establish which healthcare system characteristics contributed to the fair distribution of access to care (primarily from physicians). In most EU countries, it appears that the ease with which one can gain access to a general practitioner is unrelated to one's income. However, the accessibility of specialist care is significantly greater for high-income groups in all countries, after correction for differences in need. The extent to which access is distributed in favour of the wealthy does not appear to be directly related to the characteristics associated with a strong primary care sector, such as the existence of a gatekeeper function or a fee system based on patient lists.[91,92]

3.5 Satisfaction

Numerous international comparisons have been made of public levels of satisfaction with national healthcare systems and of patient experiences of national healthcare systems[93-100] However, none of these studies addressed the relation between the strength of a country's primary care system and levels of satisfaction.

The study of Wensing *et al*. is a noteworthy exception.[101] They looked for a correlation between patients' satisfaction with their general practitioners (measured using the EUROPEP tool) in seventeen European countries and a number of variables: physician-density and general practitioner-density, basis of general practitioners' remuneration, the existence of a referral system and the extent to which the general practitioner is the first point of contact with the care system. The study found that a good majority of patients were positive about the care provided by their general practitioners. It did not appear, however, that satisfaction was associated with the characteristics of a strong system of primary care. From other studies within various countries, however, it is apparent that, for instance, continuity or, as Macinko *et al*. name it, longitudinality, one of the key characteristics of a well developed primary care system, is strongly and consistently associated with satisfaction of both patients and care providers.[102]

3.6 Conclusion

The evidence yielded by comparative studies of healthcare systems suggests that there is a relation between a strong primary care sector and a better population health status. Furthermore, two characteristics that are associated with strong primary care – gatekeeping by the primary care sector and the payment of practitioners on the basis of patient lists – are linked to relatively low national healthcare bills. However, no evidence has yet been found to link either income-related inequality in the distribution of care or levels of patients' satisfaction with general practitioner care to the characteristics of a strong primary care sector.

The comparative research therefore indicates that, from the point of view of effectiveness and efficiency, a healthcare system that has a strong primary care sector is preferable to one that does not.

Chapter 4

Primary care in Europe: the present situation

The healthcare systems operating in the member states of the EU* have one important common characteristic: pretty well everyone is assured of access to a wide package of healthcare facilities. Europe's health insurance systems are based on the principle of solidarity not only between the healthy and the less healthy, but also between the relatively well off and lower income groups.[103] Furthermore, all EU countries have systems for the provision of healthcare not only in hospitals, but also close to or in the patient's home by care providers working outside the hospital system. Healthcare of the latter type, which is made available to people in all income groups[92] may be referred to as primary care, as distinct from secondary hospital care. However, the extent to which such primary care actually exhibits the characteristics of primary care identified in the first chapter varies considerably from country to country.

In this chapter, the Committee compares and contrasts primary care in the various countries of the European Union. The thoroughness of the Committee's analysis is dependent upon the information available, most of which relates to general practitioners and is not up to date in all respects.

* See Annex D for some background data on demography, health and healthcare in the member states of the European Union.

4.1 Funding and access

Europe's healthcare systems may be divided into two broad groups on the basis of the role played by the state in funding care and making it available to the public. On the one hand are the national health service systems, or 'state systems', funded by taxation. In countries that operate such systems, most care facilities are controlled by the government. The EU states with such systems are Denmark, Finland, Italy, Greece, Portugal, Spain, the UK and Sweden. On the other hand are the systems in which healthcare is treated as a form of social security and funded by contributions or premiums. Such 'social insurance systems' are in most cases more loosely organised, with the government playing a much more limited role in the provision of care. The countries with systems designed along these lines are Austria, Belgium, Germany, France, Ireland, Luxemburg and the Netherlands.[104] In addition to these two groups of West European countries there are the Central and East European countries, where until 1989 the Soviet Semashko healthcare system prevailed and which have since been migrating to social insurance systems at different speeds.[105]

There is a clear correlation between the type of system and the degree of access that people have to components of that system. In most state systems, general practitioners have a gatekeeper role; many other care disciplines, including specialist medical disciplines plus nursing and paramedical disciplines, can be accessed only via a general practitioner. Sweden and Greece form exceptions in this regard: although both countries have tax-funded systems, medical specialists and many other care providers are directly accessible. Social insurance systems – including those developing in the former Eastern Bloc countries – are normally characterised by direct access to all elements of the system. Again, however, there are exceptions: in the contribution-funded systems that operate in the Netherlands, Ireland and Slovenia, access to specialist medical care is generally via a general practitioner.[104,105]

Not all countries that operate a gatekeeping system apply equally strict rules. The tax-funded system in Denmark is a particularly interesting case. Danes have the option of paying additional contributions to obtain direct access to secondary care, but less than 5 per cent of them choose to do so. It should be pointed out that all countries provide for direct access to hospital emergency departments in urgent cases. However, such departments everywhere find they have to contend with people presenting non-urgent problems for attention. In the countries with gatekeeping arrangements, this inclination to bypass the gatekeeper is a significant issue.[105]

4.2 The funding of primary care

The type of healthcare system in operation is closely linked to the arrangements for the remuneration of general practitioners.

The social insurance systems of Belgium, Germany, France and Luxemburg have fee-for-service arrangements, under which general practitioners are paid a certain amount for each type of service they provide. Other countries, such as Ireland and the Netherlands operate mixed payment systems, with general practitioners paid a fixed capitation fee for some of their patients and service-related fees for the rest. In Austria, some *Bundesländer* have a fee-for-service system, while others pay capitation fees.[104]

Most state systems pay general practitioners on the basis of a capitation system, i.e. a system under which general practitioners receive a fixed amount of money for each patient registered with them, or a salary system, under which general practitioners are paid for the hours they work.

The capitation system operated in the UK until the New General Medical Services Contract was introduced, and still operates in Italy as well as in the Netherlands (where the obligatory insured majority of the population is concerned) and in Belgium's (community) health centres. Finland, Greece, Portugal and Sweden all have salary systems. In Denmark, half a general practitioner's income is accounted for by age-related capitation fees and the other half by payments for particular services.[104,106]

In several countries of central and eastern Europe, the salary system dominates. However, in Slovakia, the great majority of the general practitioners are self-employed and are paid on a fee-for-service basis. In the Czech Republic, a combined capitation and fee for service system has been established since1998, in which the capitation payment accounts for 80% of the practice income. To a lesser extent, this is also true of the Czech Republic.

The UK has a system for funding primary care that is unique in the EU. In the National Health Service, remuneration used to be based mainly on capitation, supplemented by fees for certain specific services and for achieving certain target levels of service (involving only childhood vaccination and cervical cytology).[107] In the 1990s a fundholding scheme was introduced. General practitioner fundholding was a form of integrated capitation, i.e. a system associated mainly with Health Maintenance Organizations in the USA, under which the services provided by various care providers or at various levels of the healthcare system are paid for out of a single general budget. The UK's fundholding scheme allowed general practitioners to buy hospital care for their patients. With effect from April 2004, however, the UK has introduced the New General Medical Services Contract.[108] Under this contract, each general practice receives a basic sum based on the size and make-up of its patient list, to cover the cost of providing basic

family doctor care. Additional forms of care that general practitioners are not obliged to provide, such as more complex minor surgery, mother-and-baby consultation services, support for drug-users and the homeless and out-of-hours care, are paid for separately. A practice can also qualify for additional payments if it realises certain quality standards, measured by reference to a total of 136 indicators relating to medical treatment, practice organisation and patient-orientation.[109]

In primary care, medication is normally funded separately, in contrast to the situation in hospitals, where medicines are usually paid for out of the institution's overall budget. Here again, there is considerable variation within the EU, which is not related in any way to the type of healthcare system in operation. The arrangements vary from full out-of-pocket payment (in Lithuania), fixed fees (in the UK, Germany and Austria), co-insurance with patient charges (in Belgium, Greece, Luxemburg, Poland, Portugal and Slovenia), co-insurance without patient charges (in Finland, Latvia, Hungary, Spain and France) and fixed deductible payment (in Denmark, Sweden, Malta and Ireland) to full reimbursement (in the Netherlands, Slovakia and Italy) and full reimbursement of only the cheapest generics and considerable co-payment of other medication (in the Czech Republic).

4.3 Registration with a primary care practice

Capitation payment is possible only if patients are registered for certain periods with particular general practitioners, groups of general practitioners, or other primary care organisations. In all EU countries where capitation payments account for an important part of the funding given to general practitioners –i.e. Denmark, Ireland (where lower income groups are concerned), Italy, the Netherlands and the UK – everyone is obliged to register with a particular general practitioner, group of general practitioners or health centre. Portugal, Spain and Slovenia also operate patient list systems.[105]

In principle the patient list system is not directly linked to the gatekeeping system. Gatekeeping can be found in countries where patients are not registered with a primary care practice, such as Iceland, Croatia and, until introduction of the patient list system in June 2001, Norway. Within the European Union, however, patient list systems are always found in conjunction with gatekeeping arrangements: all EU countries either have both or have neither.[105]

In some countries, the patient list system also applies to pharmacies. Registration of patients in one pharmacy greatly facilitates an active role of pharmacists in primary care, such as monitoring the medication of individual patients.

4.4 Practice size, practice form and responsibilities

Within Europe, general practices vary enormously in size. According to recently published figures, practices in Ireland and the Netherlands are on average three to four times as big as practices in Finland, France and Belgium. The average practice size is not linked to whether general practitioners play a gatekeeper role.[104]

Practice form, on the other hand, is clearly related to the type of healthcare system in operation. In countries with social insurance systems, the percentage of general practitioners practising on their own is generally well above 50 per cent, whereas under state systems the figure is well below 50 per cent.[110] The exceptions are Italy, which has a very high percentage of single-handed practices despite operating a tax-funded system, and the Netherlands, where there is a social insurance system, but the percentage of practices with only one doctor has gradually declined from 66.5 per cent in 1980 to 39 per cent by 2003.[104] Although multidisciplinary primary care teams have been advocated for decades, such teams remain unusual in most EU countries. The exceptions being Finland, where most primary care is provided via large health centres, the UK and, to a lesser extent, the Netherlands.[51]

There is a clear link between what a general practitioner is responsible for and whether patient lists and gatekeeping are in operation. In countries that use patient lists and gatekeeping, a general practitioner is more likely to act as the first point of contact with the healthcare system, both for the general patient population and for people with psychosocial problems.[105] Unlike their counterparts in most other European countries, general practitioners in the Netherlands are not involved in the certification of sickness absenteeism.[104] The situation with regard to primary and secondary prevention is quite varied. These functions are not very well developed in many countries, particularly not where collective, group-oriented and community prevention is concerned.

4.5 Accessibility

In the more densely populated parts of the EU, the geographical accessibility of general practitioners is not normally a problem. In more remote rural areas, however, accessibility can be compromised by a shortage of general practitioners.[111]

In the Scandinavian countries, the Netherlands and the UK, one normally needs an appointment to see a general practitioner. In Finland and Sweden, people often have to wait two or more days for a consultation. In Hungary, Italy and Latvia, by contrast, general practices with appointment systems are unusual. It is usually possible to contact one's local practice by phone, but the frequency of telephone consultations varies from country to country, from two to sixteen per general practitioner per day. There is even

greater variation in the number of house calls made by general practitioners. In Portugal, Sweden and Finland the average general practitioner makes two or three house calls a week, while in Germany the number is thirty-four a week, and in Belgium forty-four.[110]

Generally speaking, accessibility is even more closely related to population density in other primary disciplines than it is in general practice. In remote rural areas, the general practitioner is often the only available care provider, apart from the pharmacist, who is generally accessible for anyone during office hours. In some countries, including Norway, Switzerland and the Netherlands, general practitioners in remote areas sometimes run their own pharmacies.

Throughout the EU, primary care is generally available outside office hours in emergencies. In many countries, the general practitioners and pharmacists in a given area operate a cooperative out-of-hours scheme, covering for one another on a rota basis. In Italy, however, care is provided outside normal surgery hours by a separate government-run locum service.[112] In 1992, Denmark switched from locally organised rota systems for out-of-hours primary care to county-wide locum schemes each covering fifty to sixty thousand people. This resulted in a considerable reduction in general practitioners' workloads.[113] In the UK, 'NHS Direct' has been in operation since 1998. NHS Direct is a twenty-four-hour telephone support service staffed by trained nurses who provide advice and triage.[114] In the Netherlands, a network of general practitioner stations has quickly sprung up since the late 1990s at the instigation of the general practitioners. At these stations, practice assistants or nurses working under the supervision of general practitioners field requests for general assistance outside surgery hours. Each station is responsible for a region with an average population of 150,000.[115-117]

4.6 Disciplines

The *general practitioner* or family doctor is in many EU countries the key figure in primary care. It is increasingly common for general practitioners in many countries to have completed a vocational training period after qualifying as doctors. Under present European rules, a minimum of three years' training is required to become a family doctor. General practitioners are usually responsible for the provision of primary medical care to people of all ages. However, in some countries, especially in central and eastern Europe, paediatricians and gynaecologists can be members of primary care teams. In other countries, medical specialists – internists, gynaecologists and paediatricians, but also more 'specialised' specialists – are directly accessible and take part in the provision of primary care.

In most countries, general practitioners are normally supported by *practice assistants*, who are able to undertake administrative and logistic duties, and to perform sim-

ple medical procedures, such as syringing patients' ears or measuring their blood pressure.[110]

Although all EU countries have *pharmacists*, their density varies considerably. Pharmacies are usually independent businesses. In many Western European countries, the pharmacist is gradually becoming an (ancillary) care provider, who advises, informs and guides general practitioners and patients alike.[118,119]

Nurses are involved in primary care in various roles. *Community or district nurses* have traditionally performed a wide range of tasks – washing, dressing, tending wounds, administering medication, etc – for care-dependent people living in their own homes. In many countries, such nurses are also involved in caring for young children. The last five years have also seen the emergence of the *practice nurse*. Practice nurses perform various functions in family practices or health centres, particularly in the fields of health promotion, perinatal care, vaccination and care for the chronically ill, such as diabetics or people with chronic obstructive pulmonary disease.[120,121] In parts of Europe, particularly the UK, there are also *nurse practitioners*. In many ways, a nurse practitioner's role is similar to a practice nurse's, but they are additionally authorised to prescribe medication and to diagnose and treat straightforward health problems. With increasing frequency, such nurses play an important role in the reception of people who present themselves to the healthcare system with new health problems both within and outside surgery hours.[122-126] In some countries, *community psychiatric nurses* have a role primarily in the care of people with serious psychiatric problems.

Throughout Europe, *home helps* provide personal care and domestic assistance to people who receive general care or nursing in their own homes.[127]

Social workers are often active alongside general practitioners in certain countries, such as Hungary, Poland and Finland. In other countries, including Denmark, Latvia, Slovenia and Ireland, such cooperation is unusual. Social workers are normally local government employees.

In some countries, *psychologists* perform an important role in the diagnosis and treatment of people with psychological problems.

Physiotherapists are active throughout the European Union, particularly in the treatment of people with musculoskeletal problems. Physiotherapist-densities vary considerably across Europe: north-western European countries tend to have a lot of physiotherapists, while central and eastern European countries have few.

The majority of European countries have *midwives*, but in most places they are involved exclusively or almost exclusively in prenatal care and occasionally, under the supervision of an obstetrician, in deliveries in a hospital.[128] Only in the Netherlands do midwives commonly have an independent responsibility for the supervision of (normal) deliveries: 40 per cent of all births are supervised by a midwife, with 30 per cent taking place in the home and the other 10 per cent in a hospital.

In many European countries, *dieticians* contribute to the provision of primary care by disseminating dietary information and giving personal dietary advice.

While there are *dentists* in all EU states, their numbers and responsibilities differ markedly from country to country. In some countries, *oral hygiene* has become the responsibility of a separate category of care providers, who may or may not work under the supervision of dentists.

4.7 Quality monitoring and quality promotion

It is internationally accepted that monitoring and promotion of the quality of care should be integral elements of healthcare in general, and therefore of primary care. However, the extent to which this principle is implemented in practice varies from country to country within the European Union.

One important recent development has been the emergence of *quality circles and peer review groups*. QCs/PRGs are six to twelve-strong groups of care providers from one or more disciplines who regularly meet on a voluntary basis to review and seek ways of improving the quality of care. They collect and discuss data on the care provided, consider new guidelines and use such guidelines for the development of local consensus. They produce quality improvement plans and expertise promotion plans. Sometimes they visit one another's practices and provide each other with feedback. QCs/PRGs were first seen in the Netherlands in 1979. By 2000, the methodology had become commonplace in eight EU countries (Belgium, Denmark, Germany, Ireland, the Netherlands, Austria, the UK and Sweden), as well as in Norway and Switzerland. General practitioners' participation in QCs/PRGs varied across these ten countries, from 9 per cent to 86 per cent[129].

The development of evidence-based guidelines is generally seen as an important factor in the promotion of quality in healthcare. No formal data is available on the development of guidelines for primary care in the EU, but it is clear that a great deal of work is being done in this field in various countries. In the Netherlands, the development of guidelines is largely the responsibility of the bodies representing the various healthcare professions. Since 1989, the Dutch College of general practitioners has produced more than eighty standards. A study carried out in 2001 found that an average of 74 per cent of general practitioners were working to these standards, although there were major differences from practice to practice.[130] In the UK, guideline development is centrally organised. The National Institute of Clinical Excellence formulates national guidelines covering all fields of healthcare, which the National Health Service then draws to the attention of all relevant care providers.[48]

Another topic receiving considerable international interest is the development of methods for measuring the quality of the care provided. There is widespread agreement

that the availability of such methods is important, and definite progress has been made, but it is clear that a number of methodological problems remain to be overcome.[48]

4.8 Discussion

To what extent do the primary care systems in the EU countries display the characteristics of a strong primary care system? Due to a lack of data, the picture that may be sketched of primary care in the EU member states, is far from complete. Nevertheless, some general conclusions can be drawn. In all EU countries there are forms of general medical, paramedical and pharmaceutical care, nursing and supportive care which are provided as close to the patient's home as possible and, if possible, at the patients home. Thanks to the good coverage of Europe's solidarity-based healthcare insurances, this care is available to all income groups. However, its degree of generalism varies markedly across different countries. General practitioners, who have turned medical generalism into their specialty, are active in all EU countries. However, in some of them there are also directly accessible medical specialists who operate in the field of primary care. In those countries, the general practitioner is not as much in the position of first point of contact with healthcare as in countries where primary medical care is primarily provided by general practitioners. If general practitioners are the only doctors who are active in primary care, they often have also a gatekeeping function with respect to other, medical and paramedical, disciplines, within and outside hospitals.

In all EU countries with such a gatekeeping system, there is also a system of registration with primary care practices. Patients are obliged to register for certain periods with a general practice or primary care centre. Though there are no comparative international data on this issue, it seems quite plausible to the Committee that registration with primary care facilities strongly contributes to the realisation of continuity and coordination in the delivery of healthcare.

Another respect in which there are important differences is the remuneration of primary care providers. In some countries, general practitioners are paid according to a fee-for-service system, in others they receive a salary based on the hours they work. A capitation system, under which a general practitioner receives a fixed amount of money for each patient they take care off, is only feasible if patients are registered with primary care practices. Furthermore, there are different types of mixed systems. One example is the New General Medical Services Contract in the UK, which combines capitation with payment for specific activities and for achieving certain 'quality targets'.[107]

There are few good studies on the effect of different payment systems on the quality of care.[131] The best available evidence suggests that fee-for-service, compared with capitation, results in more primary care contacts, visits to specialists and diagnostic and curative services, but fewer hospital referrals and repeat prescriptions. Compared with

salaried payment, fee-for-service seems to result in more patient visits, greater continuity of care, higher compliance with a recommended number of visits, but less satisfaction of patients with access to their physician.[132] There is also little evidence on the effect of 'target payments'.[133] Generally spoken, it seems quite plausible that adding payments for good practice to a basic funding system could have a positive impact on the quality of care. However, given the scarcity of evidence and the dependence of the effects of payment systems on the broader institutional context, further studies on the effects of different systems in various contexts seem essential.[90,131]

Prevention, and particularly collective prevention directed at the community and specific groups, is a function of primary care which is not well developed in many countries. Much could be gained in this respect. At this point, again, registration with primary care practices could make a significant contribution. Only if groups of collaborating primary care givers serve well defined populations, are they able to plan preventive activities targeted at those populations and can they be held accountable for the execution of those activities.

Chapter 5

Future challenges

In the decades ahead, various developments will take place in healthcare and in the wider community, which may be expected to have major implications for primary care in the European Union. In this chapter, the Committee considers these developments.

5.1 Demographic and epidemiological developments

5.1.1 Contraction of the younger population and population ageing

For several decades, Europe's population has gradually been getting older. In 2001, the percentage of the total population aged sixty-five or older varied from just over 11 percent in Ireland and Slovakia to more than 17 per cent in Sweden and 18 per cent in Italy (OECD Health Data 2003). The percentage of older people in the population will continue to increase in all EU-member states in the period up to 2020, by 3 to 6 percentage points in most cases.[103] In the Netherlands, population ageing is expected to peak around 2040, by which time nearly a quarter of the population will be sixty-five or older.[134] What is more, the proportion of over-75s in the over-65 age group will also increase in a number of countries, particularly Germany and the southern European countries.[103]

At the same time, the percentage young people in the overall population will gradually decline. In 2003, the percentage of the population accounted for by children up to the age of fourteen ranged from 14 or 15 per cent in Italy, Spain, Greece, Slovenia and Germany, to 21 per cent in Ireland and on Cyprus.[135] In almost all EU countries, this fig-

ure will fall by a further 1 to 4 percentage points between now and 2020.[103] People aged nineteen or younger made up 24.5 per cent of the population of the Netherlands in 2003, with the percentage expected to bottom out at about 22 per cent in roughly 2030.[134]

As a result of these demographic changes, the demand for healthcare will increase in Europe over the next few decades, while the number of people available to provide care will decline. In the Netherlands, the percentage of the overall population accounted for by people in the twenty to sixty-four age category will decrease from 62 per cent in 2003 to 54 per cent by 2040.

The combined effects of these demographic changes will have major implications for healthcare in many European countries. In the Netherlands, a country that in the coming decades will experience contraction of the younger population and population ageing to an extent that is above-average but not extremely so, it is calculated that the ratio of all people aged fifteen to sixty-five to the total number of people aged sixty-five or older affected by dementia will go down from 63:1 in 2000 to 27:1 by 2050.[136]

5.1.2 Increase in chronic illness

As a result of population ageing and contraction of the younger population, the prevalence of numerous chronic conditions will rise considerably over the coming decades. It is calculated that in the Netherlands between 2000 and 2020, assuming population growth of 10 per cent, the prevalence of conditions such as coronary heart disease, stroke, chronic obstructive lung disease, arthritis and diabetes mellitus – all of which were already among the top ten contributors to disease burden in 2000 in terms of DALYs (disability adjusted life years) – will rise by between 35 and 55 per cent.[24] Similar increases are expected in the prevalence of dementia (see also 5.1.1.), Parkinson's disease, heart failure, sight impairment and deafness.

However, it is not only conditions associated with advanced age that will become more common. The international epidemic of childhood obesity is also a major cause of concern.[137] Over the last few decades, a dramatic rise in the prevalence of childhood obesity has been seen in the UK: there was a two to three-fold increase in the percentage of four to eleven-year-olds who were obese between 1984 and 1994.[137,138] In the Netherlands too, the percentage children affected by obesity has risen sharply, from 0.5 per cent of boys and 0.4 per cent of girls in 1980 to 0.9 per cent and 1.5 per cent, respectively, in 1997.[139] It may be assumed that this trend will continue into the future.[138]

Another important development is that it is nowadays much more common for children with illnesses such as leukaemia and other forms of childhood cancer, cystic fibrosis and Duchenne's disease to recover or to survive for an extended period. In the United States, roughly one in every 640 adults aged twenty to thirty nine in 1997 was a survivor of childhood cancer.[140] As more children benefit from the increasingly effective treat-

ments for childhood cancer, the percentage of long-term survivors in the population will gradually increase. However, it has become clear in recent years that a substantial number of these people will for decades be affected by conditions – some of them permanent – associated with their illness and its treatment, such as recurrence of the primary cancer, treatment-related secondary cancers, cognitive impairment, heart problems, abnormal growth and maturation, infertility, vision problems and hearing loss.[140,141]

Population ageing and the increasing tendency for older people and the chronically ill to wish to remain independent for as long as possible will increase demand for primary care in general and for complex care, home care and lay care in particular. In parallel with these developments there will be a growing need to focus on health promotion and illness prevention for older people, and on research aimed at identifying ways of maximising what can be achieved in this field.

5.1.3 Mental disorders

Generally speaking, there is no reason to expect that the prevalence of mental disorders will increase significantly in the next few decades. Age-related dementia is likely to form an exception in this regard. It is estimated that, by 2020, one in every forty-four Dutch people will be an older person affected by dementia; in 2000, the figure was still only one in ninety-three.[136] However, even if they do not increase in prevalence, mental disorders will in the future represent a very considerable burden on the healthcare system and an important challenge for primary care. According to WHO estimates, in those European countries that have very low mortality rates (i.e. most EU states), neuropsychiatric conditions accounted for a greater population-level disease burden (expressed in DALYs) than any other category of condition. Roughly two thirds of this involved depression, alcohol abuse or dementia. The disease burden attributable to these three conditions was greater than that associated with all cardiovascular conditions together.[142] In the Netherlands, anxiety-related disorders, alcohol dependence and depression were among the nine conditions giving rise to the greatest disease burden in 2000.[24]

As well as bringing a considerable disease burden, mental disorders are problematic in the context of primary care largely because of the extent to which they go undiagnosed and untreated or under-treated. Of the people affected by mental disorders – in Western countries roughly 20 to 25 per cent per year[143] – about three quarters will visit their general practitioner in that year, but a much smaller percentage of them actually seek help for their psychological problem. The percentage differs for different disorders. In a Dutch study it was found that of those with depression 64 per cent seek help, whereas for anxiety disorders this is 40 and for alcohol abuse only 17 per cent. Overall,

of all people with a mental disorder, only one third cites psychological symptoms or complaints as the reason for consulting their doctors.[144] Partly as a result of this, roughly a quarter of the people concerned are not diagnosed as having a psychological or psychiatric condition. Under-diagnosis tends to be less frequent if patients present with psychological rather than somatic symptoms, if they are familiar with psychological problems, if the problems are relatively serious, if additional psychosocial problems are involved, if functional difficulties are apparent and if the general practitioner possesses good communicative skills.[145] The under-diagnosis of mental disorders by general practitioners has been investigated in connection with conditions such as anxiety,[146] depression,[147] somatisation,[148] dementia,[149] and alcohol dependence.[150]

Where less serious self-limiting conditions are concerned, the consequences of under-diagnosis are not particularly far-reaching. In a proportion of cases, however, prompt diagnosis is important, since the cases concerned involve conditions that clearly benefit from proper treatment. In such cases, under-diagnosis can lead to medical overconsumption (somatic diagnosis, repeat visits), morbidity, accidents, aggression, sickness absenteeism and impairment of the effectiveness of treatment if ultimately given.[151] An international comparative study revealed that, in Germany and the Netherlands in the mid-1990s, even in cases involving serious psychological conditions, where the necessity of treatment was generally recognised, a third of patients received no treatment at all; in the other countries involved in the study (Canada, Chile and the USA) the situation was even worse. The serious cases least likely to receive treatment were those involving young, poorly educated males.[143]

Primary care can make a major contribution to improved diagnosis aimed at optimised treatment opportunities. It should seek to reduce under-diagnosis or tardy diagnosis in cases involving conditions whose early diagnosis is linked to better prognoses, and to promote watchful waiting where early intervention is undesirable. Success in this area will depend on the adoption of a multidisciplinary approach and on good interaction with secondary care, together with special in-service training where appropriate.

5.2 Socio-cultural developments

5.2.1 Individualisation and rising expectations

Individualisation, the growing autonomy of the individual relative to his/her immediate environment, is a socio-cultural trend evident in all Western countries.[152] People feel less bound by tradition, which is consequently losing its power to create uniformity. Modern citizens are much more inclined to organise their life according to personal preference.[103] One way in which this has found expression in society has been the rise of alternatives to the nuclear family (i.e. a married couple with children); these include the

one-parent family, the single-person household, cohabitation without marriage and voluntary childlessness.[103]

At the same time, people all over Europe are becoming more prosperous and average education levels are rising.[153] In 2002, some 75 per cent of twenty-five to thirty-four-year-olds had completed upper secondary education, while only 50 per cent of fifty-five to sixty-four-year-olds had done so.[153] Between 1995 and 2002, the percentage for the adult population as a whole (i.e. everyone aged twenty-five to sixty-four) rose from 55 per cent to 65 per cent.[154]

Individualisation, better education and increasing prosperity are associated with changes in the demand for healthcare. In general, the better educated and more wealthy are healthier. At the same time, they also become more and more like discerning consumers, who want to know what is available on the market and are inclined to critically assess the value of their purchases. Modern, self-confident patients have ready access to medical knowledge, particularly via the Internet, and therefore expect good comprehensible information from their care providers. They also want the decisions that are made concerning the nature of the care provided and the process by which it is provided to reflect their personal preferences. Patients have become more emancipated: they are more opinionated than previous generations with regard to what constitutes good care and more insistent that their voices should be heard.

So, what do patients expect from primary care? A European study of patients' priorities with respect to general practice care has shed some light on this matter. Patients in the UK, Norway, Sweden, Denmark, the Netherlands, Germany, Portugal and Israel apparently have a number of common priorities: getting enough time during the consultation, quick service in emergencies, confidentiality of patient information, openness concerning their illnesses, the opportunity to talk about their problems, regular in-service training for general practitioners and the availability of preventive services.[155] Recent Dutch studies found that, where primary care was concerned, patients frequently expected the following: the freedom to choose their own care provider, good information about care options, a respectful attitude from those involved in care provision, short waiting times, the rapid availability of medical data to appropriate care providers, access to care outside surgery hours, a single point of contact, more influence over their own treatment and better utilisation of their own expertise.[156,157] Interestingly, in another Dutch study, it was found that people's expectations with respect to their general practitioner have decreased as far as common, self-limiting diseases are concerned.[63]

The emancipation of the clientele is in itself a positive development, but it does bring certain drawbacks. What patients expect from the healthcare system is sometimes unrealistic, either by scientific possibilities, by professional standards of good care, or by social standards of collective affordability. This situation, which is to a certain extent unavoidable, places pressure on the healthcare system, which has to work hard to create

clarity regarding what it can and cannot do for its users.[158] It also emphasises how emancipation has important implications for the patient, who has acquired the obligation to conduct him/herself as a 'good patient'.[57]

The effects of individualisation and emancipation will become particularly apparent in the field of long-term care for the elderly. In conjunction with population ageing, higher expectations on the part of older people and changed family structures will fuel the demand for a broad range of high quality long-term care services.[159]

Tomorrow's patient will not be the same as today's. New values, preferences and life styles are developing and providing a basis for the definition of new group identities. People have ever-higher expectations regarding the quality of life, including the quality of health and health perception. These expectations go beyond remaining healthy for as long as possible, and include the enhancement of physical and psychological well-being when free from illness.[160] In all these areas, patients increasingly see themselves as independent partners in the decision-making process. The challenge for primary care is to ensure that it has the expertise and care methodologies in place to respond to this changing situation.

5.2.2 *Diversity*

Ethnic and cultural diversity will increase in Europe over the decades ahead. In the Netherlands, the proportion of the population with non-Western origins will increase from 10 to 14 per cent from 2003 to 2020, with people of Turkish, Moroccan, Surinamese and Antillean descent forming the largest non-indigenous groups.[161] By 2016, 40% of all residents of the large Dutch cities will be of non-Western origin.[162] This will have implications for the issues and health problems presented to primary care.

Within the countries of Europe, there are major socio-economic inequalities in the likelihood of suffering illness and premature mortality.[163,164] On average, people of high socio-economic status remain in good health twelve years longer than people of low socio-economic status.[164,165] Socio-economic health inequalities, particularly with regard to life expectancy, are more likely to increase than to diminish as time goes by, because mortality rates are falling more quickly in the higher socio-economic groups than in the lower groups.[164]

It is important that care remains aligned with the needs of particular groups. Increasing understanding of how differences in ethnicity, culture, socio-economic status, age and gender influence health must be put to good use.[166] In order to make adequate diagnoses, for example, care providers need to be aware of group-specific problem and morbidity patterns, while an understanding of important cultural differences is necessary for good communication and information provision. Furthermore, the fulfilment of prevention and public health tasks depends on knowledge of the particular risks associated with

certain social circumstances. The Committee believes that practice-relevant evidence and insights generated on the basis of this diversity perspective should be an integral element of the training given to care providers and of the guidelines and standards for good primary care. The importance of further knowledge development in these fields is increasingly reflected in the European framework programme.[167] Finally, it may be expected that greater consideration for diversity will tend to promote international orientation and exchange in the field of care.

5.3 Safety, quality and public accountability

Over the past several decades, concerns about the quality of healthcare and the performance of healthcare professionals have arisen in most developed countries.[48] These concerns relate to various aspects, including the safety of the care,[168-171] variations in the provision of care that cannot be explained by patient characteristics or preferences,[172,173] adherence to the guidelines for good care,[174,175] the coordination of care provision, alignment with patients' wishes and communication between care providers and patients.[42,176,177] The long waiting lists that exist in many EU countries, particularly for non-urgent surgery, are also a cause of concern.[159,171]

Because of concerns regarding the safety and quality of healthcare, there is increasing pressure on healthcare institutions and care providers to give governments, healthcare funders and the general public more insight into the quality of the care provided. Around the world, numerous programmes have been developed to measure the quality of performance in primary care and in other fields.[48,174,178-180] The push towards greater transparency concerning the quality of healthcare will fuel further efforts towards the provision of valid and user-friendly information, accessible via the Internet and other media, regarding the quality of the care provided, in terms of safety, process quality, outcomes and patient satisfaction. The public demand for information on the quality of primary care has implications for the way information is recorded and made available by primary care teams, and for the way in which care provision relationships come into being.

5.4 Information technology

The growing possibilities offered by and wider availability of information technology will have a profound effect on healthcare in the decades ahead. The speed and impact of IT-related developments depend on a variety of factors and are difficult to predict. Nevertheless, it is clear that IT will open up numerous opportunities for primary care.[176,181]

First, there will be enhanced scope for communication between patients and care providers. E-mail provides a medium for asynchronous communication, encourages

informal written expression and has the advantage that messages are automatically stored in a readily retrievable manner.[182] Video and audio/voice connections will make face-to-face contact possible between two or more people, irrespective of the physical distance between the individuals concerned. The exchange of large volumes of information, such as monitoring data and treatment instructions, will be more and more straightforward.

The same technical developments will open the way for communication amongst care providers and amongst patients. This will allow for the emergence of new forms of cooperation and new types of relationship between care providers, as well as new forms of exchange and mutual support set-ups for patients. It will also become much easier to bring specialist expertise into the primary care setting.

Development of the Internet creates opportunities for the storage and immediate retrieval of patient data created and/or required at different times, at different places and by different automated and human actors, including the patient him/her self. Patients will want to be involved in the management and use of their electronic medical (or multidisciplinary) records. Increased opportunities for recording and cross-referencing patient data are potentially advantageous not only for individual patient care, but also for community diagnosis and intervention. It additionally opens the way for the generation of information about the quality of the care provided, which can then be made available to both care providers and other parties.

Automated systems can enhance the safety and effectiveness of treatment by generating reminders and warnings, e.g. when a possibly erroneous pharmaceutical prescription is made out.

For patients and care providers alike, the Internet is a readily accessible and inexhaustible source of knowledge. Before long, there will cease to be a distinct ‘web generation’, as people of all ages will be familiar with the Internet. Everyone will have access to enormous amounts of information about health and illness. Internet can be used as a vehicle for health education, for the dissemination of guidelines and decision-support systems for care providers and patients, and for the exchange of experiences within groups of people affected by unusual or less unusual conditions.

Although IT offers primary care endless opportunities for increasing safety, effectiveness, patient-orientation, timeliness and efficiency, it is also a source of danger with regard to matters such as privacy and confidentiality, fraud, abuse and software or hardware flaws. Intensive coordinated effort from numerous different parties will be necessary in order to make proper use of the opportunities IT will bring.

Primary care needs to anticipate the developments in the field of ‘e-health’, in a technical sense, but also in terms of their significance for the nature of the care provided.

5.5 Scientific and technological developments

Increasingly rapid scientific progress brings the prospect of new prevention and care possibilities in fields such as genetics, cardiovascular disease, replacement medicine, the neurosciences, the identification and treatment of cancer, and mental healthcare. It is important that primary care providers remain abreast of such developments, if they are to perform their 'navigation' function properly. This places ever-greater demands on care providers' undergraduate and postgraduate training and continuous (para)medical education.

5.5.1 Genomics

In the decades ahead, growing scientific understanding of the role that genes play in the development and progress of many different diseases will have an enormous influence on healthcare. Genomics will make much more possible in terms of diagnosis and prognosis and open new horizons in fields such as pharmacotherapy, gene therapy, stem cell therapy, the implantation of modified cells from the patient's own body, vaccine development and so on.[183-186] However, it is difficult to predict which new techniques will prove successful, or to say how soon or in what way they will be introduced to the field. Pharmacogenetics, for example, has already yielded practical results, but in many cases its application looks set to remain a specialist activity, since the relevant genetic variations are quite unusual. Until now, other practical applications are rare, because the correct doses of medicines such as antidepressants are determined by trial and error, without utilising the available pharmacogenetic insights.

It seems likely that the implications for primary care will mainly be in the fields of diagnosis and prognosis and, in particular, the provision of related health information.[187] We are already seeing the transfer of fully developed diagnostic techniques from specialist genetic centres to general hospitals and on to primary care. Furthermore, in various ways, patients are being made aware of the role that genetic factors play in illness and of the availability of genetic tests. The information they are acquiring, from the Internet and elsewhere, is prompting them to ask questions, which will initially be addressed to primary care providers.[188]

One of primary care's important roles is providing information to prospective parents about the genetically determined risks involved and advising them about the related tests and possible ways of influencing such risks prior to conception or during pregnancy (e.g. use of folic acid). In the context of reproduction medicine, some innovations based on genetic knowledge are already available, such as risk assessment tests, followed by confirmatory invasive tests, prenatal tests for many monogenetic disorders,

and pre-implantation genetic diagnostics.[189] Other innovations are currently under development, including preconception carrier couple screening for cystic fibrosis and haemoglobinopathic conditions, such as sickle cell disease, and new neonatal screening tests.[190] However, it is sometimes not until later in life that questions arise concerning hereditary illnesses such as familial hypercholesterolaemia and hereditary forms of cancer. It is important that primary care providers are familiar with the diagnostic tools that exist, including their limitations and implications, and are aware of the circumstances under which family history and referral to a clinical geneticist are indicated.

It is not yet clear whether genetic knowledge will also be put to practical use in connection with common conditions in which genetic predisposition is less important, i.e. multifactoral illnesses, such as the seemingly non-hereditary forms of cancer, cardiovascular disease, asthma, diabetes, depression and arthritis. It is increasingly possible to determine a person's genetic susceptibility to such conditions, and this may lead to a better understanding of the interaction between genetic and non-genetic factors in their development. The Committee is unable to predict how quickly greater insight might result in the identification of new ways of influencing the risk of developing the relevant conditions, such as pharmacological intervention, modification of nutritional patterns and appropriate career and lifestyle decisions, to supplement the existing options, such as not smoking, a healthy diet and physical exercise. However, it may be assumed that any developments in this area will have implications for primary care.

Overall, the effect of the rise of genomics will be that, in addition to traditional diagnosis undertaken primarily in response to demands for care, interest is likely to grow in so-called 'diaprognostics', which is not necessarily problem-related.[187] Primary care teams will need to be able to deal with the new medical and ethical issues involved, and to provide the relevant information.[189] This will present new challenges in terms of cooperation with the various specialist fields.

5.5.2 *Home care technology*

The emergence of home care technology – technology that enables patients to remain in their own homes for as long as possible or to return home as soon as possible after a period in a care institution[191] – is not only a scientific and technological development, but also a socio-cultural development. Home care technology caters for the general wish to be able to live where one chooses, also when one is ill – which usually means at home, rather than in a hospital. Considerable further impetus for its development has come from the efficiency-motivated efforts made in many countries to reduce the length of hospital stays.[191]

Technologically speaking, the most important development in this field has been the introduction of sensors capable of measuring pressure, moisture, movement, location,

physiological parameters such as blood pressure and ECG, concentrations of substances such as glucose and oxygen in the blood and quantities of urine and faeces. When integrated with information technology, these sophisticated sensors offer enormous potentials for monitoring patients. The provision of home care is also facilitated by the ever more widespread use of PCs, handheld computers, the Internet, web browsers, image and audio/speech connections. Other factors that have contributed to the trend are miniaturisation (which has enabled the development of various portable energy-efficient appliances), and the improvement and standardisation of user interfaces and operating systems. These technological developments have opened the way for various home-based monitoring applications, including heart failure monitoring and pregnancy monitoring. In addition, a variety of technologies for body function support and treatment have entered use, including systems for respiration, dialysis, blood transfusion and the intravenous administration of antibiotics and chemotherapy drugs.[191]

The introduction of home care technology implies new opportunities and duties and a redistribution of responsibilities for patients, lay carers and professional care providers. Widespread use of home care technology can be very helpful in the context of accommodating the increasing demand for long-term care by making efficient use of scarce care providers. It may also be expected that self-monitoring, Internet contact, telemedicine and decision-making support will encourage patients with chronic conditions to live more independently. Possible drawbacks of the trend towards home care include the burden placed upon lay carers and the pressure that patients and lay carers may feel to make use of the opportunities for care in the home, even if they would prefer admission to a healthcare institution for whatever reason.[160,191]

Increasing use of home care technology will mean the transfer to primary care of responsibilities in the fields of monitoring, body function support, treatment and nursing, which have hitherto belonged almost exclusively to the specialist sector. It will therefore be necessary for care providers to acquire new knowledge and skills, and for new forms of cooperation to be developed so that primary care providers are able to work with one another and with patients, lay carers, specialist nurses and other specialist carers and the suppliers of equipment and other resources. The new relationships inherent in the application of home care technology raise numerous organisational, legal and ethical questions.[160,191] Primary care has an important role to play in addressing these questions.

5.6 Preparedness

Both political decision-makers and the public are increasingly concerned about the prevention of or rapid and appropriate response to disease outbreaks and disasters. In primary care, this implies mainly the ability to quickly pick up unusual illness patterns that

might be indicative, either of an outbreak of unknown aetiology, or of bioterrorist activity.[192-194] In that matter, primary care registration networks can make a valuable contribution. However, it is also necessary for primary care to be able to respond flexibly and effectively to disasters of various kinds, partly with a view to preventing long-term consequences as far as possible. Although the practical possibilities for preparing for very unlikely and unpredictable events is limited, primary care, as the first echelon of professional care, can contribute by up-to-date knowledge and by ensuring that its organisational status is adequate, and that it is properly positioned in the context of local disaster plans. Naturally, close cooperation on these matters is required with other experts and organisations within the healthcare system and beyond.

5.7 Workforce

The dynamics of the developments that are likely to affect primary care over the next fifteen years are not easy to predict. However, it is important that primary healthcare is sufficiently professional and well organised to be able to cope with the anticipated diversification and changes in the patterns of demand and expectation. Concerns exist, however, regarding the reduced levels of job satisfaction within the healthcare sector, the increasing frequency of burnout among care providers,[195-200] and the shortages of care personnel – both nationally, as where nurses are concerned, and regionally, as seen in the staff shortages in rural areas and low-income inner city areas.[171]

In the EU, the countries most seriously affected by shortages of nurses are the UK and the Netherlands.[159] In the Netherlands, problems are most likely in the provision of care for the elderly, a field in which three quarters of all care personnel are employed. Demand for care personnel is expected to rise by 11 per cent between 2003 and 2007, while the supply is unlikely to increase by more than 6 per cent.[201] In addition, the Netherlands is confronted with a shortage of general practitioners.[202,203]

Sickness absenteeism, which the people involved report to be often work-related, significantly diminishes the availability of nurses and other care personnel. Another problem is that many people leave these professions at a relatively young age. The reasons most often cited for seeking work in other sectors of the economy are lack of personal development opportunities and career prospects.[201]

5.8 Conclusion

In the decades ahead, European healthcare in general and primary care in particular will be challenged by major demographic, epidemiological, socio-cultural, societal, scientific and technological developments. The Committee takes the view that, in principle, primary care, as it developed during the second half of the 20th century, taking current

innovative developments into account, is well-equipped to meet these challenges. However, a determined policy and adequate investments are indispensable to strengthen European primary care and to guarantee the availability of a motivated, well-educated, strong and flexible primary care workforce that is equal to its task. In this spirit, in the next and final chapter, the Committee formulates its recommendations for the future.

Chapter 6

Strengthening primary care

In this chapter, following on from the matters highlighted in the preceding chapters, the Committee identifies what it sees as the characteristics that a primary care system should possess in order to be able to meet the challenges the future will bring. In addition, a number of points made earlier in the report are recapped and linked to recommendations for the future. The Committee has restricted itself to recommendations of a general nature, considered to be of international relevance and therefore important for primary care within Europe.

6.1 General characteristics of good primary care

In the Committee's view, efforts to achieve good primary care should be geared to the profile outlined in the following.

Primary care is generalist care, consisting of general medical, paramedical and pharmaceutical care, nursing and supportive care, and non-specialised mental and social healthcare, together with preventive and health-educational activities linked to these forms of care. The care is aimed at patients staying at home and is provided as close to the patient's home as possible and, if necessary, at the patient's home. Furthermore, it is accessible to all, irrespective of the nature of their health problems. The system is able to respond to urgent cases, providing immediate access where necessary. The system also realises continuity in responsibility and accountability with regard to prolonged care, guidance and preventive initiatives. Primary care is focused primarily on providing care for help-seeking patients, but has a proactive responsibility in relation to both individual

and group-oriented preventive activities aimed at promoting health in the local (practice) population.

Primary care is provided where necessary by different care providers working together on a coordinated basis within primary care and, if indicated, with secondary care. The cooperation between primary care providers in various disciplines is structured and is aimed at optimal patient care and prevention. In this context, primary care providers work in teams, even though they will not always operate from a single establishment. The key point is that they work together in the context of a well-organised professional network, as closely as needed, depending on the particularities of the individual patient problems at issue.

Adequately functioning primary care is capable of successfully diagnosing, addressing and treating most of the health problems with which it is presented. It is also capable of showing patients the way through an increasingly complex healthcare system and providing the necessary guidance along the way, in the form of navigation, cooperation, referral where appropriate and follow-up care, thus promoting the overall quality and efficiency of healthcare.

Recommendation:

- *In view of the importance of good primary care for Europeans, the Committee recommends to explore, in a European context, where within Europe there are problems in this field and how these problems can best be addressed. Particular attention should be given to promoting structured multidisciplinary cooperation in primary and integrated care.*

6.2 Between self-care and specialist care

Throughout the years, the extent to which people try to cope with health problems without seeking professional assistance has remained remarkably stable. In the great majority of cases, people sort their problems out themselves.[8-10,12,14-17,19] This phenomenon is apparent in all countries. Self-care and lay care generally play important roles.

When professional care is sought, primary care in the various countries is able to deal with most of the health problems presented to it: more than 90 per cent of cases can be resolved within primary care, i.e. without referral to a specialist.[14-17] By careful diagnosis and selective referral, it is possible to greatly limit the percentage of patients that need to be passed on to specialist carers.[37] Hence, a functional primary care system is very important for the effectiveness and efficiency of the healthcare system as a whole.

With the self-care potential of the European public and the sustainability of care systems in mind, it is particularly important that existing levels of self-care and lay care are maintained and increased where appropriate. Factors such as population ageing, the

increasing prevalence of chronic illness and a possible contraction of the support-base for home care (smaller families, increased social and physical mobility of offspring) mean that this issue will require particular attention. Priority should also be given to the maintenance and further development of primary care's problem-solving capabilities (which research has shown to be considerable (Chapters 2 and 3)).

Recommendation:

- *The Committee suggests identifying (potential) threats to self-care and lay care, and developing targeted supportive interventions where appropriate. Such interventions might focus on, for example, families, the local community, professional care, new routes of communication between patients and lay carers and professional care providers, and flanking social and housing policy.*

6.3 Nature of the care provided

Patient-centred care and recognition of the patient's personal responsibility are inherent aspects of primary care, which works on the basis of problems directly presented by the patient. Since the 1960s, this approach has been developed academically and reflected in the methods used in general practice and in the training given to general practitioners around the world.[4,28,71] A similar situation prevails in other primary care disciplines. As a result, primary care is able to accommodate the expectation amongst patients that they should make their own decisions, with the primary care provider supplying supportive information about relevant options.

Being patient-centred implies that primary care should be able to respond appropriately and professionally to the questions and health problems presented to it by patients, engaging specialist help or giving advice regarding such help where necessary. As in other fields of healthcare, a solid evidence base is a prerequisite for primary care.[204,205] In the medical and paramedical disciplines, the evidence-based approach – informed and shaped by up-to-date scientific knowledge and insights – is well developed in most countries, with guidelines and standards covering a large part of the field now in place.[175] Because promoting and expediting this trend is important for all primary care disciplines,[40,41] emphasis needs to be placed on maintaining and extending the evidence base. To this end, a great deal of patient-related research is required to provide a basis for professional guidelines for effective and efficient care of high quality. Increasingly, these guidelines should be multidisciplinary, covering both primary and secondary care, and – where prolonged care processes are concerned – programmatic in nature. The preparation and maintenance of a register of evidence-based guidelines available within EU member states is desirable, since it would promote the optimal application of guidelines internationally, as well as mutual learning and evaluation.

Another issue that has rightly been receiving greater attention is patient safety.[168,170] Since the 1970s, primary care has been working hard to counter medicalisation and somatic fixation, as well as to prevent iatrogenic conditions.[60] Peer review has an important role to play in this regard. As well as being consistent with the increased emphasis on patient safety expected by modern society and the associated need for public accountability, peer review provides a basis for further development in these areas. Points warranting particular attention include management of the additional risks and adverse effects arising out of the growing number of people involved in the provision of complex care and the associated transfer processes, plus the anticipation of any risks that might be associated with the introduction of new technologies to primary care.

Proper care has to be provided for acute (urgent) problems, new (non-urgent) problems, chronic somatic and mental illnesses, health problems with psychological and social backgrounds, complex cases (often involving multi-morbidity[25-27]), and health problems in which the societal context (family, housing or work circumstances, etc) plays an important role.[33,44-46] This implies the availability of a close-knit multidisciplinary primary care team, capable of satisfying the requirements regarding generalism and continuity of care. In this context, it must always be clear to the patient which of the individual care providers has primary responsibility for the care made available in connection with a given problem, how one may exercise choice and how responsibilities are divided across the various disciplines.

Individual and group-oriented prevention and information provision is an important field within primary care. Individual-oriented activities are primarily aimed at the prevention or early identification and treatment of conditions for which the person concerned is at increased risk (e.g. risk factors for cardiovascular disease). Group-oriented activities are concerned with identifying special risks affecting particular target groups within the practice population (e.g. young people in deprived circumstances) and with taking related measures, or with risky circumstances that require collective countermeasures (e.g. raised concentrations of fine particulates).[206] Group-oriented, preventive primary care may also facilitate social cohesion in the community. With regard to group-oriented prevention, close cooperation between public health and primary care is critical.[70] Similarly, cooperation between primary care and occupational health is necessary to increase the effectiveness and efficiency of activities designed to prevent long-term sickness absenteeism and occupational disability, and to encourage professional reintegration.

Finally, if primary care is to meet the challenges of the future, it should be able to respond appropriately, in terms of expertise and care supply, to the demographic, epidemiological, socio-cultural, societal, scientific and technological developments which have been sketched in the preceding chapter.

Recommendations:

- *Further development of evidence-based primary care should be encouraged within Europe. The continuous and rapid implementation of new knowledge through up-to-date professional standards and guidelines designed to optimise care should be a high priority, as should undergraduate and postgraduate training and continuous (para)medical education. Increasingly, multidisciplinary guidelines, including guidelines for complex and integrated care, should be developed.*
- *The Committee recommends the preparation and maintenance of a register of evidence-based guidelines available to the various disciplines within Europe, since it would promote the optimal application of guidelines, as well as mutual learning and evaluation. In this context, account should be taken not only of the effectiveness of care, but also of quality, efficiency, and patient safety within care processes.*
- *With regard to the field of individual and group-oriented health information and prevention, the Committee advocates close cooperation between public health and primary care. Similarly, cooperation between primary care and occupational health is regarded as necessary to increase the effectiveness and efficiency of activities designed to prevent long-term sickness absenteeism and occupational disability, and to encourage occupational reintegration.*
- *In terms of expertise and care supply, future primary care needs to respond appropriately to:*
  - *the increasing numbers of older people and people with chronic illnesses;*
  - *the increasing ethnic and cultural diversity in European countries, with emphasis on international orientation and knowledge exchange in this field;*
  - *growing individualisation and patient involvement, combined with increasingly high expectations concerning health and health perception;*
  - *rapid developments in the field of 'e-health' and their significance for the nature and methodology of care provision;.*
  - *the increasing potentials of home care technology, and the implicit redistribution of responsibilities amongst patients, lay carers and care providers;*
  - *the rapid growth of new prevention and care possibilities, with implications for performance of the navigation function;*
  - *the need to improve diagnosis and optimise treatment of mental disorders;*
  - *developments in the field of genetics (giving rise to 'diaprognostics' not necessarily related to presented health problems) and the associated new medical and ethical issues;*
  - *the increasing demand for accountability with regard to the quality of care, which has implications for the registration and provision of information;*
  - *the need to more quickly pick up outbreaks of known or unknown aetiology and to respond adequately to disasters of various kinds.*

6.4 Communication between patient and care provider

A prerequisite of a patient-centred approach is effective communication between the patient and the care provider, with consideration for the patient's needs and the background to those needs, so that the patient can be given accurate and comprehensible information relevant to the decisions that he or she has to take.[42,43,79,82] However, tension can sometimes arise, particularly in primary care with its low access threshold, between patient-centred and evidence-based working methods. A patient may, for example, specifically request a form of treatment whose use is not supported by an adequate evidence base or whose disadvantages (side-effects) appear to outweigh the potential benefits. Under such circumstances, the provision of adequate understandable information and advice based on professional expertise, within the context of continuous personal care, is the best foundation for shared decision-making without compromising patient-provider trust or either party's responsibilities. Hence, mutual trust and the efficiency of care are interrelated. It is therefore particularly important to seek to optimise communication between patient and care provider, providing for proper preparation and support through undergraduate and postgraduate training.[43]

Recommendation:

- *Undergraduate and postgraduate training for (primary) healthcare personnel should pay close attention to (learning techniques that support) optimal communication with the patient, adequate information provision and shared decision-making, including ways of handling possible tension that might arise between patient-centred and evidence-based working methods.*

6.5 Programmatic approach and integrated care

In the care of patients with prolonged or complex problems, for whom primary care is an important first link – and sometimes the last – in the professional care chain, impediments between primary and secondary healthcare can be detrimental to quality and efficiency.[80] Where such patients are concerned, it is desirable to adopt a programmatic, multidisciplinary approach based on the principle of shared care and the use of evidence-based guidelines for the entire chain of integrated care. Where this type of approach is taken, the patient is not really 'referred' by primary care, but retains a degree of contact with primary care throughout the care process. In this way, even when the patient is receiving considerable specialist care, primary care retains its ability to offer appropriate care for 'ordinary' problems and to play a guiding role. Furthermore,

ongoing attention should be given to supporting self-care and cooperating with lay carers in preparation for the period following specialist or in-hospital treatment.

Recommendation:

- *In the care of patients with prolonged or complex problems, it is desirable to adopt a programmatic, multidisciplinary approach based on evidence-based guidelines for the entire chain of integrated care, with primary care retaining an explicit role.*

6.6 Differentiation in cooperation with secondary care

Absolute separation of primary and specialist care is inconsistent with the provision of tailor-made care. Tailor-made care entails the provision of care at the most appropriate level (stepped care) with input from professionals with expertise relevant to the patient's problem. In the context of such care, primary and specialist care can work together in various ways. Referral – the temporary transfer of ultimate responsibility for a case to a specialist (where necessary in interaction with primary care) – is just one of the possibilities. Other options include consultation with a medical specialist or the clinical geneticist in a primary care centre, teleconsultation, joint consultation involving the general practitioner and the specialist within primary care, or joint treatment by the general practitioner and the specialist during a period of hospitalisation.[64,65,187] Optimal alignment of urgent primary and secondary care also requires tailor-made cooperation.[112] The Committee believes that the development of a differentiated system of interaction between primary and secondary care can be facilitated by financial arrangements geared to this end.

Recommendation:

- *The provision of tailor-made care depends on the development of a differentiated system of interaction between primary and secondary care. Insurers and those responsible for financing care in Europe can be instrumental in facilitating the development of such care.*

6.7 Core functions within primary care teams

In view of the general pattern of demand for care, the Committee sees the core functions of primary care teams as follows: general medical, paramedical and pharmaceutical care (with links to specialist medical, paramedical and pharmaceutical care), nursing and supportive care (with links to specialist and institutional nursing), as well as related forms of prevention and health education (with links to public health). Primary care is generalist care, also encompassing non-specialist mental and social healthcare.

The specific competences necessary for realisation of these functions may vary according to local circumstances and needs.[51] Generally speaking, it will be necessary to have general medical competence (general practitioner, possibly supported by a physician assistant), nursing competence (practice nurse, nurse practitioner, general district nurse, specialist nurse),[120,121] physiotherapeutic competence and community pharmaceutical competence.[118,119] It is also important for patients to be able to draw directly on competence in the fields of dentistry and midwifery, and for the primary care team to be able to call upon a community psychiatric nurse, psychologist or social worker as necessary. In some countries, in view of efficiency, opportunities have been identified for further differentiation of tasks in primary medical care. When, for example, within the responsibility of a primary care team, certain patient-related procedures are being carried out by physician assistants and nurse practitioners, general practitioners gain time.[207] The more complex the care that is required, the more different functions – and therefore disciplines – one needs to involve. As more professionals become involved, it is very important that their assistance is made available to the patient on an integrated basis.

As indicated earlier, the close association between the risks encountered in day-to-day life, unhealthy lifestyles and group-specific issues is such that the Committee believes more attention should be given to the relationship between primary care and preventive activities/public health.[70,206] Consideration should be given to delivery of certain public health activities (e.g. implementation of preventive initiatives) in the context of primary care. It would also be advantageous to enhance cooperation between primary care and occupational health in the fields of prevention and supervision.

When deciding what expertise is needed in a specific primary care team, it is important to have access to information about the pattern of presented symptoms and problems and its development over time. The longstanding international experience gained with general practitioner morbidity registration[16,32,44,58,208] may be useful for improving the supply of information relevant to other functions and disciplines.

In this context, it is vital to generally introduce a practical system of electronic multidisciplinary medical records with adequate guarantees concerning the protection of personal data.[209] It would also be helpful to tie in with the growing use of electronic information and communication technology by patients, also prior to visiting a primary care practice. The need for electronic communication between patients and care providers is expected to increase.[181]

It is vital to have effective and comprehensive out-of-hours coverage of medical, nursing and pharmaceutical care and crisis management in primary care, with access to care via various channels (by phone, via the Internet and by e-mail). Out-of-hours coverage needs to provide triage, information, advice and reassurance, based on generalist professional expertise. Access to key information held on a patient's medical file is

important for the provision of appropriate care. In this context, care providers need to make appropriate use of such information and to respect patients' privacy, while patients should be made aware of the importance of care providers being able to exchange information in order to fulfil their duty to provide good quality continuous care.

The Committee favours the regular preparation – with input from patients' representatives – of work plans for primary care teams, covering several years ahead. Such plans, which would take account of local circumstances and the requirements of special groups, for example, ethnic minorities, could serve as a basis for needs-based variations in the allocation of resources. It is envisaged that the work plans would be open to public perusal and should contain information regarding trends in important performance indicators. The plans would provide a basis for control and coordination and a vehicle for external accountability and review.

Speaking about key activities of the primary team, it must be recognised that the more care providers are relieved of bureaucratic and management duties, the more they are able to concentrate on their core tasks. To this end, it would be helpful to create an organisational distinction between management activities and core activities in primary care, possibly at the regional level.

Effective collaboration in the context of a primary care team and the realisation of the associated potential benefits are dependent upon the availability of adequate expertise and the satisfaction of specific preconditions. International research into the determinants of operational success in primary care teams could shed light on ways of providing appropriate incentives in this field.

Recommendations:

- *Although the composition of primary care teams should be geared to local circumstances and needs, the client should have access to the following: general practitioner, nurse/nurse practitioner, physiotherapist, community pharmacist, midwife and dentist. In addition, it should be possible to call in a community psychiatric nurse, psychologist or social worker. Complex care requires an integrated provision.*
- *Consideration should be given to assigning certain public health duties to primary care teams.*
- *Building on the example of the general practice morbidity registers in use in many European countries, steps should be taken to improve the provision of information on other disciplines.*
- *General introduction of electronic multidisciplinary records is desirable. This would also tie in with the increasing use of ICT by patients for health-related and illness-related purposes.*

- *It is necessary to have effective and comprehensive out-of-hours coverage of medical, nursing and pharmaceutical care and crisis management in primary care, properly coordinated with secondary care.*
- *Primary care teams should produce work plans covering periods of several years, to serve as a functional accountability tool and a basis for need-related resource allocation.*
- *With a view to relieving care providers of administrative duties, consideration should be given to the organisational separation of management activities, possibly on a regional basis.*
- *International research into the determinants of operational success in primary care teams, including team composition, skill mix, and division of tasks, is desirable.*

6.8 Registration and gatekeeping

Across Europe, considerable differences exist in the organisation and positioning within the healthcare system of non-specialist care provided outside a hospital setting. Nevertheless, to a certain extent, all EU countries have primary care with broadly similar characteristics: relatively good access, a generalist profile, continuity of care, and multidisciplinary cooperation. But there are also important differences (Chapter 4). In some countries, all persons are registered with a primary care facility. Furthermore, in a number of countries primary care acts as a gatekeeper with regard to access to secondary care; in others, however, there is no formalised relationship between patient and primary care, or patients have free access to specialists. As indicated in Chapter 3, scientific research into the structural determinants of effective and efficient care has indicated that a well-organised primary care system is advantageous. The gatekeeper function is one of the key determinants in question.[6,55] More prospective comparative research is necessary to provide more detailed observations regarding the specific influence of gatekeeping.

If the quality of the care provided is good, patients will of their own accord wish to maintain long-term relations with their primary care teams. However, the Committee believes that universal registration with a primary care team has benefits for continuity of care, prevention and the creation of conditions conducive to scientific evaluation. If a primary care team works with a and well-defined population or community, the team's work plan, as a joint responsibility, can be closely aligned with the needs of the local population. If the input required from each of the various disciplines is provided by more than one person, opportunity is retained for the patient to choose his or her care provider. The Committee considers a registered population of ten to fifteen thousand sufficient to provide the necessary scale without creating drawbacks. A population of this size should ensure that enough care providers are available to ensure continuity of

care, while allowing the care providers to remain individually familiar to the practice population and retaining the desirable community orientation. Variation in size should of course be possible in relation to population density and particular deprivation-related problems.

Whether primary care has a gatekeeper function or not in a specific country, it is important that adequate guidance and triage are available to patients with respect to, for instance, the use of specialist expertise. The provision of such guidance and triage – or 'navigation', what the Committee considers an appropriate term for this function – is one of the key competences of generalist care and a factor in the continuity of care. It is anticipated that, as the range and complexity of available (sub)specialist forms of care increase, navigation will grow in importance and be recognised as a valuable contributor to effective and efficient care.

In various countries where primary care has thus far not performed a gatekeeper function (e.g. Germany and Belgium), reorientation is currently taking place and comparative research is being carried out to identify the most appropriate organisational arrangements. In addition, experiments are underway allowing a choice between different arrangements of care.

Recommendations:

- *Registration with a primary care facility has benefits for the continuity of care, for prevention and for scientific evaluation, and therefore the Committee recommends that registration should be made available as an option in countries where this system does not currently operate.*
- *For related reasons, primary care teams should preferably work with well-defined populations or communities. The Committee favours a registered population of ten to fifteen thousand, with possible variation in line with population density and local problems.*
- *As care becomes more complex, patient guidance and navigation should increasingly be seen as core competences of generalist care provision.*
- *In view of both the differences and similarities of primary care across Europe, the Committee recommends to stimulate international comparative research on the determinants of effective and efficient (primary) healthcare within Europe.*

6.9 Preconditions

The Committee identifies a number of points that are of importance, in addition to what was said about a management structure that relieves the administrative burden from care providers, gatekeeping, and registration with a primary care facility.

- Professional education and postgraduate training should actively promote multidisciplinary cooperation. To this end, consideration should also be given to joint training in common topics and training in the basic principles of team and network organisation. In this context, the international exchange of trainees within Europe would promote mutual learning.
- Effective arrangements should be made for the organisation and funding of practice-relevant scientific research,[210] as well as guideline development, implementation, evaluation and maintenance (quality monitoring and promotion). To this end, targeted funding from the European Commission would be valuable, with the emphasis on international cooperation.
- Forms of governmental regulation aimed at monitoring and promoting the quality, coherence and accessibility of care are very important for efficient and sustainable primary care, community-based primary care, and the coordination of the responsibilities of government, health care professionals, and patients/consumers.
- It is necessary to have a funding system that will enable primary care to meet patients' care needs into the future. Where the wish is to introduce regulated market mechanisms, consideration should be given to the extent to which planned initiatives promote accessible, patient-oriented, evidence-based, effective and efficient primary care. The Committee anticipates that incentives for care providers geared to the promotion of such care will be more effective than and medically preferable to financial incentives for patients.[211] Cooperation in the context of teams serving populations of an appropriate size can be encouraged by funding arrangements, as experience in the United Kingdom has demonstrated. Given the importance of continuity of care, of a community orientation in care and prevention, and of stimuli supporting the quality of care, the Committee takes the view that a capitation system, with additional incentives for good practice, is a promising option which needs to be further explored.
- The potential benefits of financial incentives directed at primary care practices and practitioners should be carefully weighed against potential risks: strategic behaviour of care providers, the crowding out of intrinsic motivation,[212] and the undermining of trust of patients.[213] The Committee recommends prospective comparative research to fully evaluate the effects of different ways of funding primary care and remunerating primary care providers.

Recommendations:

- *Professional education and postgraduate training should actively promote multidisciplinary cooperation, and an international trainee exchange programme within Europe is encouraged.*

- *The European Commission should provide targeted funding for primary care practice-related scientific research and quality promotion, with emphasis on international cooperation.*
- *Prospective comparative research should be conducted to evaluate the effectiveness of various methods of funding and remunerating in promoting quality, coherence, accessibility, efficiency and sustainability of primary care.*

6.10 Workforce

As outlined in Chapter 5, to meet the challenges of the future such as ageing and scientific innovation, the composition of the primary care workforce must be sufficiently strong, the talent available must be properly utilised, good career prospects must be offered and there must be scope to combine a career in healthcare with a rewarding private life. An important consideration in this context is that in well-organised primary care teams part-time working is possible without compromising the continuity of care.

Recommendation:

- *The capacity of Europe's primary care needs to be kept in line with the increasing numbers of older people, people with chronic illnesses and those in need of complex care or home care, as well as with the need for prevention and health promotion. The composition of the primary care workforce can be optimised by utilising the available talent and providing adequate career opportunities.*

6.11 A European scenario

As the Committee considers the recommendations made in the previous sections to be relevant in a European context, it is important to pay more specific attention to primary care development in a EU-perspective. Except where its public dimension is concerned, healthcare is not formally the subject of community cooperation within the EU. Nevertheless, the free movement of people and services in the private sector makes primary care more sensitive to intra-European international developments than the hospital care sector. Although it is mainly in border areas that primary care is affected by such developments, it is quite conceivable that strongly increasing mobility in everyday life will bring about a gradual convergence of primary care provision within Europe. There may also be convergence in terms of the nature of the care, influenced by factors such as the European policy on the licensing of pharmaceutical products, the increasingly intensive cooperation and exchange between European organisations representing carers and patients, scientific cooperation, and European cooperation in the field of quality of care, standards and guidelines for good primary care. Hence, while traditional cultural differ-

ences will remain apparent, it is to be expected that an international standard of care based on the best available evidence will become more clearly defined as time goes by. Furthermore, a number of rulings by the European Court of Justice[214] suggest that there is likely to be a degree of international convergence in the field of health insurance, dependent on the extent to which people do actually seek to obtain care in other European countries. In terms of anticipating such developments from a policy perspective, a significant step has been made by the Ministers of Health of the EU Member States in connection to the conference 'Shaping the EU Health Community' held in The Hague in September 2004. At the Informal Health Council considering the results of that conference, the Ministers have emphasised the importance of creating more synergy in health care policies, and have expressed the ambition to invest in primary care and community based care.[215]

In the Committee's view, priorities are, firstly, an effective and efficient system of care for the protection, maintenance, and promotion of health in Europe, and, secondly, the availability of real choice for European citizens/patients in the field of primary care, based on the adequate and open provision of information regarding accessibility, quality and efficiency of care. Given these priorities and in view of what is known about the value of guidance/navigation by primary care and of the registration of patients with primary care teams or networks, the Committee holds the view that these modalities should be made generally available as options within the European care and insurance system. The principal justification for organising primary care along the lines indicated would be enhanced quality of care, for which the European authorities may consider themselves partly responsible. In this context, it is vital to have, in principle, closed circuits of facilities and services, to which the patient is referred in accordance with an integrated care model. The patient would then choose a primary care team in the context of an integrated care circuit, thereby giving up his or her complete freedom to select care providers outside the chosen circuit, in the interests of quality, continuity and efficiency of care. Naturally, the exclusion of external providers would not be absolute, insofar as it would have to be possible for people to turn elsewhere for assistance under special circumstances (e.g. when away from home). Furthermore, each care circuit would normally need to include more than one care provider per discipline, so that a degree of choice remained. This would generally not represent any curtailment compared with the amount of choice in many existing systems, which are subject to inherent geographical constraints. If and insofar as it might be concluded that such arrangements are inconsistent with the free movement of services, it would be necessary to develop a special EU policy covering this area in order to enable the relevant modalities in the various member states. Such a policy would need to be designed to enable countries whose systems already feature the modalities concerned to continue on their existing basis. At the same time, the options in question could also be made available to the citizens of other coun-

tries, without jeopardising options currently in use. In addition, this approach would provide good opportunities for prospective, comparative evaluation research.

In a relatively short run, concrete steps to strengthen primary care on a European level could be twofold. First, in the context of the Open Method of Coordination (OMC), a set of indicators to monitor development and quality of primary care throughout Europe can be designed. Such indicators may, for example, address coverage of primary care education in under- and postgraduate professional training, and availability and implementation of evidence-based practice guidelines in the various primary care professions. Second, while implementation of the specific recommendations made is within the responsibility of policy, the professional field, and healthcare insurers throughout Europe, in close collaboration with patients/consumer organisations, the Committee suggests to establish a European Primary Care Forum to facilitate relevant processes on a European level. This forum would provide a unique opportunity for the exchange of experiences, best practices, and programs for innovation, between patients, healthcare professionals, managers and policy-makers. It would enable targeted international consultation and support aimed at the realisation of effective and efficient primary care. In addition, the forum could facilitate the development and adoption of the above-mentioned indicators for development and quality of primary care. Finally, the forum could be an international platform to stimulate the preparation and execution of international comparative research, as suggested in paragraphs 6.7, 6.8 and 6.9. Such research would deepen our insight in the (policy-sensitive) determinants of healthcare performance and outcomes, thereby paving the way for further improving effectiveness and efficiency in primary care.

Recommendation:

- *With the support of the European Commission, an international forum for primary care development throughout Europe should be created and given the remit of:*
  - *providing for the regular and systematic exchange of experiences and programs for innovation between patients, professionals, managers and policy-makers, and for stimulating the dissemination of best practices in primary care provision and policies;*
  - *offering consultation and support as appropriate to any country or area that has particular problems in developing a primary care system capable of serving its intended purpose;*
  - *designing a set of indicators for monitoring the development and quality of primary care throughout the European Union;*
  - *promoting and coordinating international comparative research referred to above.*

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Annexes

Annex **A**

Request for advice

On 29 October 2003, the President of the Health Council received a letter from the Minister of Health, Welfare and Sport (reference CZ/EZ-2422168), from which the following extract is taken:

Dutch healthcare is characterised by well developed primary care. In the near future, primary healthcare will be challenged by a number of developments.

First, several demographic, epidemiological, socio-cultural, scientific and technological developments are taking place which will influence primary care. Population ageing, increasing cultural diversity, growing numbers of people with chronic diseases, growing burden of mental disorders, individualisation, increasing patient participation and involvement of the public will all lead to increasing and changing use of primary healthcare. In addition, medical, scientific and technological advances will make major demands on the system. At the same time, the available manpower is not sufficient to meet the rising demand for care, partly because of the wish to normalise working hours, the growing proportion of general practitioners working part-time and a professional training set-up whose capacity is unequal to these developments. Second, the healthcare systems of the member states of the European Union will inevitably be influenced by the general trend towards European integration. Presently, the position of primary healthcare in some EU countries, such as the United Kingdom and Denmark, is comparable with the position occupied by primary healthcare in the Netherlands. In other countries, including Belgium and Germany, primary care is less well developed. It seems reasonable to assume that, in the future, the EU member states' healthcare systems will gradually become more and more alike. It is not clear what direction this process of convergence will take. For the purpose of long-term policy development, which will involve strategic choices, at both the national and international levels, I want to ask you to inform me about the current level of scientific knowledge regarding

the organisation and significance of primary healthcare, partly in relation to, on the one hand, other forms of directly accessible professional care, lay care and self-care and, on the other hand, more specialist forms of healthcare. In particular, I would like you to include the following questions in your report:

- What are the defining characteristics of primary care and what is the significance of primary care for the general quality of healthcare provision?
- What differences exist internationally in terms of the organisation of primary care in relation to other forms of care, and what significance do these differences have for the general quality of healthcare provision?
- Given current insights, what – in terms of the overall quality of healthcare provision – is the most desirable scenario for the development of primary care within the European Union? Taking EU law into account, which aspects of the preferred development scenario require attention?

Annex **B**

The Committee

- Prof. JA Knottnerus, chair
  Professor of General Practice, University of Maastricht; president of the Health Council of the Netherlands, The Hague
- I van Bennekom
  director, Federation of Patients and Consumer Organisations in the Netherlands, Utrecht
- Prof. EKA van Doorslaer
  Professor of Health Economics, Erasmus University Rotterdam
- Dr CMA Frederiks
  Emeritus professor of Nursing Science, Enkhuizen
- Prof. PP Groenewegen
  Head of Research Department, Netherlands Institute for Health Services Research (NIVEL), Utrecht; professor of Social and Geographical Aspects of Health and Healthcare, Utrecht University
- Prof. FM Haaijer-Ruskamp
  Professor of Drug Utilisation Studies, University of Groningen
- Prof. RA Hira Sing
  Professor of Youth Health Care, VU University Medical Centre, Amsterdam
- Dr JBF Hutten
  Ministry of Health, Welfare and Sport, The Hague, advisor
- Prof. J De Maeseneer
  Professor of General Practice and Primary Healthcare, Ghent University

- Prof. B Meyboom-de Jong
  Professor of General Practice, University of Groningen
- Prof. RAB Oostendorp
  Professor of Allied Healthcare, Radboud University Nijmegen; research director, Dutch Institute of Allied Healthcare, Amersfoort
- Dr AHj van de Rijdt-van de Ven
  management consultant, Eindhoven
- Prof. AH Schene
  Professor of Psychiatry, Academic Medical Centre, University of Amsterdam
- Prof. C van Weel
- Professor of General Practice, Radboud University Nijmegen
- Prof. FCB van Wijmen
- Professor of Health Law, University of Maastricht
- Prof. JW Wladimiroff
  Professor of Obstetrics and Gynaecology, Erasmus University Rotterdam
- Dr JND de Neeling, secretary
  Health Council of the Netherlands, The Hague

The Committee gratefully acknowledges the contribution of Dr DMJ Delnoij to chapter 3 and thanks Dr WGW Boerma for his comments on chapter 4.

Annex **C**

International consultants

The Committee acknowledges the contributions of the following persons to the preparation of this advisory report:

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Annex **D**

European Union: background data

Demography, health and health care expenditure. Source: OEDC Health Data 2003.

	Total population in thousands*	Population aged 65 years old and over - % of total population[a]	Life expectancy Females at birth[b]	Life expectancy Males at birth[b]	Total expenditure on health % GDP[a]	Tobacco consumption - % of population who are daily smokers[a]
Austria	8130	15.5	81.2	75.4	7.7	29.3[h]
Belgium	10287	16.9	80.8	74.6	9	28
Czech Republic	10268	13.8	78.4	71.7	7.3	23.5[f]
Denmark	5359	14.8	79.3	74.5	8.6	29.5
Finland	5188	15.1	81	74.2	7	23.8
France	59191	16.2	82.7	75.2	9.5	27
Germany	82350	16.9	80.7[f]	74.7[f]	10.7	24.7[f]
Greece	10964	17.3[e]	80.7[d]	75.4[d]	9.4	35[e]
Hungary	10188	15.2	75.7	67.2	6.8	30.1[e]
Ireland	3854	11.2	79.2	74.2	6.5	27[g]
Italy	57894	18.4	82.4	76.3	8.4	24.1
Luxembourg	442	14	81.3	74.9	5.6[e]	26
Netherlands	16046	13.6	80.5	75.5	8.9	34
Poland	38638	12.4	77.9	69.7	6.3	27.6
Portugal	10299	16.4	79.7	72.7	9.2	20.5[f]
Slovak Republic	5391	11.4	77.4	69.2	5.7	-
Spain	40266	17	82.7	75.5	7.5	31.7
Sweden	8896	17.2	82	77.4	8.7	18.9
United Kingdom	58837	15.9	80.2	75.4	7.6	27

* see for footnotes next page

Health care supply – Density per 1000 population (head counts). Source: OEDC Health Data 2003.

	General practitioners[b]	Practising specialists[a]	Practising nurses[a]	Practising pharmacists[a]	Acute care beds[a]
Austria	1.3	1.9	9.2	0.6	6.2
Belgium	1.4[g]	1.7[g]			4.6[h]
Czech Republic	0.7	2.2[f]	9.1	0.5	6.5
Denmark	0.7	2.2	9.6	0.5	3.3[f]
Finland	1.7	1.4	14.9	1.5	2.4
France	1.6	1.7	7.0	1.0	4.2[e]
Germany	1.1	2.2	9.7	0.6	6.3
Greece		2.9	3.9[f]	0.9[e]	4[f]
Hungary	0.7[f]	2.0	4.8	0.5	6
Ireland	0.5		14.8	0.8	3
Italy	0.9		5.2[f]	1.1	4.3[e]
Luxembourg	0.8	1.7	10.4	0.7	6.6
Netherlands	0.5	0.8	12.8	0.2	3.3
Poland	0.1	1.9	4.8	0.6	5
Portugal	0.5	2.3	3.8	0.8	3.3[g]
Slovak Republic	0.4	1.5	7.3	0.4	5.6
Spain		1.8[g]	6.9	1.0	3.2[g]
Sweden	0.5		8.8[e]	0.6[f]	2.4[e]
United Kingdom	0.6	1.6	9.0		3.9

[a] data from 2001, unless indicated otherwise
[b] data from 2000, unless indicated otherwise
[c] data from 2002
[d] data from 2001
[e] data from 2000
[f] data from 1999
[g] data from 1998
[h] data from 1997

Annex **E**

Comparative studies of health care systems

Overview by dr DMJ Delnoij, Netherlands Institute for Health Services Research (NIVEL), Utrecht

Macinko J, B Starfield, L Shi. The contribution of primary care systems to health outcomes within Organization for Economic Cooperation and Development Countries, 1970-1997. Health Services Research 38 (2003); 3: 831-865	*Analysis level: ecological analysis of time series (1970-1997) of OECD countries (n=18)* *Independent variable: Composite primary care scale comprising ten items, including funding, personal registration and referral system* *Outcome measures: standardised mortality (general and by sex), standardised premature mortality, life-years lost due to cerebrovascular conditions, heart conditions, pneumonia and asthma (avoidable mortality)* *Covariates: doctor-density (per thousand residents), alcohol consumption (litres per capita), smoking (tobacco consumption in grams per capita), income (in US$ per capita, constant prices, reference year 1985), GDP (in US$ per capita, constant prices, reference year 1985), number of ambulant doctor's visits per capita, percentage of the population more than 65 years old* *Results: When correction was made for differences in GDP, per capita income, doctor-density, percentage of over-65s in the population,*

[a] ecological analysis = analysis of aggregated data in geographically distinct areas

	ambulant doctor's visits per head of the population and alcohol and tobacco consumption, a stronger orientation on the primary sector was found to be associated with lower standardised mortality, lower standardised premature mortality and fewer life-years lost due to (avoidable) mortality from cardiovascular conditions, pneumonia and asthma.
Gulliford MC. Availability of primary care doctors and population health in England: is there an association? Journal of Public Health Medicine 24 (2002); 4: 252-254	*Analysis level: Health Authorities in the NHS (n=99 regions)* *Independent variable: general practitioner-density (expressed in terms of FTEs per ten thousand residents)* *Outcome measures: standardised mortality, infant mortality, avoidable mortality, mortality due to acute myocardial infarction, incidence of teenage pregnancy (< 18 years old), (plus: hospitalisation per hundred thousand residents for chronic and acute conditions)* *Covariates: deprivation score (Townsend), proportion of ethnic minorities, percentage of the population in low socio-economic groups, percentage of the population with chronic conditions* *Results: Higher general practitioner-density was found to be associated with lower standardised mortality, lower avoidable mortality, lower mortality due to acute myocardial infarction, lower hospitalisation rates for both acute and chronic conditions and a lower incidence of teenage pregnancy. The correlation between general practitioner-density and mortality ceased (by a narrow margin) to be statistically significant when correction was made for the socio-economic characteristics of the population (deprivation, ethnic composition) and prevalence of chronic conditions. general practitioner-density did, however, remain a statistically significant predictor of hospitalisation and teenage pregnancy even after such correction.*
Shi L, J Macinko, B Starfield, J Wulu, J Regan, R Politzer. The relationship between primary care, income inequality, and mortality in US states, 1980-1995. Journal of	*Analysis level: Ecological analysis of time series (1980, 1985, 1990, 1995) for states in the USA (n=50)* *Independent variable: primary care doctor-density, broken down by discipline (general practitioners, internists and paediatricians)*

the American Board of Family Practice 16 (2003); 5: 412-422	*Outcome measures: standardised mortality* *Covariates: income inequality (Robin Hood index, Gini coefficient)* *Results: Greater income inequality was found to be associated with higher mortality, and higher doctor-density with lower mortality. Taking each of the disciplines within the primary care sector separately, only general practitioner-density ("family medicine") was consistently found to be associated with lower mortality.*
Shi L, J Macinko, B Starfield, J Xu, R Politzer. Primary care, income inequality, and stroke mortality in the United States: a longitudinal analysis, 1985-1995. Stroke 34 (2003); 8: 1958-1964	*Analysis level: This study used pooled time-series cross-sectional analysis of 11 years of state-level data (n=549). Independent variable: primary doctor-density* *Outcome measures: mortality due to CVA* *Covariates: income inequality, education level of the population, ethnic make-up of the population, percentage of the population living in urban areas* *Results: A bivariate association was found between primary care and lower mortality due to CVA. However, the association disappeared when correction was made for the covariates.*
Shi L, J Macinko, B Starfield, J Xu, J Regan, R Politzer, J Wulu. Primary care, infant mortality, and low birth weight in the states of the USA. Journal of Epidemiology and Community Health 58 (2004): 374-380	*Analysis level: Ecological analysis of time series (1985-1995) for states in the USA (n=49, excluding Washington DC)* *Independent variable: number of independently practising primary doctors (general practitioners, internists and paediatricians) per hundred thousand residents* *Outcome measures: Low birth weight (< 2500 grams), infant mortality (number of deaths < 1 per year per thousand live births)* *Covariates: income inequality (Gini coefficient), percentage of Afro-Americans, percentage of urban population, percentage of the workforce unemployed, percentage of the population above the age of*

	twenty-five with at least twelve years' schooling *Results: When correction was made for differences in income, ethnic make-up of the population, urbanisation levels, unemployment rates and education, greater primary doctor density was found to be associated with better outcomes in terms of birth weight and infant mortality.*
Starfield B. New paradigms for quality in primary care. British Journal of General Practice 51 (2001): 303-309	*Survey article.* *Results: Countries with strong primary sectors had lower healthcare bills and healthier populations. Within individual countries, regions with higher primary doctor-densities (but similar specialist densities) had healthier populations. A higher primary doctor-density was found to off-set the negative effects of social inequality.*
Starfield B, L Shi. Policy relevant determinants of health. Health Policy 60 (2002): 201-218	*Analysis level: Ecological analysis of thirteen industrialised countries* *Independent variable: Primary orientation of a healthcare system (index based on 15 characteristics)* *Outcome measures: cost of care/capita, low birth weight, perinatal mortality, infant mortality, lost life-years, life expectancy for forty, sixty-five and eighty-year-olds* *Covariates: income inequality (Gini coefficient), percentage of smokers* *Results: The study indicated that countries whose healthcare systems exhibited very little primary orientation achieved poorer health outcome scores. The analysis was statistically weak, however.*

Annex **F**

Primary care system score components

From: Macinko J, Starfield B, Shi L. The contribution of primary care systems to health outcomes within Organization for Economic Cooperation and Development (OECD) countries, 1970-1998. Health Serv Res 2003; 38(3): 831-865.

Component	Indicator	Rationale	Scoring
Regulation	Do specific national policies exist that regulate the distribution of primary care providers and facilities?	These policies are intended to improve equity in distribution of primary care services	0= no overall primary care regulation 1= limited (only some regions of populations) 2=entire system regulated
Financing	What is the method of financing health care for the majority of the population?	Scored by level of progressivity, tax-based systems considered most progressive.	0= primarily private 1= social security 2= primarily tax-based
Primary care provider	What is the predominant type of primary care provider?	Generalists (general practitioners, family doctors) considered best providers of primary care.	0= majority are specialists 1= majority are paediatricians, internist 2= majority are generalists
Access	What is the level of cost-sharing for primary care visits?	High primary care copays are considered to be a barrier to access	0= high copay 1= moderate 2= none or very low
Longitudinality	Are individual patient lists required for all primary care units?	Patient lists considered optimal way to track patients over time.	0= never required 1= limited use (of group lists only) 2= mandatory and ubiquitous
First contact	Is there a requirement that primary care practitioners serve as gatekeepers to other levels of care?	First contact is an essential if primary care is to attend to the majority of health problems.	0= never required 1= required but not enforced of required for limited population only 2= always required

Comprehensiveness	Is a full range of primary care services and procedures available for all age groups?	Specific list of services includes: prevention, mental health, minor surgery, and routine obstetric care.	0= not comprehensive (some services offered only in specialty care) 1= somewhat (all offered but not in every primary care unit) 2= comprehensive (all offered in most locations)
Coordination	Are guidelines for the transfer of information between primary care and other levels available and required?	Data transfer (either through electronic means of through client-held records) is essential for coordinating care between levels.	0= no guidelines present 1= guidelines present but not widely used 2= guidelines present and required
Family-centered	Is there a requirement that client records be organized by family as opposed to by individual?	Indicator, that primary care considers patient's family environment in diagnosis and treatment	0= never required 1= required for only some regions or populations 2= generally required
Community-oriented	Is there a policy that requires use of community-based data and/or presence of community members in primary care management of priority-setting?	Primary care is more effective when it treats patients in their larger social context	0= never required 1= required for limited population only 2=generally required