



**EVALUATION OF THE ORGANIZATION AND
PROVISION OF
PRIMARY CARE IN** **SERBIA**

A survey-based project in the regions of
Vojvodina, Central Serbia and Belgrade

Primary care in the WHO European Region

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ABSTRACT

In many countries in transition, health reforms are part of profound and comprehensive changes in essential societal functions and values. Reforms of (primary) care are not always based on evidence, and progress may be driven by political arguments or the interests of specific professional groups, rather than by the results of sound evaluations. However, policy-makers and managers nowadays increasingly demand evidence of the progress of reforms and the responsiveness of services. The implementation of the WHO Primary Care Evaluation Tool (PCET) aims to provide a structured approach to this by drawing on health system functions such as governance, financing and resource generation, as well as the characteristics of a good PC service delivery system: accessibility, comprehensiveness, coordination and continuity. This report gives an overview on the findings for Serbia.

The project was implemented in Serbia in 2009 in the framework of the 2008–2009 Biennial Collaborative Agreement between the WHO Regional Office for Europe and the Ministry of Health of the Republic of Serbia, which lays out the main areas of work for collaboration between the parties. Other partners were the Netherland Institute for Health Services Research (NIVEL) – a WHO Collaborating Centre for Primary Care – and other stakeholders in the health system of Serbia, such as national policy experts, managers, medical educators, PC physicians and their patients.

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ABBREVIATIONS

BCA	Biennial Collaborative Agreement between the WHO Office for Europe and Member States
CIS	Commonwealth of Independent States
CHC	community health centre
CME	continuing medical education
EU	European Union
EU15	European Union Member States before May 2004
GDP	gross domestic product
GP	general practitioner
HIF	Health Insurance Fund
IUD	intrauterine device
NGO	non-governmental organization
NIVEL	Netherlands Institute for Health Services Research
PC	primary care
PHC	primary health care
PCET	Primary Care Evaluation Tool
PPP	purchasing power parity
RH	reproductive health
SDR	age-standardized death rate
SMS	Serbian Medical Society
STI	sexually transmitted infection
TB	tuberculosis
WHO	World Health Organization

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FOREWORD

Primary health care embodies the values and principles that WHO pursues in its world-wide effort to help countries strengthen their health systems efficiently and equitably. WHO renewed its commitment to global improvements in health, especially for the most disadvantaged populations, in the *World health report 2008*, which urges countries to act on evidence that access to PC services forms the core of an efficient and appropriate health care system. The title of the report underscores the urgency of its message: *Primary health care – Now more than ever*.

Over the past 30 years, health in the 53 WHO Member States in the European Region has improved considerably overall, despite significant changes in the patterns and trends in disease occurrence, demographic profiles and exposure to major risks and hazards in a rapidly evolving socioeconomic environment. In addition, the Region has seen trends towards more integrated models of care and greater pluralism in the financing and organization of health systems. Governments are continuing to rethink their roles in population health and health care organization and delivery, thereby changing the context for framing and implementing health policy.

This report evaluates PC developments in Serbia, using a methodology that characterizes a good PC system as one that is comprehensive, accessible, coordinated and integrated. Other necessary attributes are continuity and equal consideration to all the functions outlined in the WHO framework in order to improve the overall health system. This means that the financing arrangements, service delivery, human and other resources (such as appropriate facilities, equipment and drugs) and necessary legal frameworks and regulations must be in place, and the system must have effective leadership. The report thus offers interested policy-makers and stakeholders a structured overview of the strengths and weaknesses of the country's PC organization and provision, taking into account the opinions of the professionals and patients concerned. The report focuses on structural performance, and provides a list of proxy indicators. However, it does not examine the process or outcome of care itself, and thus its quality. It does, nonetheless, signify a first and very important step towards a baseline for improving PC processes and outcomes. We at the WHO Regional Office for Europe hope that this report will contribute to further PC reform in Serbia.

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EXECUTIVE SUMMARY

This report summarizes the results of the WHO Primary Care Evaluation Tool (PCET), which was implemented in Serbia in 2009 in the framework of the 2008-2009 Biennial Collaborative Agreement (BCA) between the WHO Regional Office for Europe and the Ministry of Health of the Republic of Serbia, which lays out the main collaborative areas between the parties. Other partners were the Netherlands Institute for Health Services Research (NIVEL) – a WHO Collaborating Centre for Primary Care – and other stakeholders in the health system of Serbia, such as national policy experts, the Institute for Public Health, educational institutions, regional authorities, PC physicians and their patients.

Introduction

The Primary Care Evaluation Tool (PCET) is an instrument developed for the WHO Regional Office for Europe to examine both supply and demand-side aspects of PC. It is intended to support ministries of health and other stakeholders in monitoring the progress of their PC-related policies and reforms and to set new priorities on the basis of evidence-based information with the aim of further strengthening PC.

Methods

The tool was implemented in Vojvodina, Belgrade and Central Serbia in 2009. Data were processed and analyzed in December 2009 and January 2010. The survey approach relies on the self-reported experiences of physicians and their patients. The underlying methodology for the design of the PCET was derived from the WHO 2000 Health Systems Framework (1), which indicates that the performance of a health system is determined by the way in which its functions – stewardship, resource generation, financing and service provision – are organized. The PCET framework encompasses these four functions, together with the key characteristics of PC services, including: accessibility, continuity, coordination and comprehensiveness. Furthermore, a number of key dimensions and subthemes were identified for each of the PC functions and characteristics and in a second step translated into indicators or proxies. In order to evaluate the complexity of PC systems, information is gathered on different levels from demand and supply sides alike. The PCET therefore consisted of three questionnaires: one for the national level of PC, one for PC physicians/general practitioners (GPs) and one for patients. Together, the three questionnaires covered the PC functions identified and the dimensions and items derived from the framework. The questionnaires for GPs and patients were pre-structured, with precoded answers. The questionnaire for the national level contained both prestructured and open-ended questions, as well as statistical data to be filled in.

Results

National (based on information gathered by the health system questionnaire and interviews with national policy experts)

Stewardship / governance

Especially since 2002, specific PC (PC) legislation has been developed in Serbia. In the policy document *Better health for all in the third millennium*, prevention and PC were prioritized. At the Ministry of Health, PC-related responsibilities have been allocated to several departments. Mechanisms have been created to systematically involve stakeholders and interest groups in health policy development. Major PC reforms

include separating primary and secondary care delivery (expected completion 2010), the advanced introduction of the “chosen doctor” and ongoing PC decentralization in favour of municipalities. Recent plans and activities focus on a new performance-related payment system, human resources planning, a relicensing scheme for health care workers and a voluntary accreditation scheme for community health centres (CHCs).

Financing

One quarter of the Serbian health budget is spent on PC, with CHCs mostly funded from the Health Insurance Fund and municipal sources providing the rest. As all PC physicians have a salary and are employed by the state, there are few financial incentives for good performance. Salaries of GPs and paediatricians are equal. Salaries of medical specialists are 35% above the salaries paid in PC. Performance indicators have been developed as the basis of a new capitation-based payment system, which is expected to improve the quality of PC services. The existing copayments for essential services, such as consultation of primary and secondary care physicians and prescribed drugs, are an obstacle to health care access.

Human resources

Around one quarter of all physicians in Serbia work in PC, as GPs, paediatricians, gynaecologists, occupational physicians and dentists. PC nurses comprise one third of the total in the country. GPs, paediatricians and gynaecologists are organized in their own professional organizations. All four faculties of medicine offer three-year postgraduate GP training programmes. The quality of PC services is monitored at various levels by many clinical and other indicators. Clinical guidelines for specific use in PC are being developed on a range of topics; 25 have been distributed.

Service delivery

On average Serbian citizens have four PC contacts per year, with 22% resulting in referral to a specialist and 13.5% in hospital admissions. There are 1.6 drug prescriptions made per patient contact.

Physician and patients

(based on survey responses)

Accessibility of care

The reported size of the practice population of GPs was 1200 on average, well below the national norm. Paediatricians reported an average population of almost 1000. Nevertheless, almost half of the GPs and paediatricians indicated that staff shortages existed in their CHC. Home visits were rare. Physicians as well as patients answered that patients' access to services was good, although evening access could be better. Physical access (except for wheelchair users) as reported by patients was good and most patients were satisfied with current opening hours and services. Patients in rural areas were somewhat more satisfied than patients in urban areas. However, financial access left something to be desired. Patients reported having had to pay for several essential services. The use of clinical guidelines, as reported by physicians, was far from universal, in particular among paediatricians. Although obligatory, patient complaint procedures were reported to be generally lacking. Evaluation of patient satisfaction was frequently reported. The recommended job satisfaction interviews with health care workers were reported by half of the respondents.

Coordination of care

Structured cooperation was most frequently intradisciplinary. Regular meetings with medical specialists at the secondary level were rare, but asking advice on a case-by-case basis was frequent. The average referral rate of GPs was very high compared to other countries as well as to paediatricians. GP referral rates varied regionally. The usual finding that urban PC physicians have higher referral rates than those in rural practices was not confirmed in Serbia, where the rates were similar. From the patient survey it turned out that patients generally felt they could choose a doctor and change if desired. Although most patients found communication among the physicians they visit insufficient, they were confident that their GP or paediatrician would receive information about a treatment completed by another physician. Patients were very satisfied with the cooperation between their doctor and the practice nurse. Patients in rural areas were more positive than those in urban areas.

Continuity of care

Clinical records were well kept, but it was difficult to retrieve specific categorical information from the system. The flow of information between primary and secondary care related to patient referrals was good. Referral letters are widely used and medical specialists usually inform PC after specialist treatment has finished. Many PC physicians do not use computers and apparently keep records on paper. Other practice staff subsequently store clinical information in the computer, probably for management and statistical purposes. Computers were rarely used to search information. The use of computers strongly differed among regions. Results from the patient survey (including “heavy users”) suggest a very high PC visit frequency, not just to one’s own physician but also to others. This could indicate an imperfect functioning of the chosen doctor system. Patients were positive about their GPs and their professional skills were well appreciated. Patients were more positive about GPs than they were about paediatricians. Patients in rural areas were generally more positive about their doctors than those in urban areas.

Comprehensiveness of care

PC physicians, especially GPs, were not sufficiently equipped to provide a comprehensive package of preventive, curative and rehabilitative services in either urban or rural practices. However, the availability of laboratory and X-ray facilities (within or outside the practice) was good. Waiting times for results of diagnostic tests could be long, especially for GPs. Waiting time differences were small between urban and rural areas, but wide among regions. As expected, GPs reported a wider range of health problems in the first contact than paediatricians. However, the profile is rather small in international comparison. It seems that, in contrast to paediatricians, GPs lack a clear-cut clinical domain in first contacts. Urban and rural physicians did not differ in their role as first contacts. The GPs’ role in disease treatment was more comprehensive than that of paediatricians. GPs’ treatment profile seemed clearer than their first contact profile, with no differences between urban and rural areas. Involvement of GPs and paediatricians in providing medical technical procedures (e.g., minor surgical procedures) was generally very low, while they were modestly involved in screening and categorical services. Family planning and contraception seemed not to belong to the professional domain of GPs, especially in urban areas. Physicians indicated that medically unnecessary prescriptions were made in a small fraction of cases. A majority of GPs and paediatricians answered they would like to spend more time on prevention.

Table 1: Overview of selected (proxy) indicators by PC function for the regions of Vojvodina, Central Serbia and Belgrade

Functions	Selected dimensions/proxy indicators	Findings Physicians (N=285) Patients (N=1655)
Stewardship/	Department in Ministry of Health specifically dealing with primary care (PC)	Yes (since 2007)
Governance	Ministry of Health department specifically dealing with PC	No
	% physicians reporting that a patient complaint procedure was in place in practice/unit	83.0
Financing	Employment status of PC physicians	100%
State employed	% of active physicians in Belarus working in PC	12.4%
	% patients reporting copayments for PC prescriptions	58.0
Resource generation	% of active physicians in Serbia working in PC	28.0
	% doctors working in PC who are retrained GPs	21.6
	Average age of GPs	49.0
	Average age of paediatricians	51.0
	Hours GPs spend on professional reading (per month)	17.5
	Hours paediatricians spend on professional reading (per month)	15.9
		1%
	Medical universities with a department of General Practice / Family Medicine	5.0
	Average number of items of medical equipment available to physicians (from a list of 30 items)	14.0
	% of physicians reporting no or insufficient access to a microbiological laboratory	GPs: 7.0 Paed.: 11.0
	% of physicians reporting no or insufficient access to a biochemical laboratory	GPs: 1.0 Paed.: 5.0
	% of physicians reporting no or insufficient access to X-ray facility	GPs: 8.0 Paed.: 7.0
	% of physicians with a computer in the centre/practice	GPs: 61.0 Paed.: 57.0
Service delivery		
Service access	% of patients living within 20 minutes travel of GP or paediatrician	73.0
	Average number of registered patients per GP	1197.0
	Average number of registered patients per paediatrician	975.0
	Average number of patient consultations per day per GP	39.0
	Average number of patient consultations per day per paediatrician	43.0
	Average number of home visits per week per GP	4.0
	Average number of home visits per week per paediatrician	2

Functions	Selected dimensions/proxy indicators	Findings Physicians (N=285) Patients (N=1655)
	Average working hours of GP per week	35.0
	Average working hours of paediatrician per week	36.0
	Average length of patient consultations (minutes)	GP: 14.7 Paed.: 14.5
	Reported average contact rate with a GP by GP patients per year	9.1
	Reported average contact rate with a paediatrician by paediatrician patients per year	9.1
	% PC physicians offering evening opening at least once per week	43.0
	% GP & paediatrician patients having a same day consultation on demand	GPs: 77.0 Paed.: 64.0
	Referral rate to specialist secondary services (% of all office and home care contacts) *	By GPs: 12% By paed.: 5.0
	Referral rate to specialist secondary services (% of all office and home care contacts) *	rural: 10.3 urban: 9.9
Coordination	% of PC physicians sharing premises with other PC physicians	51.0
	% of PC physicians having regular meetings with practice nurses	GPs: 15.0 Paed.: 11.0
	% of PC physicians having regular meetings with midwives	GPs: 19.0 Paed.: 7.0
	% of PC physicians having regular meetings with pharmacists	GPs: 1.0 Paed.: 0.0
	% therapists providing routine antenatal care	53%
Continuity	% physicians keeping medical records routinely	GPs: 92.0 Paed.: 96.0
	% of patients assigned a GP (not chosen)	5.0
	% of patients assigned a paediatrician (not chosen)	8.0
	% of patients with their GP for at least 1 year	78.0
	% of patients with their paediatrician for at least 1 year	75.0
Comprehensiveness	% of physicians frequently using clinical guidelines	GPs: 61.0 Paed.: 41.0
†= range 1 (never) - 4 (always)	Score for GPs' role in first contact care for a selection of 18 health problems†	2.1
	Score for paediatricians' role in first contact care for a selection of 18 health problems†	1.7
	Score for GPs' involvement in the treatment of a selection of 20 diseases†	3.0
	Score for paediatricians' involvement in the treatment of a selection of 20 diseases†	2.2
	Score for GPs' involvement in the provision of a selection of 16 preventive and medical-technical procedures†	1.5

Functions	Selected dimensions/proxy indicators	Findings Physicians (N=285) Patients (N=1655)
	Score for paediatrician or team member involvement in the provision of a selection of 16 preventive and medical-technical procedures†	1.4
	Coverage of public health activities (based on 12 items = 100%) by GPs on a routine basis	32.0
	Coverage of public health activities (based on 12 items = 100%) by paediatricians on a routine basis	32.0
	% physicians involved in cervical cancer screening programme	GPs: 16.0 Paed.: -%
	% physicians providing family planning / contraception services	GPs: 11.0 Paed: 32.0
	% GPs providing routine antenatal care	14.0
	% paediatricians providing routine antenatal care	42.0
	% physicians involved in TB screening	GPs: 14.0 Paed: 13.0
	% of PC physicians having regular meetings with local authorities	22.0

* Self-referrals not included

Policy recommendations

Governance and regulation

- Coherence among PC services*

Teamwork and other facilitating conditions should be promoted to counteract fragmented provision.

The segmentation of the PC system in separate sections for women, children and adults is an unfavourable condition for coherent care provision. For instance, integration of care provided to members of one family may be more difficult to realize than in systems with family-oriented PC. The survey found little teamwork and few structural links among physicians from the three sections. No change in the current segmented system is foreseeable.
- Distribution of human resources*

Special attention should be paid to a more even distribution of human resources. Short-term measures should be taken to ensure it before new planning mechanisms are developed in the government's human resources strategy.

The distribution of human resources is uneven. In some regions physicians are working for practice populations far above the national norm, while in others there is an oversupply of staff.
- Regional variation*

There should be a policy decision on the acceptable degree of regional variations, and measures of central regulation or coordination should be taken to ensure even quality of, and access to care.

Considerable differences were found among the three regions, for example in referral rates to medical specialists, the use of computers and availability of test results.

- The functioning of chosen doctors
Measures should be taken to promote an effective functioning of the chosen doctor system as a cornerstone of health care reform.
Patients visit other PC physicians than their own chosen doctors, suggesting an imperfect functioning of the system, possibly resulting in duplication and poorly coordinated services.
- Home care
The provision of medical and nursing services in the home should be made available, considering the ageing of the population. Home care should be integrated with PC services, social services and long-term care.
Home care services, for instance for the frail elderly, chronically ill or those needing care after hospital discharge have not been developed yet. International trends toward more community care and shorter hospital stays suggest that home care services might be an effective response to the ageing of the population.

Education and professional development

- Professional PC skills
Further investigation should be undertaken to clarify whether the primary care professionals have the knowledge and skills required for the chosen doctor. If necessary, a CME plan to upgrade current capacity should be developed. More specifically, a list of essential skills should be included to the current CME accreditation.
As a result of the high number of referrals to specialists, the professional skills of PC physicians may have eroded below the level needed to provide good quality chosen doctor services.
- Effective CME
A CME system that is guided by the educational need rather than personal interests or other considerations aside from professional development, should be gradually introduced.
CME accreditation is an important step towards improving its quality. However, physicians and nurses themselves still decide what CME to attend. Often they do not choose subjects for which education is most needed.
- Use of clinical guidelines
Clinical guidelines that are accepted by professionals should be continuously produced and updated. Their use should be monitored, for instance by using them in CME programmes, and making their use part of the annual PC quality assessment.
The survey showed that the use of clinical guidelines is far from universal among PC physicians, especially paediatricians.
- The role of nurses in PC
The role of nurses in PC should be shifted from administrative work to nursing work (e.g., prevention, health information, routine monitoring of chronic patients). Mea-

asures need to be taken to delegate the administration when possible to non-medical workers, or to computerize it.

At present, most nurses are mainly involved in documentation and other paperwork.

Financing and payment

- Patients' payment for services

Investigation of the current copayments needs to be undertaken to examine to what extent they are compatible with the officially maintained principles of access.

Patients reported they had to pay for essential PC services including visits to physicians and prescribed drugs. These financial obstacles may threaten access to services, especially where socially and economically disadvantaged people are concerned.

- Financial incentives for physicians

The planned introduction of capitation payment should be accelerated, and additional financial incentives for improving performance should be considered. The possibility to work as independent contractors to the health insurance system should be given to physicians who would prefer so.

The current salary structure for physicians in PC lacks incentives for good performance.

Service delivery

- The range of PC services

It should be considered whether the present strong reliance on specialist and hospital services is in line with a policy that aims to prioritize PC.

The profile of provided curative services and the involvement in screening by physicians at the PC level was found to be very limited. For instance, GPs had a very limited role as doctors of first contact and rarely provide minor surgery and other medical procedures to their patients. Thus, many relatively simple curative services are provided at the secondary level, as reflected in the high referral rates.

- Clinics for prevention and health education

A critical evaluation of the preventive activities, including health promotion clinics, should be done with a view to the public they reach and their effects.

In PC much attention is paid to health education and prevention, both in individual patient contacts and in special clinics. In the patient survey, however, only very few respondents said their doctor spoke with them about topics of health promotion during such clinics.

- Medical equipment

It should be investigated whether the current low level of medical equipment restricts physicians in their role as chosen doctors. If so, investments should be made to bring the equipment up to the desired level.

Physicians had relatively few items of medical equipment at their disposal, which may restrict their clinical possibilities.

- IT
Measures should be taken to develop and/or implement relevant health information software, introduce computers in PC physicians' offices and make physicians computer-minded.
Computers were sparsely used to support physicians in their clinical work, for instance, for keeping patient records, rapid identification of patient groups at risk or for searching information in expert systems.
- Home visits
The role of PC physicians in caring for patients who are unable to visit the practice should be reconsidered.
Making home visits is unusual among PC physicians. Indeed, home visits are made by separate organizational units. However, treatment by the same physician in the office and in the patient's home can contribute to continuity of care.

I EVALUATING PRIMARY CARE: BACKGROUNDS AND APPLICATION

1.1. The theoretical framework of the PCET

Careful monitoring is required for the fundamental changes taking place in the health care systems of countries in transition. Although strengthening PC services is a priority of health reforms in many countries, in central, eastern and western Europe, the backgrounds of the reforms are not similar. In western Europe, emphasis on PC is a response to rising costs and changing demand resulting from demographic and epidemiological trends. Central and eastern European countries, as well as those formerly part of the Soviet Union, are struggling to improve the performance and cost effectiveness of their entire health systems. In many of these countries, health care reforms have been and continue to be part of profound and comprehensive changes in essential societal functions and values (2).

Evaluations and performance measurements increasingly play a role in health care reforms. Stakeholders need this information to guide their decisions in steering the health system towards better outcomes (3). In the past, reforms were not always based on evidence, and progress was often driven by political arguments or the interests of specific professional groups, rather than by the results of sound evaluations, but now stakeholders – not least governments – are increasingly held accountable for their activities and this requires evidence, for instance on the progress of reforms.

In addition, demographic and epidemiological changes require adaptation on the part of health systems. This requires evaluation of their responsiveness from the patients' perspectives. Such evaluations generate information about access and convenience of services, how patients are treated by health staff, how patients perceive information and communication about their conditions that can impact on their own behaviour and well-being and how their care is managed at the PC level and beyond.

Furthermore, evaluations and performance assessments should be explained within the national contexts. Only then can performance information serve as direct input to policy making and regulation. However, the role of governments goes beyond the direct use of information. The stewardship role also implies that a necessary flow of information be made available to other stakeholders and that the necessary analytical capacity be available (3).

A final major requirement of evaluations and performance assessments is to start from a proper framework for developing measures. Deriving indicators from an accepted framework ensures the relevance of the (proxy) indicators and good coverage of the identified areas. The following sections describe the framework used to develop the PCET.

Primary care evaluation and health systems

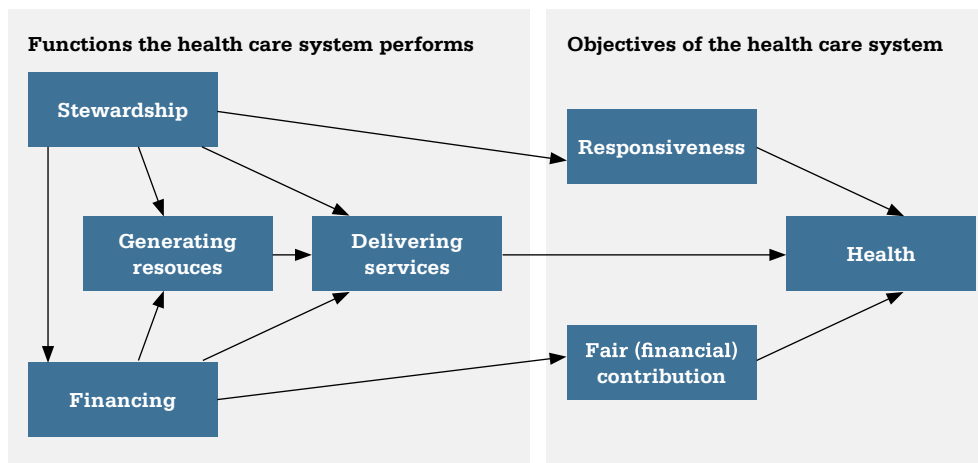
A health system can be defined as a structured set of resources, actors and institutions related to the financing, regulation and provision of health care to a given population. The overall objective of a health system is to optimize the health status of an entire population throughout the life cycle, while taking account of both premature mortality and disability (3). Health systems aim to achieve three fundamental objectives (1,3):

- improved health (e.g., better health status and reduced health inequalities);
- enhanced responsiveness to the expectations of the population, encompassing respect for the individual and client orientation; and
- guaranteed financial fairness (households paying a fair share of the national health bill and receiving protection from financial risk resulting from health care).

The level of attainment of these goals ultimately reflects the performance of the system as a whole. However, as there are variations in both health conditions and health systems among countries, national contexts need to be taken into account. Thus, performance measurement should cover both goal attainment and available resources and processes.

The WHO Health System Performance Framework (Fig.2) indicates that performance is determined by the way in which stewardship, resource generation, financing and service provision are organized (3). Other approaches can be found in the international literature (4,5,6,7), however, they all use related concepts. The four functions can be applied to the whole health system of a country – or to PC only – with specific subcharacteristics for PC.

Figure 1: WHO health system functions and objectives



Stewardship

Stewardship is an overriding function (but broader than regulation), in that it oversees all basic health system functions and has direct and indirect effects on outcomes (1). It encompasses defining the vision and direction of health policy, exerting influence through regulation and advocacy and collecting and using information. It covers three main aspects: a) setting, implementing and monitoring health system rules; b) assuring a level playing field for purchasers, providers and patients; and c) defining strategic

directions for the health system as a whole. Stewardship can be subdivided into six subfunctions: overall system design, performance assessment, priority setting, regulation, intersectoral advocacy and consumer protection (3). In short, stewardship deals with governance, information dissemination, coordination and regulation of the health system at various levels.

Resource generation

Any level of a health system needs a balanced variety of resources to function properly, but they have to be further developed (and expanded) in order to sustain health services over time and across levels and geographical areas. The resources needed encompass physical assets (equipment, facilities), consumable supplies, human resources and information. It is crucial that the quantity and quality of human resources be adequately matched to the demand for services and equitably distributed across the country. Naturally, to ensure quality of care, the skills and knowledge of health providers need to be up-to-date and compatible with developments in technology and evidence-based medicine. Policy development concerning resource planning and a regulatory framework for assuring high quality service provision and consumer protection fall under the stewardship function, but the workforce volume, distribution and professional development are usually included under the resource generation function.

Financing

In general, financing deals with the mobilization, accumulation and allocation of funds to cover the health needs of the people, individually and collectively (8). The financing function in health systems is defined by Murray and Frenk (3) as “the process by which revenues are collected from primary and secondary sources, accumulated in fund pools and allocated to provider activities”. Three subfunctions can be distinguished: revenue collection, fund pooling and purchasing. Revenue collection means the mobilization of funds from primary sources (households, firms) and secondary sources (governments, donor agencies). There are a number of mechanisms through which funds can be mobilized, varying by health systems context, e.g. out-of-pocket payments, voluntary insurance rated by income, voluntary insurance rated by risk, compulsory insurance, general taxes, earmarked taxes, donations from NGOs and transfers from donor agencies. In order to share and reduce health risks, funds can be pooled through various forms of health insurance. Purchasing is the allocation of funds to cover the costs (staff, durables and running costs) of specific health service interventions by health providers (institutional or individual) (3). The way these subfunctions are organized and executed has an impact on the access to health services.

Service delivery

Service provision involves the mix of inputs needed for the production process within a specific organizational setting leading to the delivery of health interventions (3). It relates to preventive, curative and rehabilitative services delivered to individual patients and to services aimed at larger populations (e.g. health education, promotion) through public and private institutions. Providing services is something that the health system does; it is not what the health system is.

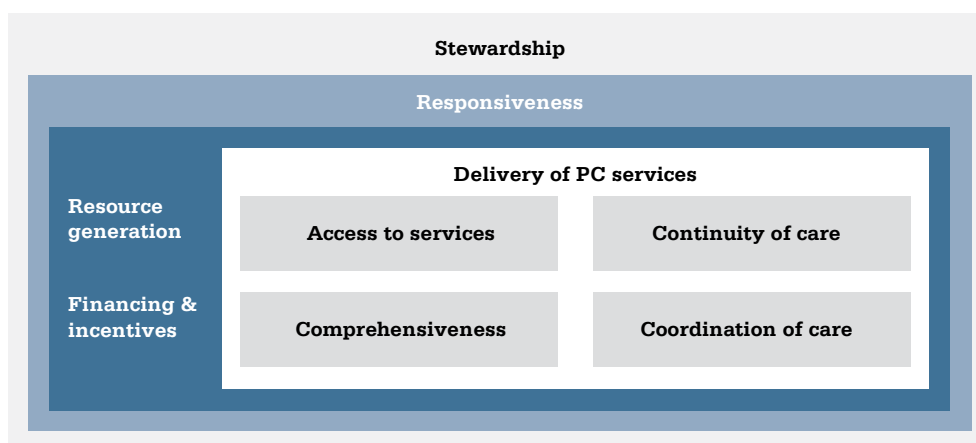
The Primary Care Evaluation Framework

PC characteristics and definitions vary from country to country (see the Annex); however, a comprehensive or well-developed PC system has the following characteristics:

Primary care is that level of a health system that provides entry into the system for all new needs and problems, provides person-focused (not disease-oriented) care over time, provides care for all but very uncommon or unusual conditions, and coordinates or integrates care provided elsewhere or by others. (9)

The Primary Care Evaluation Framework (see figure 2) from which the PCET was developed, encompasses the four functions of a health care system (as mentioned above), combined with the four key characteristics of PC services that are part of service delivery, as derived from the above definition.

Figure 2. Primary Care Evaluation Framework



Key characteristics of a good PC system

- Access

In general, access to health services can be defined as the ease with which health care is obtained (5), or “the patients’ ability to receive care where and when it is needed” (10). Various physical, psychological, sociocultural or financial barriers can restrict accessibility. Included in the PCET scheme are, for instance, geographical limitations, organizational factors such as office hours, distant consultations and timeliness, as well as financial factors such as cost-sharing and copayments.

- Continuity of services

PC interventions should be geared to patients’ needs over a longer period and cover successive episodes. A general definition of continuity is the “follow-up from one visit to the next” (11). WHO provides a more comprehensive definition, which takes into account the possible involvement of various health care providers. It is described as “the ability of relevant services to offer interventions that are either coherent over the short term both within and among teams (cross-sectional continuity), or are an uninterrupted series of contacts over the long term (longitudinal continuity)” (10).

Several levels of continuity can be distinguished (12): informational continuity related to the medical and social history accessible to any health care professional caring for the patient; longitudinal continuity, in a specific locus where a patient customarily receives health care from an organized team of providers in an accessible and familiar environment; and interpersonal continuity, an ongoing personal relationship between

the patient and the care provider (12). Furthermore, Reid et al. (13) add another level, management continuity, the provision of timely and complementary services within a shared management plan. The PCET scheme includes informational, longitudinal and interpersonal continuity of care.

Coordination of delivery

Particularly because PC often serves a gate-keeping function to other levels of care, coordination of services at PC level is an important element in health system responsiveness. The potential for coordination problems is particularly evident in the primary – secondary interface, or between curative care and other health promotion services (14). A general definition of coordination is “a technique of social interaction where various processes are considered simultaneously and their evolution arranged for the optimum benefit of the whole” (8), more specifically:

...a service characteristic resulting in coherent treatment plans for individual patients [where] each plan should have clear goals and necessary and effective interventions, no more and no less. Cross-sectional coordination means the coordination of information and services within an episode of care. Longitudinal coordination refers to the “interlinkages among staff members and agencies over a longer episode of treatment”. (10)

In the PCET scheme, the various dimensions of coordination encompass collaboration within a PC practice, on the same level of PC providers (GPs, community nurses, physiotherapists, etc.) and between PC and other levels of care in the context of consultation and referral systems.

- **Comprehensiveness**

Comprehensiveness can be defined as the extent to which a full range of services is either directly provided by a PC physician or other provider or specifically arranged elsewhere (15). In PC, comprehensiveness encompasses curative, rehabilitative and supportive care, as well as health promotion and disease prevention (14,16). Comprehensiveness of services is not only manifested in the specific range of services provided but also refers to practice conditions, facilities and equipment, and the professional skills of the PC service provider. The community orientation of PC workers also plays a role. All these dimensions have been taken into consideration for the PCET scheme.

The Primary Care Evaluation Scheme

Taking the Primary Care Evaluation Framework (1) as its basis, the Primary Care Evaluation Scheme focuses on specific issues, policies and health care priorities relevant to countries. The scheme consists of measurable topics and items related to essential features and national priorities for change in PC and the facilitating conditions. The evaluation scheme, which in turn forms the basis of the PCET, is structured as follows:

- stewardship
- financing and incentives

- resource generation

- delivery of PC, subdivided into:
 - » accessibility
 - » care continuity
 - » care coordination
 - » service comprehensiveness.

Table 2 shows a number of key dimensions for each PC function. Each dimension has been translated into one or more information items or proxy indicators.

Table 2. Overview of selected functions, dimensions and information items

Function	Subfunction	Dimension	Selected Items/Proxies
Stewardship		Policy development	PC policy priorities
		Professional development	(re-) accreditation system for pc
			Quality assurance mechanisms for pc
		Conditions for the care process	Laws and regulations
			Human resources planning
		Conditions for responsiveness	Involvement of professionals and patients in policy process
			Patient rights; complaint procedures
Resource generation		Workforce volume	Numbers and density
		Professional development	Role & organization of professionals
			PC education
			Scientific development & quality of care
		Professional morale	Job satisfaction
		Facilities & equipment	Medical equipment
			Other equipment
Financing and incentives		Financing	PC funding
		Expenditures	PC expenditures
		Incentives for professionals	Entrepreneurship
			Mode of remuneration
		Financial access for patients	PC Cost sharing/ copayment

Function	Subfunction	Dimension	Selected Items/Proxies	
Delivery of Care	Access to services	Geographical access	Distance to PC practice	
			Distribution of PC physicians	
		Organizational access	List size	
			PC provider workload	
			PC outside office hours	
			PC home visits	
			Electronic access	
			Planning of non-acute consultations	
		Responsiveness	Timeliness of care	
			Service aspects	
			Clinics for specific patient groups	
		Continuity	Informational continuity	Computerization of the practice
	Medical records			
	Longitudinal continuity		Patient lists	
			Patient habits with first contact visits/referrals	
			Endurance of patient-provider relationship	
	Interpersonal continuity		Patient-provider relationship	
	Coordination		Cohesion within PC	PC practice management
				Collaboration among GPs/family doctors
		Collaboration of physicians with other PC workers		
		Coordination with other care levels	Referral system/gate-keeping	
			Shared care arrangements	
		Comprehensiveness	Practice conditions	Premises, equipment
				Medical procedures
				Preventive, rehabilitative, educational activities
	Community orientation		Disease management	
			Practice policy	
			Monitoring and evaluation	
Community links				
Professional skills			Technical skills	

In order to evaluate the complexity of any PC system, information is gathered on different administrative levels and from health providers and patients. Therefore, the PCET consists of three separate questionnaires – for experts (national level), physicians and patients – which cover all identified PC functions, their dimensions and information items, as derived from the scheme. The questionnaires for GPs and patients are pre-structured, with precoded answers. The expert questionnaire has prestructured as well as open-ended questions, and list of statistical data to be provided.

1.2 Overview of the PCET development and pilot testing

PCET development started in February 2007 and was completed in May 2008, when the final instrument became available to WHO for its health system support activities with Member States. The successive stage of development, from desk research to pilot implementation and an international meeting to discuss experiences and results, will be shortly explained. The development process has been described in more detail elsewhere (21,22,23).

- Literature review

As a first step, the researchers at NIVEL conducted a directed literature study on the basis of the WHO performance framework (1), to find ways to implement key PC system functions. Particular attention was paid to indicators and existing performance measurement and evaluation tools and questionnaires. This resulted in a preliminary listing of dimensions and items for the tool.

- First exchange with experts of the WHO Region

The outcomes of the literature study were discussed in an international expert meeting in March 2007. Major objectives of the meeting were to discuss and reach consensus on key concepts and definitions, discuss and validate the provisional set of dimensions, proxy indicators and information items and improve the first version of the scheme (see Table2) in order to develop the questionnaires. First steps were also taken for pilot implementation of the provisional tool.

- Drafting, validating and translating questionnaires

Draft versions of the questionnaires were developed on the basis of the information and feedback from the expert meeting. Comments from the experts on these versions were incorporated in new versions of the three questionnaires. These versions were subsequently tailored to the situation of the two pilot countries, the Russian Federation and Turkey. Terms were adapted accordingly and, on request of health authorities in the two Member States, some additional questions were included on topics related to national PC priorities. The final versions were translated into the respective languages in a check and double-check procedure. The translations were first made into the local language with inputs from a PC expert and then back-translated and compared to the original version.

Two pilot implementations

The provisional tool was pilot tested in two provinces in Turkey and two districts in the Moscow region of the Russian Federation. Under supervision of the WHO Regional Office for Europe and the respective ministries of health, local partners together with

the technical lead of NIVEL organized the details of the fieldwork, including sampling procedures, training of fieldworkers, logistics of data collection and data entry. In both countries meetings were organized with experts to discuss and validate the answers on the national level questionnaires. All data were analysed, conclusions and policy recommendations formulated and a draft report produced – including a section on lessons learned with the pilot implementation (18,19).

Copenhagen consultation meeting

The draft report was then discussed at a review meeting with international experts at the WHO Regional Office for Europe in Copenhagen on 14–15 April 2008, resulting in a revision of the three questionnaires, with the following changes:

- Questions were made more factual, avoiding asking for opinions.
- The sequence of topics and questions was reordered.
- The national level questionnaire was changed into a more comprehensive background document to be prepared by a small team of local experts and subsequently discussed and validated in a focus group directed by WHO and NIVEL.
- The questionnaires for patients and physicians were shortened.
- The language throughout the questionnaires was made more consistent.
- In addition to the results of the surveys other complementary sources of information were to be used, such as available literature, articles, interviews with health care workers and experts and personal observations during site visits.
- For implementation of the tool, countries would be able to add questions related to specific national priority areas (such as TB care and reproductive health services in the case of Belarus).
- The final report would contain a set of proxy indicators.

After revision, the PCET was available for use. An implementation scheme for the information of Member State counterparts was produced.

1.3 Overview of the PCET implementation in Serbia

The PCET was implemented in the framework of the 2008–2009 Biennial Collaborative Agreement (BCA) between the WHO Regional Office for Europe and the Ministry of Health of the Republic of Serbia. Preparation was done during a visit of WHO representatives to Serbia in June 2008. NIVEL, in its capacity as WHO Collaborating Centre, and the National Institute of Public Health in Belgrade named collaborating partners. The project effectively started in May 2009.

From 11–15 May 2009, a NIVEL researcher visited Serbia to inform counterparts – together with staff from the WHO Country Office – of the implementation purpose and activities, and to prepare further methodological and logistic steps, as follows.

- The translated questionnaires were explained and discussed with the project's national working group and the partner National Institute for Public Health.
- Additional questions were formulated to be added to the core of the tool.
- Implementation procedures were discussed with the above-mentioned partner and stakeholders.
- Further planning was discussed with the national coordinator, including identification of target populations of physicians and patients, sampling procedures and fieldwork organization.
- Field visits were made.

A second visit was made from 6–10 September 2009 on further implementation measures, including:

- final fieldwork preparations with local counterparts
- meeting with representatives of facilities
- fieldworker instruction on data collection among physicians and patients
- installation of data entry software and related training
- discussion of the national level questionnaire with experts
- discussion of further planning.

The selected regions and districts

In order to have a good coverage of the country, in close consultation with local partners it was decided to implement the surveys in Vojvodina, Belgrade and Central Serbia.

Vojvodina

Vojvodina is an autonomous province located in the north of the country, with a population of about two million, with various ethnic and cultural backgrounds, predominantly Serbs and Hungarians. Six official languages are used in the province. Three districts were included in the study:

- Novi Sad, the regional capital (pop. c. 370 000), the second largest after Belgrade, and environs;
- Sombor, in extreme northwestern Vojvodina, with around 100 000 inhabitants, half in the city of Sombor; and

- Indija, in southern Vojvodina, with a population of 52 000, half in the city.

Belgrade

The Belgrade area includes the capital and environs, with a total population of 1.6 million. The area is a separate territorial unit consisting of 17 municipalities of varying size, including:

- Stari Grad, the old city of Belgrade, with a population of 55 000; and
- Voždovac, a large area, ranging from industrial to agricultural, 4 km south of downtown Belgrade with a population of around 150 000.

Central Serbia

- Niš district in the southeastern part of Central Serbia and has a population of 380 000. The administrative centre is the city of Niš, an important industrial centre with 250 000 inhabitants. The district outside the city is divided into 6 municipalities.
- Doljevac is one of the municipalities in the Niš district with a population of around 20 000, fewer than 2000 in the village of the same name.
- Smederovo district has a population of around 109 000 and is situated in the north of Central Serbia, bordering the Belgrade area to the west. The city of Smederevo (pop. c. 80 000) is the heart of Serbia's steel industry. In the more rural parts of the districts fruit growing is a major business.

The selected districts and municipalities not only offer good geographical coverage, but also allow comparison of Vojvodina, where decentralization is more advanced, to Central Serbia, where it is in an early stage.

Preparation and implementation of the surveys

Two groups were selected for the physicians' survey: GPs (serving the adult population from the age of 18) and paediatricians. The initial intention of including PC gynaecologists in the survey was not realized since they comprise only 9% of all PC physicians in the country and getting a sufficient number in the study would require almost twice the number of centres to be approached, at prohibitive cost.

Within the selected districts official staff lists were used as the sampling frame. From these lists physicians from both populations were selected by the local counterpart according to a random procedure. In each of the three areas random samples of 25 paediatricians and 75 GPs were to be drawn. So there were 75 respondents among paediatricians and 210 among GPs.

For the patient survey, respondents would be recruited from the practices of 10 paediatricians and 28 GPs in each district. Each of these practices was to be visited by a trained fieldworker whose task was to ask attending patients to fill in a questionnaire. For patients under the age of 15 an accompanying adult would be asked. The fieldworkers' task was to collect 15 completed questionnaires, which would result in 450 respondents among patients of 30 paediatricians and 1260 respondents among patients of 84 GPs (altogether 1710 patients).

Role of fieldworkers

Fieldworkers had a crucial role in the data collection among patients. They recruited and informed the patients and distributed and collected the questionnaires among the patients and physicians. Distribution of questionnaires to physicians working in practices not visited by fieldworkers was done via the management of the respective CHC, and returned in closed envelopes. Fieldworkers were recruited by the local coordinator and instructed by the NIVEL researcher during his second mission, including:

- explanation of the context and objectives of the survey;
- the basic principles and structure of the tool and the type of questions used;
- the specific topics of the questionnaires;
- establishing good rapport with respondents by clear explanation and stressing confidentiality;
- creating a suitable environment for patients to fill in the questionnaire;
- checking readability and completeness of answers; and
- logistics.

Information gathering at the national level

A team of 17 experts contributed to answering the questionnaire, from the following institutions: the Ministry of Health, the National Institute of Public Health, the Regional Institute of Public Health of Vojvodina, the Regional Institute of Public Health of Belgrade, the Department of Social Medicine of the Medical Faculty of the Medical University, the Health Insurance Fund, the Serbian Medical Chamber, the Serbian Nursing Association and the Serbian Agency for Accreditation.

The answers and the collected statistical data were translated into English and sent to WHO, NIVEL and national working group experts, with whom a discussion and validation meeting was organized in Belgrade on 10 September 2009. The meeting aimed to check and consider the answers in a broader perspective and to gather more detailed information where possible. Results and outcomes can be read in chapter 3 of this report.

Data processing, analysis and reporting

Data entry was carried out by the counterpart National Institute of Public Health in Belgrade. A data-entry program was designed by NIVEL, using SPSS Data Entry Station version 3.0.3. Raw data files were sent to the NIVEL research team for processing and analysis. A draft report with results and preliminary recommendations was discussed in a meeting with Serbian and WHO experts in Belgrade on 9 March 2010. On the basis of suggestions and requests for additional information made at this meeting and further peer review at NIVEL, the draft report was revised and finalized in April 2010. This new version was submitted by NIVEL to the WHO Regional Office for Europe for final editing and publication.

Table 3. Key data on the application of the PCET in Serbia

Elements of the Implementation	Explanation
Target groups	<ul style="list-style-type: none"> • PC physicians (GPs and paediatricians) • Patients (visiting PC facilities) • Health care experts (national)
Locations	<ul style="list-style-type: none"> • Vojvodina (3 districts) • Belgrade (2 districts) • (Rest of) Central Serbia (3 districts)
Type of data collection	<ul style="list-style-type: none"> • PC physicians: survey using prestructured questionnaires (disseminated by field workers and IPH staff) • Patients: survey using prestructured questionnaires (personally handed over by field workers) • Health care experts: mixed approach; questionnaire and meeting for validation and feed back
Method of sampling	<ul style="list-style-type: none"> • PC physicians: GPs: random samples in 8 districts; Paediatricians: random samples in 8 districts • Patients: the first 15 patients attending the practice of 84 GPs and 30 Paediatricians • Health care experts: 17, recruited by local partner
Planned sample sizes	<ul style="list-style-type: none"> • PC physicians: 285 (210 GPs+75 Paediatricians), as follows: <ul style="list-style-type: none"> » Vojvodina: 70 GPs + 25 Paediatricians » Belgrade: 70 GPs + 25 Paediatricians » Central Serbia: 70 GPs + 25 Paediatricians • Patients 1 710 (with 114 sampled physicians; each 15 patients), as follows <ul style="list-style-type: none"> » Vojvodina: 28 GPs x 15 = 420 patients 10 Paediatricians x 15 = 150 patients » Belgrade: 28 GPs x 15 = 420 patients 10 Paediatricians x 15 = 150 patients » Central Serbia: 28 GPs x 15 = 420 patients 10 Paediatricians x 15 = 150 patients • 17 health care experts:(from various institutes)
Response	<ul style="list-style-type: none"> • Physicians 285 (GPs: 210 Paediatricians: 75) • Patients: 1.655
Instructions	<ul style="list-style-type: none"> • Local coordinator: methodology of sampling and recruitment; identification of study populations; lists of GPs and paediatricians; logistics of surveys • Management of CHCs: aim and approach of the study • Field workers: explanation of questions; how to approach and assist respondents; quality aspects • Respondents: introduction/instruction included in the questionnaires; introduction, patient support by fieldworkers
Coordination of fieldwork	<ul style="list-style-type: none"> • Local coordinator: overall responsibility • Field workers: information of respondents; correct administration of data collection in their facilities • NIVEL: general supervision during and after field visit
Period of data collection (surveys)	September 2009
Analysis & reporting	At NIVEL (Utrecht, Netherlands)
Key dates	<ul style="list-style-type: none"> • WHO preparatory visit: June 2008 • First visit NIVEL researcher: 11-15 May 2009 • Second visit NIVEL researcher: 6-10 September 2009 • Expert meeting nat. questionnaire: 10 September 2009 • Data files sent to NIVEL: 3 November 2009 • Draft report available: 5 February 2010 • Expert meeting / workshop in Belgrade on draft report: 9 March 2010

2 INTRODUCTION TO SERBIA

2.1 The country²

Figure 3. Map of Serbia



Source: http://en.wikipedia.org/wiki/File:Serbia-CIA_WFB_Map.png

Situation and administration

The Republic of Serbia is a landlocked country between central and southeastern Europe, with borders with Hungary to the north, Romania and Bulgaria to the northeast and east, the Former Yugoslav Republic of Macedonia to the south and Croatia, Bosnia and Herzegovina and Montenegro to the west. Disputes exist concerning the border with Albania and the status of Kosovo.

The Serbian landscape is varied, with fertile plains in the north, limestone ranges and basins in the east and mountains and hills in the southeast, with Mount Midzor as the highest point, at 2169 metres. The country is organized into autonomous provinces, districts, cities and municipalities. Vojvodina, in the north, is an autonomous province consisting of 7 districts, 6 cities and 39 municipalities. The territory of Serbia excluding the autonomous provinces is called Central Serbia, which, however is not an administrative entity and has no government of its own. Central Serbia consists of 17 districts and the capital Belgrade is a district itself. Districts are purely administrative, and do not have councils or other representative organs.

The basic units of local self-government are municipalities and cities. Municipalities usually have at least 10 000 inhabitants and are responsible for public services, have

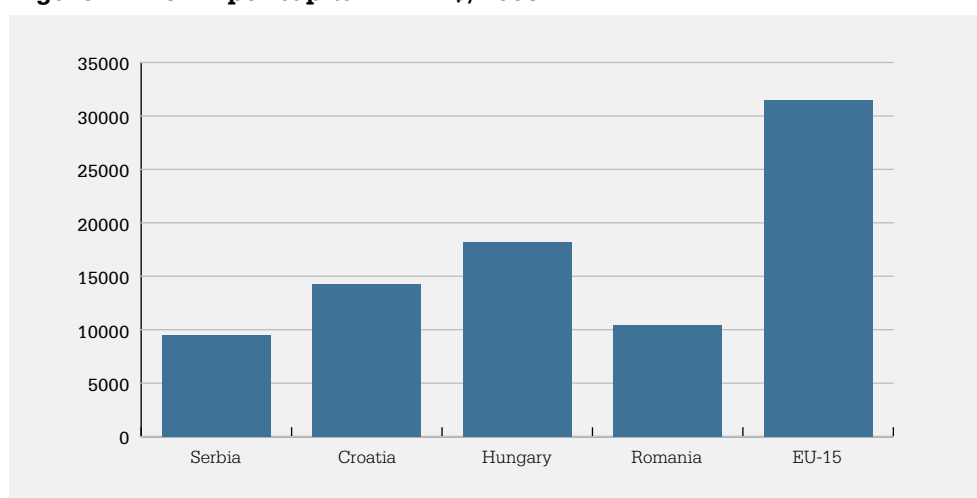
² Sources: Statistical Office Republic of Serbia at: <http://webrzs.statserb.sr.gov.yu/axd/en/index.php> ; Serbia: Country Brief 2008. Washington, World Bank, 2008 (<http://www.worldbank.org.yu/wbsite/external/countries/ecaext/serbia>); Serbia. Wikipedia (<http://en.wikipedia.org/wiki/serbia>); Serbia Country Profile. UNDATA (<http://data.un.org/CountryProfile>).

their own budget and are governed by an elected council. Large cities (with more than 100 000 inhabitants) can be divided in a number of municipalities. In those cases competences are divided between city authorities and municipalities.

Economy

After the turmoil of the 1990s and a period of economic sanctions by the international community, new reform programmes were started after the turn of the century, resulting in economic recovery and increased wealth. Other signs of change are Serbia's rejoining of the World Bank and the European Bank for Reconstruction and Development, and, in particular, an official application for EU membership in December 2009. As Figure 4 shows, productivity in Serbia is lower than in Croatia, Hungary and Romania. The gross domestic product per capita is less than one third that of the EU-15 countries.

Figure 4. GDP per capita in PPP\$, 2006



Source: WHO HFA database at <http://data.euro.who.int/hfad>

In order to increase foreign investments, state institutions need to further improve their performance and be more transparent, which will require legal and judicial reform.

Reduction of poverty and improving the well-being of the most vulnerable groups, especially minorities and rural residents, is another (major) problem that deserves urgent attention, for instance by creating social protection mechanisms and human capacity development. As Serbia has been hit by the economic crisis, like other countries, tackling these problems has become more difficult. The severely declining manufacturing output (down by 12.1% from 2008 to 2009) and exports have caused serious economic problems and are a setback to the positive economic development of the past decade.

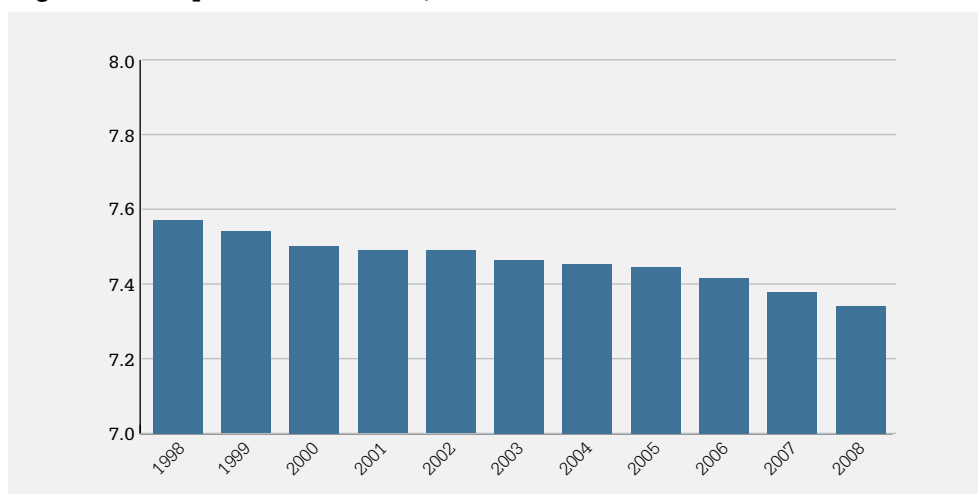
2.2 Population and health³

In 2008, Serbia had a population of 7 350 000 (excluding Kosovo), around one-quarter in Vojvodina, and the remainder in Central Serbia. Over the last decade the Serbian popu-

³ Sources: Statistical Office Republic of Serbia (<http://webzrzs.statserb.sr.gov.yu/axd/en/index.php>); Serbia. Wikipedia (<http://en.wikipedia.org/wiki/serbia>); Health for all database. Copenhagen, WHO Regional Office for Europe (<http://data.euro.who.int/hfad>).

lation has steadily declined (see figure 5), perhaps due to the hostilities, which caused many people to leave the country, and the very low birth rate (see Table 4). There are large numbers of refugees and displaced people in Serbia. The official number of the UNHCR is 327 000, but the actual number is thought to be higher. Among the diverse ethnic groups in the country, there are an estimated 450 000 Roma, many of whom are socially vulnerable. As many refugees and displaced people are expected to stay, the poverty problem will deserve continued attention.

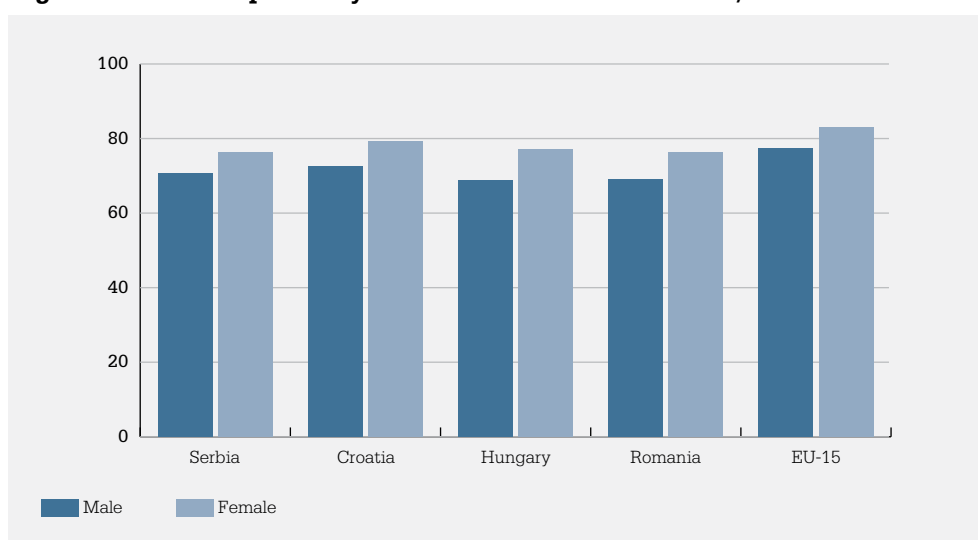
Figure 5. Population of Serbia, 1998–2008



Source: Statistical Office RS (excl. data on Kosovo)

In Table 4 and Figures 6 and 7 a number of key indicators for Serbia have been compared to some neighbouring countries and the EU-15. The life expectancy at birth in Serbia is 70.8 years for men, which is higher than in Hungary and Romania but almost 2 years lower than in Croatia and almost 7 years lower than in the EU-15. Female Serbians have an average life expectancy of 76.2 years, comparable to women in Romania, but lower than in Croatia, Hungary and the EU-15.

Figure 6. Life expectancy at birth in several countries, 2006



Source: WHO HFA database at <http://data.euro.who.int>

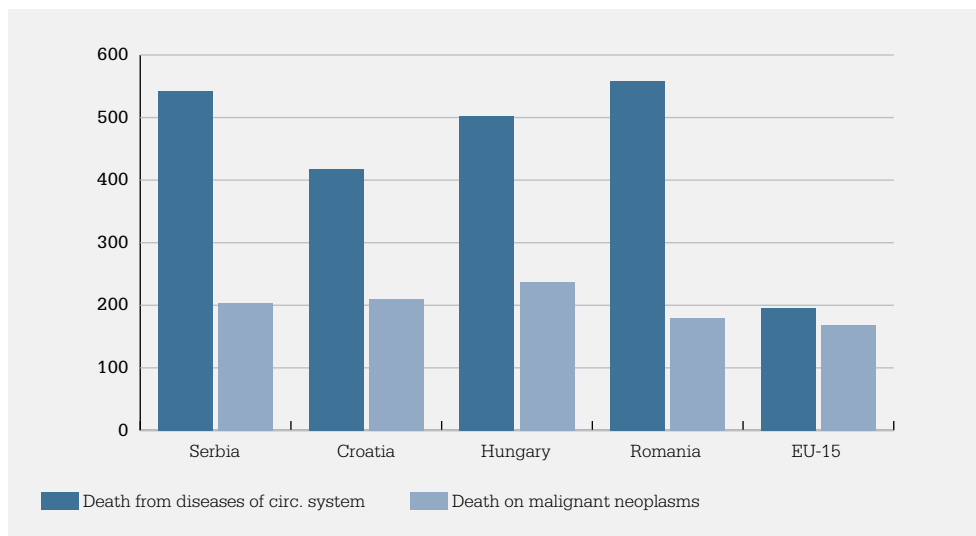
These demographic indicators point to a faster pace of ageing than in the EU-15 countries, where this has become an important policy issue (see 4).

Table 4: Selected demographic, health and life style indicators

Indicator	Serbia	Croatia	Hungary	Romania	EU-15
Population 0-14 yrs (%)	15.5	15.7	15.5 *	15.2	15.9
Population 65+ yrs (%)	17.2	17.0	15.7 *	14.9	17.5
Population density (per km ²)	84	79	108	91	n.a.
Live birth rate (p. 1 000 pop)*	9.2	9.3	9.7	10.3	10.7
Total fertility rate (children per woman)	1.40	1.40	1.35	1.30	1.58
Life expectancy at birth (yrs)	M 70.4 F 76.5	M 72.6 F 79.4	M 68.8 * F 77.2 *	M 69.8 F 77.3	M 77.4 F 83.1
Death rate (p. 1 000 pop.)	13.9	11.4	13.5	11.8	9.3
Maternal deaths (per 100 000 live births)	12.7	9.7	8.2	13.5	5.4
Infant mortality (p. 1 000 live birth, reported)	7.1	5.2	6.2	10.8	3.9
Death from diseases of circulatory system (per 100 000 SDR)	543	418	502	558	196
Death from malignant neoplasms (per 100 000 SDR)	203	210	237	180	169
Death from external cause injury & poisoning (per 100 000 SDR)	45	53	68	57	34
Tuberculosis incidence - official (per 100 000) - estimated	26.6 n.a.	20.9 40	15.3 17	104.9 115	9.2 13.0
HIV incidence (per 100 000)	1.20	1.49	0.80	0.83	6.14
Abortions (per 1 000 live births)	356	114	449	685	230 *
Regular smokers (% 15+)	M: 31 F: 23	M: 34 ** F: 22 **	M: 37 ** F: 25 **	M: 33 F: 10	Germany: M: 37 F: 31 Italy: M: 29 F: 17 Spain: M: 32 F: 22

WHO HFA database at <http://data.euro.who.int/hfad> (yr: 2006 or later); n.a. = not available
* 2005 or 2004 ** 2003

Figure 7. Deaths from diseases of the circulatory system and malignant neoplasms (SDR per 100 000)



Source: WHO HFA database at <http://data.euro.who.int>

2.3 The health care system

The 1978 WHO Alma Ata Declaration has had a major influence on the shape of the health care system in the former Yugoslavia. Principles like universal access and community-based services became health policy priorities. However, due to economic decline and a decade of conflicts, the quality of public health care system deteriorated in Serbia. New successful reform initiatives have been developed to restructure and strengthen the health care sector.

Financing

Health care in Serbia is mainly financed by mandatory contributions to a social health insurance scheme. The National Health Insurance Fund (HIF) is responsible for financing the system. Mandatory health insurance premiums are levied on salaries of employees (employer and employee pay equal portions) as well as from farmers and the self-employed. Another source of financing is private expenditures for health, mainly out-of-pocket payments for medicines. Much private expenditure is related to medicines. In Serbia out-of-pocket payments for health (as a proportion of the total health expenditure) are relatively high (see figure 8). Collected funds are centrally pooled by the HIF and redistributed in line with regulation for contracting with health institutions. The HIF is obliged to contract all health care services from delivery institutions that are on an official list.

Contracts with the HIF include a work plan developed by the Regional Institute of Public Health. Payments to providers are primarily based on inputs instead of service delivery. Thus, salaries of health care workers currently contain very few incentives for good performance. There are plans to change this system by contracting facilities and by paying health workers within a capitation-based payment scheme.

According to the ongoing process of decentralization in the PC sector, municipalities increasingly own facilities and equipment, and are therefore responsible for capital investments.

Service provision

The HIF guarantees access to a relatively broad package of health services to the entire population. Scope and content of care are legally defined and include preventive, curative, rehabilitative, inpatient and outpatient specialist care, and PC including prescription drugs, home care and medical transport. Despite the initial strong emphasis on PC, the system evolved such that curative services were largely carried out by specialists and in the hospitals. The frequent referrals by PC providers to the secondary and tertiary levels resulted in a loss of PC skills, to the point where not all physicians feel capable of performing the more comprehensive chosen doctor duties.

Resources and utilization

Table 5. Indicators of health care resources and utilization

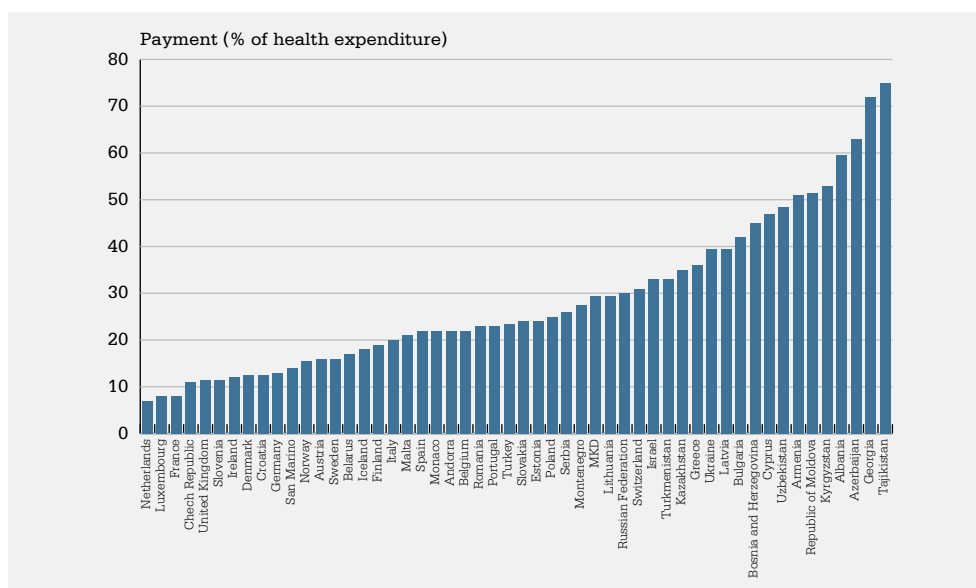
Indicator	Serbia	Croatia	Hungary	Romania	EU-15
Total health expenditures as % of GDP (WHO est.)*	8.0	7.4	7.8	5.5	9.6
Total health expenditures per capita (in PPP \$)*	395	1.0	1.3	507	2 282
Hospital beds (per 100 000)	540	535	713	654	554
Physicians (per 100 000)	271	259	278	192	338
GPs / District physicians - (per 100 000)	69	65	65	69	102
- as % of all physicians	25.5	25.1	23.4	35.9	30.2
Nurses (per 100 000)	557	524	902	397	805
Pharmacists (per 100 000)	26	57	54	4	81
Dentists (per 100 000)	33	72	42	20	65
Average length of stay (days)					
- all hospitals	10.0	9.9	9.1	7.6	9.4
- acute hospitals	7.8	7.5	6.0	n.a.	6.5
Acute care hospital admissions (per 100)	9.4	14.6	18.5	n.a.	16.7
Outpatient contacts per person (per year)	8.9	6.4	10.8	5.6	Germany: 7.5 Denmark: 4.2 Holland: 5.6

WHO HFA database at <http://data.euro.who.int> (yr: 2007 or 2006)

* 2005

Figure 8 below shows that out-of-pocket payments, which increased due to increasing poverty in the 1990s, resulting in more people, particularly those from socially vulnerable groups, having greater difficulty accessing health care services.

Figure 8. Out-of-pocket payments as % of total health expenditure, 2006



Source: *The European Health Report 2009*. WHO Regional Office for Europe.

Primary care⁴

At the core of PC in Serbia are the CHC located in all cities and municipalities, which may be relatively large structures, including a number of attached ambulatories, pharmacies and institutes. As a result of decentralization, CHCs are increasingly owned and run by municipalities. This decentralization is an important precondition to implementing another financing reform. The new system will be based on contracting facilities, a new payment scheme based on a capitation fee and a clear split between purchaser and provider roles.

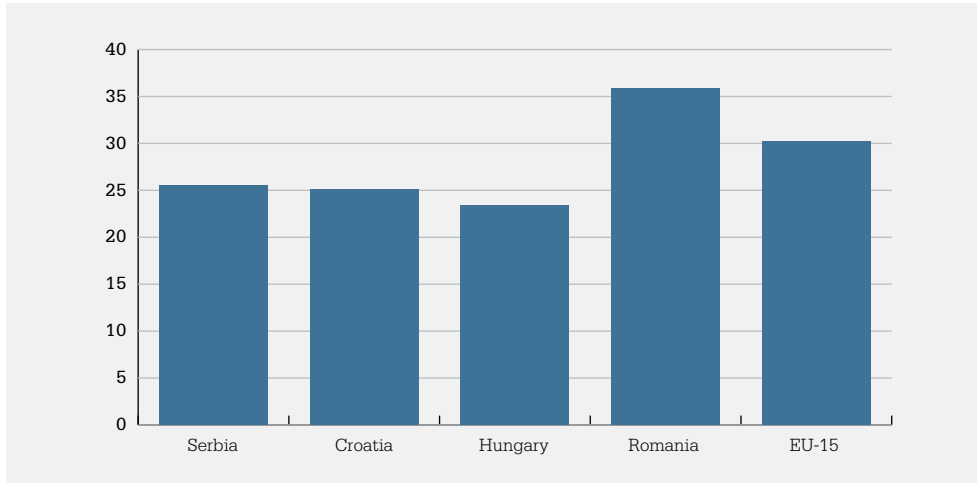
Ambulatories are staffed according to the size and needs of the population they serve, varying from several full-time teams of doctors and nurses, dentists and pharmacists working in shifts to one or two weekly doctor visits in remote ambulatories. According to official norms, citizens should have access to a CHC or ambulatory within 15 minutes travel distance. Services provided at CHCs vary considerably. Core services are: preventive health care, emergency services, general medical services, women's and children's care, home nursing services and diagnostic services (laboratory and imaging). CHCs also provide dental care, occupational medicine, physical therapy, rehabilitation and ambulance services if they are otherwise unavailable in the area. If a hospital is more than 20 kilometres away and the catchment area has more than 20 000 inhabitants, the CHC also provides a number of specialist services, including internal medicine, tuberculosis care (phtysiology), ophthalmology, ENT and psychiatric services.

A core element of the ongoing PC reform is the chosen doctor scheme, which requires people to register with a PC physician of their choice. This can either be a GP, a gynaecologist, a paediatrician or an occupational doctor. At present, well over 75% of the

⁴ Based on the draft working paper, "Better primary health care for us; Policy directions to strengthen the primary health care system in Serbia, from 2010 to 2015". Ministry of Health of the Republic of Serbia / Balkans Primary Health Care Policy Project (CIDA funded). Belgrade, 2009

population has registered with a chosen doctor, who is the doctor of first contact, coordinating care across levels and being accountable for it.

Figure 9. Physicians working in PC as a percentage of all physicians



Source: WHO HFA database at <http://data.euro.who.int> (yr: 2007 or 2006)

3. PRIMARY CARE IN SERBIA: NATIONAL CONTEXT

This chapter will provide an overview of the priorities, regulation and structures relevant to PC in Serbia. Topics will include: national policy and legislation, the financial arrangements, workforce and education of providers, aspects of quality assurance and the role of patients.

Information in the chapter is based on answers provided on questions in the national level questionnaire by a team of experts. The statistical backgrounds were contributed by the National Institute of Public Health. Results will be described according to the health system functions and dimensions used in the Primary Care Evaluation Scheme (see Table 2). This chapter describes the context for the results of the surveys among PC physicians and their patients, to be described in the chapters 4 and 5.

3.1 Stewardship / governance

3.1.1 Policy development

The 1978 WHO Alma Ata Declaration, with its community orientation and focus on intersectoral collaboration, strongly influenced health care in Yugoslavia. Since then, the health care system has gradually lost its position as an international model as a result of the economy, the disintegration of Yugoslavia and a period of hostilities and isolation of the country. In the years after the turn of the century steps were taken to reverse the trend. The 2002 document "Health policy in the Republic of Serbia" focused on the health status of the Serbian population and the health potential of the nation. It advocated fair and equal access to health care for all, particularly vulnerable groups, putting the user into the centre of the system, health system sustainability, transparency and partial decentralization, and it aimed to improve performance, efficiency and quality of services. The document also defined the role of the private sector. In 2002 and 2003 two more policy papers were published: "Vision of the health care system in Serbia" and "Strategy and action plan for health system reform in Serbia by the year 2015". These documents were later contained in the more comprehensive strategic document "Better health for all in the third millennium", which has been the basis of the health sector reform since. It prioritized prevention and PC, with the team of chosen doctors at the core, consisting of internist or occupational medicine, specialists for adults, paediatricians, gynaecologists and dentists. Other PC services are emergency services, diagnostic services, some specialist-consultative outpatient services and community nursing.

Timeline of PC policy measures

Between 2002 and 2009 the following policy documents were published:

- 2002: Health policy of the Republic of Serbia;
- 2003: Better health for all in the third millennium;

- 2005. Law on health care protection (Official Gazette, Journal of RS no. 107/2005) (definition of the types of health services and health institutions at primary level; social care; patient rights);
- 2005: Law on Health Insurance (Official Gazette, Journal of RS no.107/2005.) (rights of the insured to health care; responsibilities of chosen doctors);
- 2006: Regulation on detailed conditions for carrying out health activities in health care facilities and other forms of Medical Services (Official Gazette, Journal of RS no. 43/2006) (criteria for staff, space, equipment and drugs in primary level facilities, average number of patients per chosen physician, PC services);
- 2006: Regulation on conditions and internal management of health institutions (Official Gazette of RS no. 43/2006);
- 2007: Rules on health care quality indicators (Official Gazette of RS no 57/2007) (quality indicators, waiting lists)
- 2007: Regulation on detailed conditions for the implementation of continuing education for health workers and health assistants (criteria for continuing education and choice of institutions providing continuing education);
- 2008: Regulation on exercising the right of compulsory health insurance (Official Gazette of RS no 108/2008, 112/2008, 11/2009, 24/2009, 56/2009, 80/2009) (number of patients per chosen doctor, procedure of choice, changing chosen doctors);
- 2009: Decree on the Plan network of health institutions (Official Gazette. Journal of RS no.71/2009) (number, structure, capacity and territorial layout of all state-owned health institutions; health establishments for municipalities with at least 10 000 inhabitants or for two or more municipalities.
- 2009: Regulation on the content and scope of the right to health protection from compulsory health insurance and copayment for 2009 (Official Gazette of RS no. 43/06), (content and scope of rights, including prevention, diagnostics, treatment, rehabilitation, etc.); copayments for certain treatment categories),
- 2009: Regulation on conditions, criteria and standards for the contracting health care providers and to set the level of compensation for their work for 2009 (contractual conditions and criteria of HIF funding);
- 2009: Regulation on the nomenclature of health services at primary level (Official Gazette of RS no 23/2009) (list of health services, personnel and time for PC services).

National programmes and national health strategies

Since 2005 national programmes have been adopted for: cancer, colorectal cancer, breast cancer prevention, prevention and early detection of type two diabetes, prevention of cervical cancer, health of women, children and youth, and dental care. National strategies have been developed for: public health, combating drug abuse, palliative care, quality and safety improvement for patients, youth health and mental health.

Prevention and early detection (screening) play an important role in the execution of national programmes and strategies on the CHC level. The chosen doctor role is dominated by prevention, promotion of healthy lifestyles and health education.

Primary-secondary care split

Since 2005, PC institutions (CHCs) have been separating from secondary care facilities (general hospitals). The old conglomerates including both primary and secondary care functions should have disappeared by 2010. This reform is part of the decentralization of health services under which CHCs are owned and managed by municipalities.

New payment scheme

After two years of preparation the capitation-based payment system is now being implemented. Payment is related to the number of patients registered with a doctor and performance indicators of efficiency and quality of care are used. Teams of doctors and nurses are rewarded for the performance of certain preventive examinations (such as PAP tests with gynaecologists in PC).

Health promotion centres

Since 2006, many CHCs have opened counseling centres for health promotion, primarily intended for employed people, where visitors can have health checks and have their risk for non-communicable diseases assessed.

Human resources planning

As a result of a 2009 regulation, human resource plans are being implemented in publicly owned facilities, aiming to achieve a more rational distribution of staff in line with the official norms and standards. This activity will further rolled out in the coming years.

Licensing of workers

As a result of the project PHC Policy in the Balkans, a scheme on licensing and relicensing of health care workers was initiated on 1 January 2010. Relicensing is dependent on staff CME achievements. During the past two years of preparation, all health workers had to get licensed by producing documentation of their qualifications, experience and working status to the Medical Chamber. Educational programmes have been accredited by the Health Council.

Voluntary accreditation of CHCs

Accreditation of health care facilities is not obligatory in Serbia. However, some pilot CHCs have successfully completed voluntary accreditation. More CHCs are interested, but funding of accreditation seems to be an obstacle. Primary, emergency and occupational medicine services are also subject to initiatives aiming to improve efficiency.

Chosen doctor

By the end of 2009 an estimated 75–80% of the population had registered with a doctor (GP, occupational medicine doctor, paediatrician, gynaecologist or dentist) in the CHC in their home territory. Tasks of chosen doctors are to: organize and implement measures to preserve and improve the health of individuals and families; provide detection and suppression of risk factors; provide diagnosis and timely treatment; provide emergency medical care; refer the patient to an appropriate health institution or a medical special-

ist; coordinate continued treatment; provide home treatment, health care, palliative care, and post-hospital treatment; prescribe medicines; provide mental health care and perform other duties required by law.

3.1.2 Central and local health governance

Primary care at the Ministry

No one section or department at the Ministry of Health has charge of or a coordinating role in PC. In fact, since 2008, there are six sections and departments with partial responsibility for it:

- Organization of Health Services and Health Inspection Section (with one PC reforms coordinator)
- Health Insurance and Health Care Financing Section
- Department of Public Health and Health Care Programme
- Department of Sanitary Surveillance
- European Integration and International Cooperation Section
- Department of Medicines and Medical Devices.

Regional differences in PC

The old regional primary and secondary care conglomerates were different in size and range of services. Decentralization, which should be completed in 2010, will result in priorities and service provision in CHCs increasingly tuned to local needs and circumstances. Consequently, regional PC differences are likely to grow. For the provision of health care, municipalities are supposed to:

- monitor population health
- set and implement priorities
- create conditions for accessibility and uniform pc utilization
- plan and implement environmental protection programmes
- test food, drinking water, sanitation, etc.
- fund construction, maintenance and equipment of health facilities.

Local governments may design their health care programmes for certain categories of people or types of disease, beyond the national programmes. They also have the power to appoint and dismiss directors and members of management and supervisory boards of health institutions. So, municipalities can make a difference in the range and quality of PC services, the quality of premises and transportation and the patient-friendliness of services and accommodations. Other differences among municipalities may be seen in the way vulnerable groups are cared for; how media are used for health promotion and

copayment schemes. The development of municipal health policies will largely depend on local economic conditions.

It should be noted, however, that the financing of health care costs such as salaries, consumables and medicines is not the responsibility of the municipalities, but rather of the HIF (for health services) and the Ministry of Health (for national programmes). Furthermore, municipalities and their CHCs are obviously bound by national rules on financing and criteria for service provision and staffing.

3.1.3 Licensing and accreditation

Physicians

The following are formal licensing requirements for public and private physicians:

- a medical degree
- a six-month postgraduate internship
- passing a professional exam
- permission to work independently to a minimum of half-time
- working in the area for which the license applies.

Chosen doctors (GPs) must renew their license every seven years, according to the following criteria:

- a minimum of 50% of working time in the area for which the license applies
- having been subject to disciplinary procedures
- 24 points annually in accredited CME programmes.

Nurses

Like physicians, nurses are obliged to recertify every seven years, under the same criteria.

CHCs

Accreditation is not obligatory for CHCs. An experimental voluntary accreditation scheme is in place, evaluating:

- clinical quality of work
- protocols and procedures
- good clinical practice guidelines
- work processes
- leadership, management, human resources

- environmental considerations, disaster preparedness, accident and fire protection
- medical documentation.

Criteria used in the voluntary accreditation are uniform and have been established by the Ministry of Health. The accreditation is conducted by the Agency for Accreditation of Health Institutions in Serbia, an independent public agency. Results are reported to the management of the CHC and to the local, regional and national health administration, and are not available to the public. No sanctions or consequences are applicable to CHCs failing to meet minimum criteria.

3.1.4 Conditions for care process

Table 6. Population per full-time PC worker, official norms

Type of PC physician	Population per full-time employee
GP	1600 adult patients (1100–2000)
Occupational medicine	1600 adult patients (1100–2000)
Gynaecologist	6500 women 15+ (4500–7500)
Paediatrician	850 pre-school children (500–1000) / 1500 school children (1100–2000)
Dentist	1500 children up to 18 yrs (1000–1700) / 10 000 adult patients (8000–12 000)

Table 7. Staff shortages in a number of PC professions

primary care professions	No shortage	Shortage in some regions	Shortage nationwide
- GPs		√	
- PC Paediatricians		√	
- PC Gynaecologists		√	
- Dentists	√		
- Pharmacists	√		
- Community Nurses	√		
- Physiotherapists	√		

If the average staff norms are applied there is no lack of these workers at the national level. However, a 2007 analysis of staff by districts and CHCs showed that there are large variations in coverage of the various categories of the population by chosen doctors and their (poor) involvement in preventive visiting (see Table 8). Indeed the average availability is around the national norm, but there are wide variations, which means that on the one hand there are CHCs with oversupply of physicians, while on the other hand there are CHCs where physicians have workloads far above the national norm.

Table 8. Availability of PC physicians compared to national norms, and involvement in preventive visiting.

Population category	Number per doctor / standard (min – max per district)	% doctors Involved in preventive visits (min%-max% per district)	Number of visits per doctor (min-max per district)
Preschool children	678 / 850 (414 – 1104)	20% (14%–32%)	6 995 / 6 000 (4 216 – 8 576)
School children	1 515 / 1 500 (1 069 – 3 935)	17% (10%–25%)	6 951 / 6 000 (4 172 – 13 114)
Woman	5 988 / 6 500 (4 467 – 15 146)	42% (28%–55%)	4 849 / 6 000 (3 606 – 10 912)
Adult population	1 768 / 1 600 (1 396 – 2 781)	5% (1%–13%)	6 616 / 7 200 (4 836 – 8 796)

Mode of practice

No information was available about the composition of teams, whether monodisciplinarily (the number of physicians per team) or multidisciplinarily (the number of workers of various disciplines on a team).

Primary care gate-keeping

Patients should first visit their chosen doctors before they can see a medical specialist (by referral).

3.1.5 Conditions for responsiveness

The role of NGOs / stakeholders

Since 2002 the Ministry of Health has created mechanisms to involve stakeholders and interest groups systematically in the development of policy documents. It has also encouraged civil society initiatives to formulate ideas and needs and to communicate them to the public. Representatives from the organizations listed below, listed with their relevant activities, are formally part of a working group involved in the drafting of strategic documents and in consensus conferences.

- HIF: health care financing and advising; PC staffing norms;
- Chamber of Health Workers: participation in debates of legislative proposals; licensing;
- Chamber of Health Institutions: consultation on Ministry documents;
- Serbian Medical Society: participating in debate on legislation; organization of expert meetings; contribution to themes set by annual programmes;
- Health Care Trade Unions: consultation on Ministry documents; consensus conferences; representing the interests of health professionals;
- Health Workers' Professional Association: consultation Ministry documents; consensus conferences;

- Standing Conference of Towns and Municipalities: participation in drafting legislation, regulation and national strategies relevant to local governments; organization of public hearings; expert opinion for amendments to laws, regulations and strategies;
- Consumers' and patients' associations, including those for specific diseases and those for health care consumers in general: representing the interests and rights of patients; improvement of conditions for people with special needs; promotion of healthy lifestyles; protection of patient rights; participation in working groups and consensus conferences; and
- Other NGOs relevant to PC, although their scope may be wider, for example, those working with vulnerable groups, such as the Roma population, refugees and displaced people.

Patient rights

Between 2002 and 2007, a series of patients' rights-relevant laws and regulations were implemented: Vision of Health Care Development, Strategies of Health System Reform by 2015 including an action plan (integrated in the 2003 policy paper Better Health for All in the Third Millennium), the Health Care Protection Act of 2005, the Professional Health Workers Act of 2005 and the Regulation on Indicators of Quality Health Care of 2007. In a second period, from 2007, the Ministry of Health has launched two campaigns, You Have the Right (including regional meetings with rights advocates, press conferences, dissemination of information in all health facilities) and Health is Spreading with a Smile, promoting communication between patients and health workers. Since 2007, the Ministry has been more systematically monitoring aspects of patient rights in health care facilities.

Legislation and regulation

Important aspects of patients' rights have been addressed in the Health Care Protection Act of 2000, including access to care according to need, resources and equal access, rights and obligations related to compulsory health insurance, patient information, free choice (including choice of doctor), confidentiality of information, self-determination and informed consent, access to medical records, complaints, liability and compensation and information on health protection. The Act also defined patient duties, including: participation in protecting, preserving and improving their health, informing health workers about their health, adhering to prescribed treatment and respecting the house rules of health facilities.

Patient choice

Patients are assigned to the CHC in the area where they are living. Within the CHC they can choose to register with any GP or other eligible physician. This freedom of choice, which applies from age 18, is guaranteed by law as far as possible. In rural areas choice can be limited by the small number of doctors working in the ambulatory; in such situations patients may also choose a doctor from the central facility of the CHC. Children until the age of 6 years are supposed to be treated by paediatricians from the child health services, while those between 7 and 18 fall under paediatricians from the Institution of School Health. In smaller CHCs, services for children and youth (0-18) are allowed to be organized in one unit. Children up to age 6 may only have a paediatrician as the chosen doctor; those 7–18 may choose a paediatrician or a GP.

Access to specialist services

Except in emergencies, access to medical specialists at the secondary or tertiary level is only by referral from a chosen doctor). Specialists usually develop a treatment plan, while suggested medication is prescribed by the chosen doctor, who also conducts the follow-up treatment. Often specialists continue to see the patient for monitoring and control. In particular cases (for instance HIV or TB) the division of roles can be different with possible involvement of other physicians. Treating specialists have to report to the patient's chosen doctor once per month.

Patient complaints

The procedure for submitting complaints has been established by the Health Care Protection Act, and is obligatory for every health care facility, including CHCs. Even if complaints are communicated orally they need to be recorded in the facility's files. Written complaints can be delivered either to a health worker or to the "protector of patient rights" in any health institution. Written complaints must be answered within eight days. Patients can also deliver a complaint directly to the Ministry inspectors. Finally, each municipality and town has an Ombudsman to whom perceived violations of human rights may be reported.

Patient organizations

As mentioned above, there are many national and regional organizations defending the interests of patients, either those with a specific disease or general users of health care services.

Ombudsman

The Citizens' Protector (or Ombudsman) was established in 2007, to oversee and enhance the protection of human and minority rights, and to monitor fairness and legality of the work of the public administration (including the health services). The Ombudsman is elected in the parliament.

3.2 Resource generation

3.2.1 PC workforce

Table 9. Numbers of professionals working in PC

PHC providers (public facilities)	Number (in 2008)
- GPs / internists	4 348
- PHC paediatricians	1 068
- PHC gynaecologist	461
- GPs+paed+gynaec. in PHC	5 877
- Doctors of occupational medicine	n.a.
- PHC nurses	13 361
- PHC midwives	860

The total number of active physicians was 20 638 (2008), nurses 41 144 (2007), midwives 2 425 (2007).

The main groups of physicians working in CHCs and ambulatories (GPs, internists, paediatricians and gynaecologists) together made up 28% of all physicians in 2008. According to the WHO Health for all (HFA) database 25.5% of all physicians were working in PC in 2007 (see Table 5). The number of active nurses in PC amounted to 33.1% of the total number of nurses in Serbia in 2007 and the 860 midwives comprised up 35.5% of the total number. No data were available on the composition of the PC teams.

3.2.2 Professional development

Professional organizations

GPs, paediatricians and gynaecologists are organized as indicated below.

GPs:

- General Medicine Section of the Serbian Medical Society (SMS) (1000 members)
- General Medicine Section of the SMS - Vojvodina
- PHC Committee of the Regional Chamber of Physicians Vojvodina

Paediatricians:

- Paediatrics Section of the SMS (500 members)
- Serbian Society of Paediatrics

Gynaecologists:

- Gynaecology Section of the SMS (300 members)
- Serbian Society of Gynaecologists

All organizations mentioned are reported to be involved in professional development (e.g. guideline development); medical education and scientific activities.

Professional journals:

The journal *General Medicine* has about 500 subscriptions. In addition, PC physicians can submit papers to other professional journals, such as *Serbian Archives of Medicine*, *Doctor* or *The Doctors Voice*, the SMS newsletter.

Medical education

Faculties of medicine are found at the universities of Kragujevac, Nis, Novi Sad, Belgrade, and the U.S. Medical School, Belgrade. Four of these institutions offer postgraduate programmes in general medicine / GP. Table 10 provides an overview of the duration of the programmes.

Table 10. Postgraduate training

Location	Pro-fessors in GP	Duration of GP postgraduate course (months in PC)	Duration of Paed postgraduate course (months in PC)	Duration of Gynaec postgraduate course (months in PC)
Nis	2	3 yrs (13)	4 yrs (6)	4 yrs (4)
Novi Sad	NA	3 yrs (13)	4 yrs (6)	4 yrs (4)
Kragujevac	1	3 yrs (13)	4 yrs (6)	4 yrs (4)
Belgrade	6	3 yrs (13)	4 yrs (6)	4 yrs (4)

In the 2007–2008 academic year, 10.5% of medical graduates chose to enrol in a postgraduate GP programme (79 of 750), far below the 21% of all doctors working as PC GPs (see Table 9). It has not been reported whether this proportion is increasing or decreasing. For learning practical skills, part of the postgraduate programme is spent a primary care setting, usually under the supervision of a mentor. This period takes 13 months for GPs to be; 6 months for future paediatricians; and 4 months for those becoming gynaecologists (see Table 10).

3.2.3 Quality assurance

The quality of (primary) health care services in Serbia is extensively monitored at various levels with clinical and other indicators. Internal controls in the CHCs, practice inspection by supervisors and external clinical auditing are the most common. Periodic testing of physicians' and nurses' knowledge and skills is never or rarely done.

Health institutions are obliged to develop annual plans for internal professional monitoring. One third of the CHCs are involved in external monitoring. The SMS has developed skills testing on an experimental basis, which has also been used to identify educational needs of physicians in CHCs. Mayors are responsible for monitoring the performance of chosen doctors and their teams. Furthermore there are regular checks of medical documentation. In case of irregularities or complaints the Health Inspectorate can apply external control mechanisms. The licensing scheme for medical professionals was restructured after the establishment of the Health Council in 2009. From 1 January 2010 license renewal depends on having collected a minimum number of points for accredited CME activities.

Indicators for physicians

The following process and outcome measures were reported to be routinely used by the Ministry of Health for monitoring PC physicians:

- patient contacts per year
- prescriptions (per 100 visits)
- referrals for laboratory tests (per 100 visits)
- referrals for X-rays (per 100 visits)
- referrals for ultrasound examination (per 100 visits)

- referrals for specialist consultation (per 100 visits)
- percentage of preventive contacts (of all contacts)
- coverage of influenza vaccination among people over 65.

The following outcome indicators are recommended by the Ministry to be used at de-central level to monitor PC:

- coverage of influenza vaccination among patients with chronic diseases
- percentage smokers among patients with coronary heart disease (CHD) and stop smoking advice in past 12 months
- percentage patients with CHD with cholesterol record in past 12 months
- percentage patients with hypertension with blood pressure record in past 12 months
- percentage patients with hypertension with record of 140/90 or lower in past 12 months
- percentage women (20 to 65 yrs) with examination for cervical cancer
- percentage children (under 18 yrs) with acute upper respiratory tract infection with antibiotics prescribed at first visit
- percentage first contacts with undefined diagnosis.

Separate sets of mandatory and recommended quality indicators have been developed for medical specialists.

Indicators for institutions

Quality improvement in each health care institution, including CHCs, is coordinated by a commission that develops a quality plan, initiates activities and reports about them. The work of the commissions is thoroughly regulated by a set of mandatory quality indicators:

Patient safety

- set procedures for adverse events registration
- set procedures for adverse drug effects the registration

Information dissemination

- information on health care services under compulsory health insurance
- information about private payments and exemptions
- complaint/suggestion boxes

- listing of the name, office number and working hours of the protector of patients' rights
- percentage of complaints/appeals that have been resolved
- listing of chosen doctors, working hours and other details
- patient satisfaction surveys
- analysis of the satisfaction surveys and continuous quality improvement activities

Employees' satisfaction and keeping up-to-date

- employee satisfaction surveys
- analysis of these surveys and improvement activities
- educational plan for all employees
- workshops, educational meetings and seminars
- indication of staff attendance to relevant courses, seminars etc.

This system of quality indicators has been operational nationwide since 2004 and was updated in 2007. A national quality commission has been continuously improving and extending the indicators. At the annual national conference, an award is given to the facility scoring highest on the current set of indicators.

Clinical guidelines

Standards for good clinical practice (or clinical guidelines) have been produced in a project funded by the European Agency for Reconstruction (EAR). The guidelines are intended to be used by clinicians both in hospitals and PC. After this project, an expert committee started to develop evidence-based guidelines specifically for use in PC. In addition to leading national experts, PC practitioners should be involved in the drafting process. At present 25 guidelines have been published on medical topics under the programme for rationalization and drug administration, with development of diagnostic and therapeutic protocols and patient education. The production of each guideline has been in the hands of a working group with relevant medical specialists, including GPs. They have been promoted and all are available on the Ministry of Health website, and have been distributed free to the CHCs. Physicians are not obliged to follow the guidelines. Recommendations made in the guidelines have been used in drafting strategic documents, such as the scope and content of health services, national programmes, etc.

No national guidelines for nurses have been developed yet. In general, technical literature for nurses is sparsely available. Some guidelines have been developed in the context of projects, for instance on palliative care and working in the community.

3.3 Financing

3.3.1 PC financing and expenditures

For most people copayments are necessary for PC drugs and consultations with the chosen doctor. Only certain categories of the population, specified in laws and regulations, are exempted (for instance, disadvantaged groups and people suffering from specific chronic conditions). As noted in section 2.3, out-of-pocket payments as a proportion of total health expenditure are high.

Almost one quarter (24.6%) of the entire health budget is spent on PC, 19.1% in CHCs alone. CHCs are funded mostly (83.8%) by the HIF. Local and central government contribute 4.4% and 0.2% is from donations. Another 11.6% is earned by provision of additional – usually private – services, rental of ambulances and offices, etc. On the expenditure side 70.5% is spent on salaries, 14.5% on procurement of goods and services and 15% on drugs, equipment and other costs.

3.3.2 Financial incentives

Payment mechanisms

The calculation of health workers' salaries is regulated by the Labour Act and the "Regulation on coefficients for calculation and payment of salaries of public employees". In general, salaries are established by application of an education coefficient, which can be increased by a degree of expertise (e.g. specialist, primarius) or academic degrees (Master, PhD). In addition, work experience counts for 0.4% per year of experience. Furthermore, there are supplements for shift work, weekend duty, overtime and field work (e.g., home visits).

The planned introduction of capitation-based PC funding requires a change in the Labour Act. The capitation formula contains the following four elements: the number of registered patients, the degree of rationality, efficiency and preventive services. In rural areas a correction coefficient is applied to the number of registered patients. In preparation for the new funding scheme, the "Rules on the conditions, criteria and standards for the conclusion of contracts with providers of health services" was amended in 2009, with incentives added for doctor and nurse teams to stimulate registration of patients with a chosen doctor.

Income levels

Gross salaries of physicians working at the PC level and at the secondary care level in Serbia are listed in Table 11. GP salaries are equal to those of PC paediatricians, whereas the salaries of secondary care specialists are 35% higher than those of their PC colleagues. Differences in salaries of PC and secondary care specialists arise because of the slightly higher coefficient of qualification in secondary health care, and some differences result from additional payment for night shifts and working on Saturdays and Sundays.

Table 11. Average gross annual salaries of physicians

Medical professionals	Gross salary per year* (in Euros)
GP; chosen PC doctor	7 368
PC Paediatrician	7 368
Gynaecologist/obstetrician (secondary)	10 000
Paediatrician (secondary)	10 000
Internist (secondary)	10 000
Cardiologist (secondary)	10 526

* On average at age 40

3.4 PC service delivery

3.4.1 National data on utilization and provision of services

Table 12. Key indicators of utilization of PC services

Indicators	Rate
Number of PC patient contacts per 1000 population per year*	4 000
Number of PC referrals to medical specialists per 1000 patient contacts**	217
Number of hospital admissions from primary care per 1000 patient contacts	135
Number of PC drug prescriptions per 1000 patient contacts	1 566

* This is part of outpatient contacts.

** As reported by the Ministry of Health.

The survey among physicians also asked about contact frequencies and number of referrals (see Chapter 4).

Almost 22% of all contacts results in a referral to a medical specialist and 13.5% result in hospital admissions.

4. GP AND PAEDIATRICIAN RESPONSES

This chapter contains the results of the survey among GPs and paediatricians working in CHCs in the regions of Vojvodina, Belgrade and Central Serbia, covering workload and use of time, service availability and access, quality of care, use of clinical information, coordination and cooperation, available medical equipment and clinical task profiles.

4.1 Respondents' characteristics

A total of 285 PC physicians responded: 96 in Vojvodina; 95 in Central Serbia and 94 in the Belgrade area (see Table 13). In all three regions around three quarters of the respondents were GPs (Vojvodina: 74%, Central Serbia 74%, Belgrade 73%) and one quarter PC paediatricians. Overall 79% of the physicians worked in urban CHCs, but obviously this percentage was higher in the Belgrade area (96%) than in Vojvodina (72%) and Central Serbia (68%).

Table 13: PC GPs and paediatricians

Physicians	Vojvodina (N=96)		Central Serbia (N=95)		Belgrade (N=94)		Total (N=285)	
	urban	rural	urban	rural	urban	rural	Abs.	%
GPs	50	21	44	26	65	4	210	74
Paediatricians	19	6	21	4	25	-	75	26
TOTAL	69	27	65	30	90	4	285	100

In Serbia primary medical care is predominantly provided by women, consequently 89% of the respondents were women. The gender distribution is equal for the GPs and the paediatricians.

Table 14. Gender of urban and rural physicians

Physicians	Vojvodina (N=96)		Central Serbia (N=95)		Belgrade (N=94)		Total (N=285)	
	urban	rural	urban	rural	urban	rural	Abs.	%
GPs								
• Female	42	16	40	23	60	3	184	65.0
• Male	7	5	3	3	5	1	24	8.5
Paediatricians								
• Female	16	6	17	3	25	-	67	23.7
• Male	3	-	4	1	-	-	8	2.8
TOTAL	68	27	64	30	90	4	283	100

A number of key characteristics of the physicians and their practices in the three regions are provided in Table 15. Only six physicians answered to have completed a retraining programme. Although in line with the Serbian PC system with separate chosen doctors for adults and children, some respondents working in rural ambulatories without paediatricians served a mixed population of adults and children. In Belgrade almost two-thirds of the respondents are older than 50 years; in Vojvodina about half and in Central Serbia well over one-third. Paediatricians on average are somewhat older than GPs.

Table 15. Summary of characteristics of responding physicians, by region

Physicians	Vojvodina (N=96)			Central Serbia (N=95)			Belgrade (N=94)		
	Abs.	%	Valid N	urban	rural	Valid N	urban	rural	Valid N
Male physicians	15	15.6	95	11	11.6	94	6	6.4	94
Physicians completing retraining programme	3	3.1	93	1	1.1	91	2	2.1	87
Physicians serving adults and children	13	13.5	96	7	7.4	95	3	3.2	94
Physicians under age 50	49	51.0	96	35	36.8	93	60	63.8	92
Physicians average age	Urban		Rural*	Urban		Rural*	Urban		Rural*
• GPs	49.8		46.7	49.8		46.0	49.8		45.8
• Paediatricians	51.3		48.0	51.3		46.5	51.3		-
Average years working as									
• GP	17.8			15.2			19.5		
• Paediatricians	17.4			14.3			22.0		
*Including small towns and rural areas									

4.2 Accessibility of care

4.2.1 Organizational access

Workload

The average number of patients registered with GPs is almost the same in the three regions, around 1200, well below the national norm of 1600. The average number of children reported by paediatricians is closer to the national norm (1100–1200). Although these numbers do not suggest staff shortages, respondent do report them, as seen on the bottom line of the table.

Table 16: GPs' and paediatricians' workload and use of time, by region

Physicians	Vojvodina (N=96)		Central Serbia (N=95)		Belgrade (N=94)		Total (N=285)	
	Mean	Valid N	Mean	Valid N	Mean	Valid N	Mean	Valid N
List size (patients)								
• GPs	1 207	68	1 181	64	1 205	56	1 197	188
• Paediatricians	1 171	21	845	21	916	23	975	65
Patient consultations per day								
• GPs	41	70	43	70	34	69	39	209
• Paediatricians	44	24	45	25	40	25	43	74
Home visits per week								
• GPs	5	70	3	61	4	59	4	190
• Paediatricians	3	22	1	23	1	19	2	64
Working hours per week								
• GPs	36	70	35	65	35	60	35	195
• Paediatricians	32	25	38	25	38	20	36	70
Hours reading per month								
• GPs	15	66	20	66	17	63	18	195
• Paediatricians	17	24	17	24	14	21	16	69
Hours following courses per month								
• GPs	6	62	8	45	5	51	6	158
• Paediatricians	5	21	4	17	6	10	5	48
	Abs.	Valid N	Abs.	Valid N	Abs.	Valid N	Abs.	Valid N
Reporting staff shortages								
• GPs	23	68	41	69	23	66	87	203
• Paediatricians	8	25	15	25	13	23	36	73

The same aspects of workload are presented in Table 17, but broken down by level of urbanization. Unlike in many other countries, differences between rural and urban practice are small for most indicators. Rural physicians have only slightly more patients than the urban, make two more home visits and barely work more hours per week.

Table 17. Urban and rural physicians' workload and use of time, by region

Aspects of workload	Vojvodina (N=96)		Central Serbia (N=95)		Belgrade (N=94)		Total (N=285)	
	Mean	Valid N	Mean	Valid N	Mean	Valid N	Mean	Valid N
List size (patients)								
• urban physicians	1 161	63	1 101	59	1 101	75	1 120	197
• rural physicians	1 289	26	1 093	26	1 488	4	1 212	56
Patient consultations per day								
• urban physicians	41	68	45	65	36	90	40	223
• rural physicians	42	26	40	30	31	4	40	60
Home visits per week								
• urban physicians	3	66	2	57	3	74	3	197
• rural physicians	7	26	3	27	7	4	5	57
Working hours per week								
• urban physicians	33.5	68	36.9	61	35.5	77	35.2	206
• rural physicians	39.0	27	33.0	29	37.3	3	36.0	59
Working hours per month								
• urban physicians	13.3	63	19.5	62	15.7	80	16.1	205
• rural physicians	21.2	27	19.7	28	18.3	4	20.4	59
Hours following courses per month								
• urban physicians	6.3	58	7.8	41	5.0	58	6.2	157
• rural physicians	4.6	25	4.8	21	5.7	5	4.7	49
	Abs.	Valid N	Abs.	Valid N	Abs.	Valid N	Abs.	Valid N
Reporting staff shortages								
• urban physicians	26	67	41	64	35	85	102	216
• rural physicians	5	26	15	30	1	4	21	60

Service availability and access

In Vojvodina and Central Serbia opening hours in the evening are reported by a majority of respondents, but in the Belgrade region such evening services seem to be rarely available. Opening during a weekend day (at least once per month) is widely practised in all three regions. If practices are closed, a majority of physicians report that a telephone number is available for patients.

Table 18. Practice access indicators

Access	Vojvodina (N=96)		Central Serbia (N=95)		Belgrade (N=94)		Total (N=285)	
	%	Valid N	%	Valid N	%	Valid N	%	Valid N
Same day visits are possible	87.5	96	88	93	95	93	89.9	282
Evening opening at least once per week	60.4	96	64	94	5	92	43.4	282
Weekend day opening at least once per month	82.3	96	76	95	86	94	81.1	285
Phone number for patients when practice is closed	78.1	95	54	94	51	94	60.8	283
Clinics or sessions in use for special patient groups								
• diabetes patients	68	83	43	69	23	73	44.8	225
• hypertensive patients	62	83	27	69	22	73	37.1	225
• family planning information	30	83	30	69	26	72	28.3	224
• pregnant women	42	83	44	69	51	72	45.5	224
• the elderly	37	83	17	69	14	71	22.4	223
• adolescents	41	83	31	69	55	72	42.0	224
• children with developmental problems	37	83	30	69	44	72	36.4	224
• parental paediatric counselling	51	83	53	69	47	72	50.0	224
No clinics or sessions for special patient groups	10	93	22	90	10	88	14.0	271
Practice situated 5 km or more from nearest general hospital	47	96	50	95	63	94	52.8	285

4.2.2 Responsiveness

Table 19 shows how often quality improvement measures are used, according to respondents.

Although complaint procedures are obligatory, 19% of GPs and 12% of paediatricians indicated they do not have them. Furthermore, only 50–60% of physicians indicated that the recommended job satisfaction interviews are conducted in their CHCs.

Table 19. Use of clinical guidelines, complaint procedure and job satisfaction evaluations

Aspects of workload	Vojvodina (N=96)		Central Serbia (N=95)		Belgrade (N=94)		Total (N=285)	
	%	Valid N	%	Valid N	%	Valid N	%	Valid N
Using clinical guidelines								
• GPs								
» frequently	54	70	70	69	59	66	61	205
» occasionally or seldom/never	45	70	29	69	36	66	37	205
• Paediatricians								
» frequently	64	25	20	23	40	24	41	72
» occasionally or seldom/never	36	25	72	23	56	24	55	72
Having a procedure for dealing with complaints								
• GPs	82	70	79	69	81	69	81	208
• Paediatricians	84	25	92	25	88	24	88	74
Using evaluation methods								
• investigation of patient satisfaction								
» GPs	82	68	60	68	58	64	67	200
» Paediatricians	96	25	92	25	68	25	85	75
• interviewing community reps about satisfaction with the centre/practice								
» GPs	38	67	27	64	19	55	28	186
» Paediatricians	56	22	32	25	16	18	35	65
• interviewing GPs/ Paediatricians and nurses about their job satisfaction								
» GPs	63	67	43	65	55	65	54	197
» Paediatricians	76	22	56	24	44	21	59	67

4.3 Continuity of care

4.3.1 Informational continuity

Keeping records of all clinical information on patients, an important condition for coordination and continuity of care, is daily routine for almost all physicians in the three regions (see Table 20). However, the retrieval of specific information from the information system, for instance for preventive monitoring, was reported to be difficult. The identification of patient groups on the basis of a shared diagnosis, health risk or just age may enable efficient outreach activities, yet only 22% of GPs and 36% of paediatricians were able to easily generate such lists. In Vojvodina, however, half of paediatricians answered they could easily identify such patient categories.

Cooperation between primary and secondary care can strongly benefit from information that accompanies patients when they are referred to medical specialists and return after this treatment. Almost all respondents indicated using referral letters for most patients.

The flow of information from medical specialists to GPs and paediatricians is slightly less favourable. Around 80% report they always receive this information after specialist treatment is completed. In Belgrade this was lower than in both other regions, however.

The roughly 40% indication of lack of computer use does not necessarily mean there is no computer in the practice; there may be one that is used by other personnel. In Belgrade not using a computer is exceptional, while in Central Serbia it is more or less the rule. Those using a computer rarely use it for searching information. If the use of computers by other practice staff is considered, it appears that storing patients' medical record is the most frequently mentioned application. In these situations handwritten patient records are probably entered into the computer later. Computer files may be used for statistical and management purposes, while the physicians may just rely on their paper records.

Table 20. Availability and use of clinical information

Aspects of workload	Vojvodina (N=96)		Central Serbia (N=95)		Belgrade (N=94)		Total (N=285)	
	%	Valid N	%	Valid N	%	Valid N	%	Valid N
Keeping patients' medical records routinely for all contacts								
• GPs	99	71	90	69	88	68	92	208
• Paediatricians	96	25	92	25	100	25	96	75
Easy to generate a list of patients by diagnosis or health risk								
• GPs	96	70	89	70	93	69	92	209
• Paediatricians	96	25	100	25	100	25	99	75
Always receive information from medical specialists within reasonable time after completed treatment								
• GPs	90	71	87	70	67	69	81	210
• Paediatricians	88	25	80	25	68	25	79	75
Use the computer for:								
• Booking appointments								
» GPs	16	69	-	68	7	69	8	206
» Paediatricians	20	25	-	25	4	25	8	75
» Other staff in GPs' practice	34	71	-	67	20	65	18	203
» Other staff in Paediatricians' practice	44	25	-	25	17	24	20	74
• Financial administration								
» GPs	11	69	4	68	-	68	5	205
» Paediatricians	8	25	-	25	-	25	3	75
» Other staff in GPs' practice	44	70	13	67	17	65	25	202
» Other staff in Paediatricians' practice	56	25	24	25	17	24	32	74

Aspects of workload	Vojvodina (N=96)		Central Serbia (N=95)		Belgrade (N=94)		Total (N=285)	
	%	Valid N	%	Valid N	%	Valid N	%	Valid N
• Prescriptions								
» GPs	42	69	4	68	88	69	45	206
» Paediatricians	48	25	-	25	96	25	48	75
» Other staff in GPs' practice	11	70	5	67	48	65	21	202
» Other staff in Paediatricians' practice	28	25	4	25	63	24	31	74
• Keeping medical records								
» GPs	48	69	7	68	81	69	45	206
» Paediatricians	56	25	8	25	96	25	53	75
» Other staff in GPs' practice	59	70	61	67	77	65	65	202
» Other staff in Paediatricians' practice	68	25	80	25	88	24	78	74
• Writing referral letters								
» GPs	38	69	3	68	58	69	33	206
» Paediatricians	48	25	-	25	84	25	44	75
» Other staff in GPs' practice	10	70	3	67	39	65	17	202
» Other staff in Paediatricians' practice	28	25	-	25	63	24	30	74
• Searching information								
» GPs	4	69	1	68	12	69	6	206
» Paediatricians	-	25	-	25	8	25	3	75
» Other staff in GPs' practice	1	70	5	67	9	65	5	202
» Other staff in Paediatricians' practice	4	25	1	25	8	24	4	74
• Not using a computer								
» GPs	31	69	79	68	6	69	39	206
» Paediatricians	40	25	88	25	-	25	43	75
» Other staff in GPs' practice	1	71	27	67	-	65	9	203
» Other staff in Paediatricians' practice	4	25	4	25	-	24	3	74

4.4 Coordination of care

4.4.1 Cohesion within PC

Respondents most frequently answer that they work with other GPs (83%) and to a much lesser extent with paediatricians (49%). Although PC gynaecologists also act as chosen doctors, only 22% responded that they had worked with a gynaecologist in the same unit. Dentists (stomatologists) are mentioned by 40% of respondents.

The other medical specialists mentioned in the table are mentioned much less frequent. In Vojvodina more respondents answer to work with medical specialists in the same building, which suggest that CHCs in Vojvodina are broader.

Table 21. Other medical professionals working in the same unit as respondent

Working in the same building	Vojvodina (N=96)		Central Serbia (N=95)		Belgrade (N=94)		Total (N=285)	
	%	Valid N	%	Valid N	%	Valid N	%	Valid N
GPs	89	94	81	94	79	93	83	281
PC paediatricians	49	92	50	93	49	94	49	279
PC gynaecologists	26	92	15	94	26	93	22	279
Internists	20	91	15	94	11	92	15	277
Surgeons	1	87	12	94	2	90	5	271
Neurologists	19	89	13	94	9	92	14	275
Dermatologists	18	91	14	94	0	89	11	274
ENT specialists	18	91	12	94	11	92	13	277
Ophthalmologists	25	92	11	93	12	91	16	276
Radiologists	17	91	13	94	11	92	13	277
TB specialists (phtysiologists)	10	89	3	92	4	92	6	273
Psychiatrists	16	89	12	93	9	92	12	274
Pharmacists	18	90	21	94	6	90	15	274
Stomatologists (dentists)	57	93	38	93	25	93	40	279
Practice nurses	51	96	41	94	43	85	45	275
Community nurses	79	95	48	94	60	84	62	273
Midwives / birth assistants	31	95	7	94	45	83	28	272
Social workers	20	95	25	94	20	83	22	272
Psychologists	31	95	20	94	30	83	27	272
Physiotherapists	26	95	21	94	32	83	26	272
Laboratory technicians	67	96	46	94	48	83	54	273
X-ray technicians	26	95	21	94	32	83	26	272
Others	73	95	54	94	48	82	58	271

Table 22 shows respondents' frequency of fact-to-face meetings with medical colleagues, which are more frequently reported in Vojvodina than in the other regions. The data suggest a low level of structured cooperation and teamwork, both within PC and between primary and secondary care. It seems that organized information exchange among chosen doctors is not well developed and most doctors have no regular meeting with nurses. There are very few signs of structured cooperation between medical doctors across levels of care.

Table 22. Face-to-face meeting with other PC workers

Meet face-to-face at least monthly with:	Vojvodina (N=96)		Central Serbia (N=95)		Belgrade (N=94)		Total (N=285)	
	%	Valid N	%	Valid N	%	Valid N	%	Valid N
(Other) GPs	83	69	61	68	64	68	70	205
• GPs	12	20	8	22	8	18	9	60
(Other) PC paediatricians	11	53	1	55	-	43	4	151
• GPs	84	25	68	23	40	25	64	73
PC Gynaecologists	4	53	1	54	-	42	2	149
• GPs	4	20	8	21	4	17	5	58
Secondary paediatricians	1	53	1	55	-	42	1	150
• GPs	52	23	12	20	20	19	28	62
Secondary gynaecologists	3	53	1	56	-	42	2	151
• GPs	-	20	-	20	-	16	-	56
Internists	11	54	21	57	10	44	14	155
• GPs	4	19	12	21	-	17	5	57
Surgeons	6	51	3	53	3	41	4	145
• GPs	4	19	16	21	4	18	8	58
Neurologists	9	52	3	53	6	41	6	146
• GPs	4	19	8	20	-	17	4	56
Dematologists	1	52	6	54	1	41	3	147
• GPs	8	18	20	21	-	17	9	56
ENT specialists	1	52	4	54	3	42	3	148
• GPs	8	19	16	20	4	18	9	57
Ophthalmologists	1	52	6	54	6	42	4	148
• GPs	12	19	12	21	4	18	9	58
Radiologists	1	52	9	53	6	42	5	147
• GPs	12	19	4	20	-	17	5	56
TB specialists	1	51	10	53	3	42	5	146
• GPs	8	19	12	21	4	18	8	58
Psychiatrists	6	52	9	56	3	42	6	150
• GPs	4	19	8	21	4	18	5	58
Pharmacists	16	53	11	54	3	42	10	149
• GPs	20	19	4	20	4	18	9	57
Stomatologists (dentist)	10	52	7	53	1	42	6	147
• GPs	20	19	12	20	4	18	12	57

Meet face-to-face at least monthly with:	Vojvodina (N=96)		Central Serbia (N=95)		Belgrade (N=94)		Total (N=285)	
	%	Valid N	%	Valid N	%	Valid N	%	Valid N
Psychologists								
• GPs	1	51	1	51	1	41	1	144
• Paediatricians	8	19	8	20	4	18	7	57
Physiotherapists								
• GPs	3	53	7	51	6	42	5	144
• Paediatricians	12	19	8	20	4	18	8	57
Practice nurses								
• GPs	21	53	11	52	13	46	15	151
• Paediatricians	20	20	4	20	8	18	11	58
Community nurses								
• GPs	34	55	14	52	15	44	21	151
• Paediatricians	28	20	8	21	12	19	16	60
Midwife / Birth assistants								
• GPs	14	51	6	53	7	41	9	145
• Paediatricians	16	20	-	20	4	18	7	58
Pharmacists								
• GPs	-	9	1	23	3	15	1	47
• Paediatricians	-	3	-	8	-	5	-	16

4.4.2 Contact with other care levels and with the community

Although regular meetings between GPs and paediatricians, on the one hand, and medical specialists on the other hand are rare, they do meet on a case-by-case basis (see Table 24).

A large majority of GPs indicate seeking advice from an internist, surgeon, neurologist, dermatologist, ENT specialist or ophthalmologist. In contrast, however, very few GPs ask advice from paediatricians or gynaecologists at the secondary level. In contrast to GPs, most paediatricians ask advice from secondary paediatricians and few from internists. Like GPs, only a minority of paediatricians sought advice from secondary gynaecologists.

Table 23. Consultation with medical specialists

Frequently or sometimes asking advice from:	Vojvodina (N=96)		Central Serbia (N=95)		Belgrade (N=94)		Total (N=285)	
	%	Valid N	%	Valid N	%	Valid N	%	Valid N
Secondary paediatricians								
• GPs	25	56	18	50	12	42	19	148
• Paediatricians	75	24	96	24	96	24	89	72
Secondary gynaecologists								
• GPs	42	57	39	51	26	43	36	151
• Paediatricians	57	21	24	21	63	16	47	58
Internists								
• GPs	96	70	88	69	99	68	94	207
• Paediatricians	21	19	32	19	25	16	26	54
Surgeons								
• GPs	83	69	91	67	92	64	89	200
• Paediatricians	100	24	96	22	83	23	93	69
Neurologists								
• GPs	88	69	91	69	93	67	91	205
• Paediatricians	91	23	78	23	74	19	82	65
Dermatologists								
• GPs	82	68	85	68	77	61	82	197
• Paediatricians	96	25	88	24	70	20	86	69
ENT-specialists								
• GPs	86	69	87	67	91	66	88	202
• Paediatricians	100	25	92	24	88	24	93	73
Ophthalmologists								
• GPs	87	69	87	69	92	66	89	204
• Paediatricians	96	25	92	24	87	23	92	72

Table 24. Patients referred to medical specialists during the previous 4 weeks, by region

Patients referred to a:	Vojvodina (N=96)		Central Serbia (N=95)		Belgrade (N=94)		Total (N=285)	
	Mean (range)	Valid N	Mean (range)	Valid N	Mean (range)	Valid N	Mean (range)	Valid N
Secondary paediatrician	32 (0-27)	62	3.9 (0-40)	65	2.4 (0-30)	39	3.3 (0-40)	166
Secondary gynaecologist	3.8 (0-30)	61	0.8 (0-6)	56	1.0 (0-10)	37	2.0 (0-30)	154
Internist	16.3 (0-88)	64	25.4 (0-88)	70	15.5 (0-80)	46	19.7 (0-88)	180
Surgeon	10.6 (0-60)	70	9.6 (0-60)	83	6.5 (0-30)	49	9.2 (0-60)	202
Neurologist	8.9 (0-70)	74	14.2 (0-70)	80	6.8 (0-40)	47	10.5 (0-70)	201
Dermatologist	5.9 (0-51)	75	8.6 (0-40)	79	3.9 (0-20)	46	6.5 (0-51)	200
ENT-specialist	6.5 (0-26)	77	9.3 (0-70)	83	9.1 (0-36)	50	8.3 (0-70)	210
Ophthalmologist	6.0 (0-35)	76	13.7 (0-90)	81	6.8 (0-30)	51	9.2 (0-90)	208
Total referrals per 4 weeks	74.1		103.5		61.3		81.7	
Referrals as % of all office contacts and home visits								
• GPs	10.11		14.65		10.96		12.40	
• Paediatricians	4.83		5.04		3.89		4.67	

The average referral rate (referrals as a percentage of all patient contacts in the office and during home visits) of GPs is more than 2.5 times higher than that of paediatricians, and the regions strongly differ in this respect. Although missing values suggest caution, it seems reasonable to say that the referral rate of GPs is very high in international comparison. The officially provided referral rate from primary to secondary care – 217 per 1000 patient contacts (see Table 12 in chapter 3) – is even higher than that found here, but the survey's rate of 12.4 is very high.

Table 25. Patients referred to medical specialists during the previous 4 weeks, by urbanization

Patients referred to a:	Urban (N=224)		Rural (N=61)		Total (N=285)	
	Mean (range)	Valid N	Mean (range)	Valid N	Mean (range)	Valid N
Secondary paediatrician	3.4 (0-40)	123	2.9 (0-20)	43	3.3 (0-40)	166
Secondary gynaecologist	1.5 (0-25)	116	3.6 (0-30)	38	2.0 (0-30)	154
Internist	16.9 (0-88)	133	27.5 (0-85)	47	19.7 (0-88)	180
Surgeon	8.9 (0-60)	151	9.9 (0-30)	51	9.2 (0-60)	202
Neurologist	9.1 (0-70)	150	14.7 (0-70)	51	10.5 (0-70)	201
Dermatologist	6.4 (0-51)	147	6.8 (0-40)	53	6.5 (0-51)	200
ENT-specialist	8.4 (0-40)	155	7.9 (0-70)	55	8.3 (0-70)	210
Ophthalmologist	8.8 (0-90)	153	10.2 (0-80)	55	9.2 (0-90)	208
Total referrals per 4 weeks	80.7		84.9		81.7	
Referrals as % of all office contacts and home visits	9.89		10.29		9.98	

The finding here is in contrast to what is usually found in other countries, namely that referral rates in urban areas are higher.

Only a minority of the respondents indicate that there are structured contacts with community (see Table 26).

Table 26. Community contacts

Type connection:	Vojvodina (N=96)		Central Serbia (N=95)		Belgrade (N=94)		Total (N=285)	
	%	Valid N	%	Valid N	%	Valid N	%	Valid N
Regular meetings with local authorities	28	90	21	87	12	86	20	263
Regular meetings with community / social workers	18	87	8	80	5	79	11	246
Community representative on the CHC board	26	89	21	86	17	84	22	259

4.5 Comprehensiveness of care

4.5.1 Practice conditions

GPs and paediatricians were asked whether information materials such as leaflets or posters had been displayed or made available in the waiting room of their CHC or ambulatory. Materials on cardiovascular diseases, healthy diet and smoking cessation were available in the waiting rooms of at least three quarters of the respondents, while materials about social services were least available

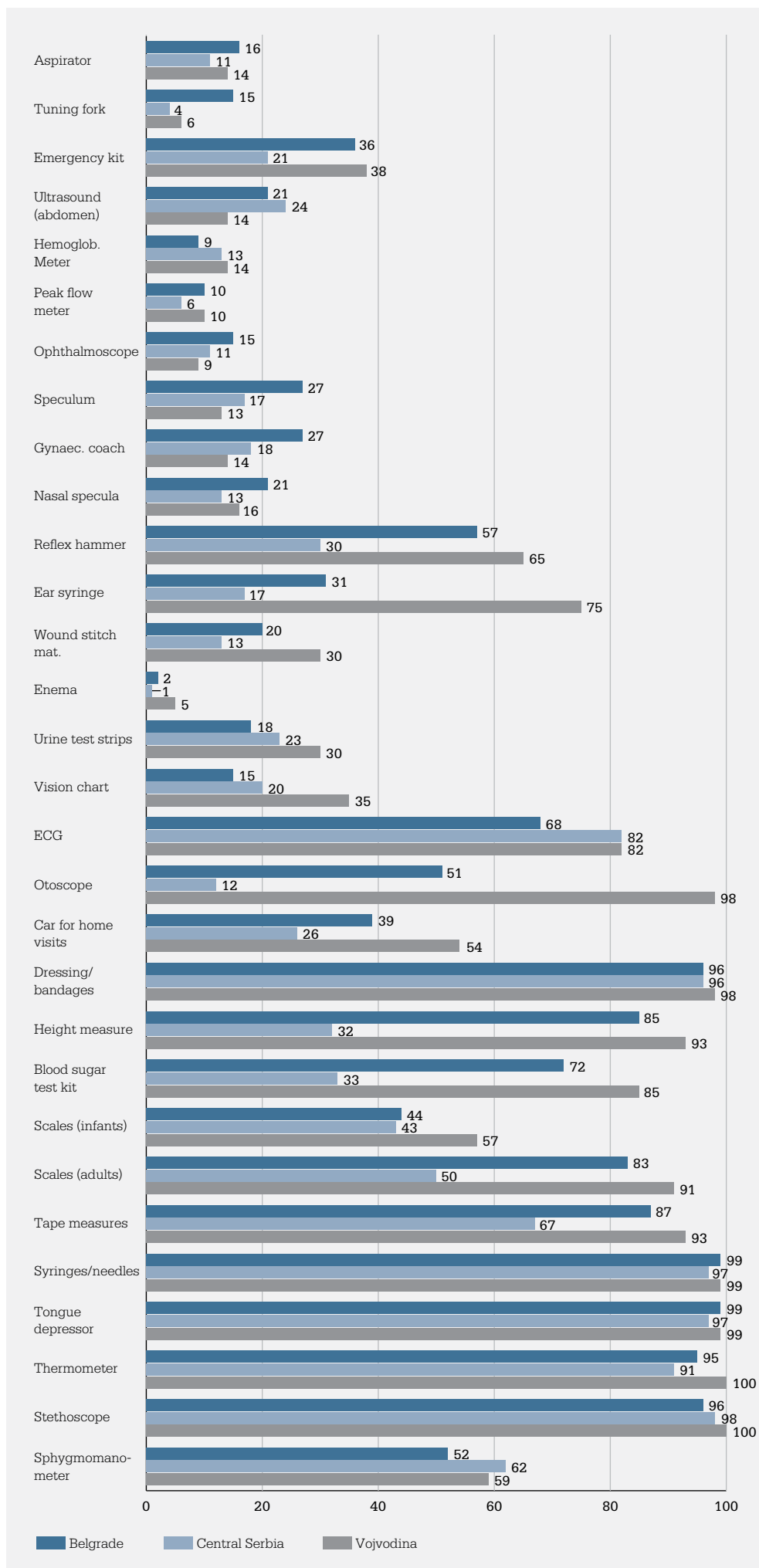
Table 27. Information for patients in the waiting room

Subject of information materials	Vojvodina (N=96)		Central Serbia (N=95)		Belgrade (N=94)		Total (N=285)	
	%	Valid N	%	Valid N	%	Valid N	%	Valid N
Cardiovascular disease risks	81	88	74	92	72	81	76	261
Healthy diet	91	93	76	91	85	90	84	274
Smoking cessation	83	85	74	92	77	84	78	261
Obesity	74	84	67	88	66	77	69	249
Diabetes	76	85	66	89	63	76	68	250
Sexually transmitted diseases	56	83	43	87	37	75	46	245
Vaccinations	69	84	56	89	56	80	60	253
Contraception	33	71	20	74	19	60	24	205
Self treatment of cold / coughing	38	72	34	77	21	58	31	207
Social services	35	72	16	73	15	57	22	202

4.5.2 Medical equipment

Figure 10 and Tables 28 and 29 summarize the state of medical equipment in the CHCs and ambulatories and by region and by urbanization. Overall, an average of 14 items were available from the list of 30 (46%). These results suggest that the equipment that physicians, and in particular GPs, have at their disposal is not compatible with a comprehensive package of preventive, curative and rehabilitative PC tasks. The sharp contrast among the regions with respect to several items also points to opportunities for improvement.

Table 28. Medical equipment available to physicians, by region



Number of items of equipment	Vojvodina (N=96)		Central Serbia (N=95)		Belgrade (N=94)		Total (N=285)	
	Abs.	%	Abs.	%	Abs.	%	Abs.	%
15 or less	53	55	79	83	72	77	204	72
16 – 20	32	33	2	2	8	9	42	15
21 – 25	5	6	10	11	7	7	22	8
26 – 30	6	6	4	4	7	7	17	5
TOTAL	96	100	95	100	94	100	285	100
Average number of items per physician (from list of 30)								
• GPs	15.2		10.4		13.7		13.1	
• Paed	17.8		15.3		15.1		16.1	
• Total	15.9		11.7		14.1		13.8	

Table 29. Medical equipment available to physicians, by urbanization

Number of items of equipment	Urban (N=224)		Rural (N=61)		Total (N=285)	
	Abs.	%	Abs.	%	Abs.	%
15 or less	164	73	40	66	204	72
16 – 20	28	13	14	23	42	15
21 – 25	15	7	7	11	22	8
26 – 30	17	7	-	-	17	5
TOTAL	224	100	61	100	285	100
Average number of items per physician (from list of 30)	14.0		13.4		13.8	

Figure 10. Available equipment (% of physicians)

Responses on the availability of microbiological, biochemical and X-ray facilities are presented in tables 30 and 31. Both microbiological and biochemical laboratory facilities are fully available to a large majority of respondents, the former more often outside the practice building, while the opposite is true for the latter. In the Belgrade area laboratory facilities are more often within the practice than in both other regions. X-ray facilities are reported to be fully available by a large majority of respondents.

Table 30. Physician access to laboratory and X-ray facilities, by region

Type of facility and mode of access	Vojvodina Region (N=96)		Central Serbia Region (N=95)		Belgrade Region (N=94)		Total (N=285)	
	%	Valid N	%	Valid N	%	Valid N	%	Valid N
Microbiological laboratory:								
• Full, in practice								
» GPs	21	68	22	68	43	63	28	199
» Paediatricians	29	24	16	25	46	24	30	73
• Full, outside practice								
» GPs	71	68	74	68	51	63	65	199
» Paediatricians	63	24	72	25	42	24	59	73
• N.a. / insufficient								
» GPs	8	68	4	68	6	36	7	199
» Paediatricians	8	24	12	25	12	24	11	73
Biochemical laboratory								
• Full, in practice								
» GPs	66	68	56	70	75	67	65	205
» Paediatricians	84	24	64	25	72	25	74	75
• Full, outside practice								
» GPs	32	68	43	70	25	67	34	205
» Paediatricians	12	24	32	25	20	25	21	75
• N.a. / insufficient								
» GPs	2	68	1	70	0	67	1	205
» Paediatricians	4	24	4	25	8	25	5	75
X-ray								
• Full, in practice								
» GPs	39	69	40	70	66	67	48	206
» Paediatricians	60	25	64	25	48	25	57	75
• Full, outside practice								
» GPs	52	69	46	70	33	67	44	206
» Paediatricians	28	25	32	25	48	25	36	75
• N.a. / insufficient								
» GPs	9	69	14	70	1	67	8	206
» Paediatricians	12	25	4	25	4	25	7	75
	Mean	Valid N	Mean	Valid N	Mean	Valid N	Mean	Valid N
Average wait for laboratory results (days):								
• GPs	2.2	68	5.8	69	3.7	65	3.9	202
• Paediatricians	1.6	25	1.1	24	1.7	23	1.5	72
Average wait for X-ray results (days):								
• GPs	9.6	61	8.0	62	4.6	64	7.4	187
• Paediatricians	1.3	24	1.1	23	1.3	20	1.3	67

As shown below, physicians in urban practices more often have their own facilities than physicians in rural practices and microbiological laboratory access is more often reported as insufficient or unavailable in rural practices.

Table 31. Physician access to laboratory and X-ray facilities, by urbanization

Type of facility and mode of access	Urban (N=224)		Rural (N=61)		Total (N=285)	
	%	Valid N	%	Valid N	%	Valid N
Microbiological laboratory						
• Full, in practice	34	211	12	61	29	272
• Full, outside practice	60	211	77	61	64	272
• N.a. / insufficient	6	211	11	61	7	272
Biochemical laboratory						
• Full, in practice	73	219	49	61	68	280
• Full, outside practice	25	219	49	61	30	280
• N.a. / insufficient	2	219	2	61	2	280
X-ray						
• Full, in practice	55	220	33	61	51	281
• Full, outside practice	36	220	62	61	41	281
• N.a. / insufficient	9	220	5	61	8	281
	Mean	Valid N	Mean	Valid N	Mean	Valid N
TOTAL	224	100	61	100	285	100
Average wait for laboratory results (days):						
• GPs	4.0	153	3.7	49	3.9	202
• Paediatricians	1.4	62	2.1	10	1.5	72
Average wait for X-ray results (days):						
• GPs	7.9	140	5.6	47	7.4	187
• Paediatricians	1.2	58	1.6	9	1.3	67

4.5.3 Service delivery

Three categories will be distinguished in the physicians' clinical task profiles:

- physicians' first contact roles
- provision of medical technical procedures to their patients and
- treatment and follow-up of diseases.

Details of the methodology of this study were described in Chapter 1.

First contact roles

Tasks related to the first contact role were measured with 18 items on a variety of problems of men, women and children. Physicians could indicate whether their patients would bring up these problems either "(almost) always", "usually", "occasionally", "seldom/never" or "do not know". Tables 32 and 33 provide results. Percentages refer to physicians

who estimated that they would always or usually be the doctor of first contact, and the percentage in brackets refers to the category “occasionally”.

The overall summary scores for GPs and paediatricians on the bottom line in Table 32 show that GPs report seeing a wider range of health problems in the first contact than paediatricians. This is a consequence of the list of health problems, which are partly typical for children, but also contain problems of women and adults. On the typical problems related to children, paediatricians score very high and GPs extremely low. The position of paediatricians as the first contact is more clear-cut than that of GPs. None of the listed health problems is unanimously reported by GPs as normally presented to them in the first contact. These results suggest that GPs lack a clear domain in the first contact. The summary score of 2.06 is very low compared to GPs in other countries. If the typical paediatric items are excluded the score would be 2.4, which is still low. If regions are compared, GPs in Vojvodina have a more comprehensive role in the first contact than GPs in the other regions.

Table 33 shows that paediatricians in urban and rural practice have identical roles in dealing with patients who have a first contact with a health problem. GPs in urban CHCs, however, see a wider spectrum of health problems in the first contact than their rural colleagues. This is unlike results usually found among GPs in other countries.

Table 32. Physicians' first contact role, by region

Physician perceived to be the first contact in case of:	Vojvodina (N=96)			Central Serbia (N=95)			Belgrade (N=94)			Total (N=285)		
	% GPs*	% Paed.*	Valid N	% GPs*	% Paed.*	Valid N	% GPs*	% Paed.*	Valid N	% GPs*	% Paed.*	Valid N
Child with rash	16 (9)	100 (-)	59 / 25	7 (13)	100 (-)	60 / 25	3 (4)	96 (4)	55 / 25	9 (9)	99 (1)	174 / 75
Child with severe cough	17 (6)	100 (-)	59 / 25	6 (13)	100 (-)	59 / 25	1 (7)	100 (-)	54 / 25	8 (9)	100 (-)	172 / 75
Child age 7 with enuresis	10 (6)	88 (4)	59 / 25	4 (6)	84(12)	59 / 24	- (-)	76(16)	52 / 24	5 (4)	82(11)	170 / 73
Child age 8 with hearing problem	7 (4)	80 (8)	59 / 25	4 (3)	76(20)	58 / 24	- (-)	48(20)	50 / 18	4 (2)	68(16)	167 / 67
Woman age 18 asking for oral contraception	4 (18)	- (24)	59 / 20	5 (11)	12 (8)	60 / 19	- (9)	4 (20)	52 / 14	3 (13)	5 (17)	171 / 53
Woman age 20 for confirmation of pregnancy	8 (10)	- (-)	61 / 20	7 (9)	- (-)	60 / 18	- (6)	- (4)	53 / 13	5 (8)	- (1)	174 / 51
Woman age 35 with irregular menstruation	20 (19)	- (-)	65 / 19	11(34)	- (-)	56 / 18	- (29)	- (-)	55 / 12	11(31)	- (-)	176 / 49
Woman age 50 with lump in the breast	74 (18)	- (-)	68 / 19	70(24)	- (-)	69 / 18	64(22)	- (-)	65 / 12	70(21)	- (-)	202 / 49
Woman age 60 with polyuria	79 (14)	- (-)	68 / 19	71(19)	- (-)	67 / 18	72(13)	- (-)	63 / 13	74(15)	- (-)	198 / 50
Anxious man age 45	76 (16)	- (-)	69 / 19	71(14)	- (-)	67 / 18	83(10)	- (-)	64 / 11	77(13)	- (-)	200 / 48
Man age 28 with a first convulsion	44 (16)	- (-)	67 / 19	34(21)	- (-)	65 / 18	35(19)	- (-)	62 / 12	38(19)	- (-)	194 / 49
Physically abused child	7 (9)	48 (24)	59 / 22	- (4)	36 (8)	57 / 23	1 (3)	32(20)	55 / 19	3 (5)	39(17)	171 / 64
Couple with relationship problems	14 (21)	4 (-)	64 / 18	9 (23)	- (12)	55 / 19	15(26)	- (-)	54 / 13	12(23)	1 (4)	173 / 50
Man with suicidal inclination	31 (31)	- (-)	67 / 18	14(34)	- (-)	63 / 19	20(36)	- (-)	61 / 12	22(34)	- (-)	191 / 49
Woman age 35 with psychosocial problem related to work	55 (30)	- (-)	67 / 18	49(37)	- (-)	66 / 19	67(28)	- (4)	65 / 13	57(31)	- (1)	198 / 50
Man age 32 with sexual problems	38 (25)	- (4)	67 / 19	24(29)	- (-)	65 / 19	23(48)	- (-)	61 / 12	29(34)	- (1)	193 / 50
Man age 52 with alcohol addiction problems	51 (31)	- (-)	68 / 19	37(49)	- (-)	68 / 19	48(42)	- (-)	66 / 12	45(41)	- (-)	202 / 50
Man with symptoms of TB	54 (21)	- (4)	68 / 19	27(27)	- (-)	67 / 19	44(25)	- (-)	65 / 12	42(24)	1 (1)	200 / 50
TOTAL SCORE First contact**	2.21	1.75		1.97	1.74		2.00	1.69		2.06	1.73	

* Note: percentages are sum of the answers "(almost) always" and "usually"; percentages in brackets refer to "occasionally" being the doctor of first contact.

** For the calculation of the score, answers have been weighted as follows: seldom/never = 1; occasionally = 2; usually = 3; (almost) always = 4.

Table 33. Physicians' first contact role, by urbanization

Physician perceived to be the first contact in case of:	Urban (N=224)			Rural (N=61)			Total (N=285)		
	% GPs *	% Paed. *	Valid N	% GPs *	% Paed. *	Valid N	% GPs *	% Paed. *	Valid N
Child with rash	3 (6)	98 (2)	126 / 65	26 (20)	100 (-)	48 / 10	9 (9)	99 (1)	174 / 75
Child with severe cough	1 (6)	100 (-)	124 / 65	29 (16)	100 (-)	48 / 10	8 (9)	100 (-)	172 / 75
Child age 7 with enuresis	1 (-)	82 (11)	122 / 63	18 (16)	90 (10)	48 / 10	5 (4)	82 (11)	170 / 73
Child age 8 with hearing problem	1 (-)	66 (17)	119 / 57	14 (10)	80 (10)	48 / 10	4 (2)	68 (16)	167 / 67
Woman age 18 asking for oral contraception	- (7)	6 (15)	122 / 45	14 (31)	- (30)	49 / 8	3 (13)	5 (17)	171 / 53
Woman age 20 for confirmation of pregnancy	1 (7)	- (2)	125 / 43	20 (12)	- (-)	49 / 8	5 (8)	- (1)	174 / 51
Woman age 35 with irregular menstruation	4 (30)	- (-)	127 / 41	29 (33)	- (-)	49 / 8	11 (31)	- (-)	176 / 49
Woman age 50 with lump in the breast	69 (20)	- (-)	151 / 41	73 (26)	- (-)	51 / 8	70 (21)	- (-)	202 / 49
Woman age 60 with polyuria	74 (15)	- (-)	148 / 42	77 (16)	- (-)	50 / 8	74 (15)	- (-)	198 / 50
Anxious man age 45	80 (11)	- (-)	150 / 40	67 (22)	- (-)	50 / 8	77 (13)	- (-)	200 / 48
Man age 28 with a first convulsion	40 (17)	- (-)	144 / 41	30 (24)	- (-)	50 / 8	38 (19)	- (-)	194 / 49
Physically abused child	1 (4)	40 (17)	123 / 55	10 (8)	30 (20)	48 / 9	3 (5)	39 (17)	171 / 64
Couple with relationship problems	13 (19)	- (5)	126 / 42	10 (37)	10 (-)	47 / 8	12 (23)	1 (4)	173 / 50
Man with suicidal inclination	25 (31)	- (-)	143 / 41	12 (41)	- (-)	48 / 8	22 (34)	- (-)	191 / 49
Woman age 35 with psychosocial problem related to work	59 (28)	- (2)	148 / 42	49 (43)	- (-)	50 / 8	57 (31)	- (1)	198 / 50
Man age 32 with sexual problems	29 (34)	- (2)	144 / 42	28 (33)	- (-)	49 / 8	29 (34)	- (1)	193 / 50
Man age 52 with alcohol addiction problems	48 (37)	- (-)	152 / 42	36 (53)	- (-)	50 / 8	45 (41)	- (-)	202 / 50
Man with symptoms of TB	44 (23)	- (2)	150 / 42	34 (29)	- (-)	50 / 8	42 (24)	1 (1)	200 / 50
TOTAL SCORE First contact**	2.01	1.73		1.73	1.71		2.06	1.73	

* Note: percentages are sum of the answers "(almost) always" and "usually"; percentages in brackets refer to "occasionally" being the doctor of first contact.
 ** For the calculation of the score, answers have been weighted as follows: seldom/never = 1; occasionally = 2; usually = 3; (almost) always = 4.

Involvement of PC physicians in the treatment of diseases

In tables 34 and 35 results are presented on the involvement of GPs and paediatricians in the treatment of a list of 20 diseases. Physicians could indicate whether they would treat a patient from their practice with a diagnosis either “(almost) always”, “usually”, “occasionally”, “seldom/never” or “do not know”. The percentages refer to physicians who estimated that they always or usually be the doctor to treat this patient. The percentages in brackets refer to the category “occasionally”

The overall summary scores for GPs and paediatricians on the bottom line in Table 35 show that GPs report to be more involved in the treatment of patients with these diagnoses than paediatricians. The treatment profile of GPs seems to be clearer than the first contact profile. From the list of 20 diagnoses there are 9 where at least three quarters of GPs say they are always or usually the treating physician. There is no diagnosis listed with fewer than 20% of GPs responding that they would always or usually treat it. The profile of paediatricians is narrower. Against 3 diagnoses covered by 80 to 90% there are 6 which are reported to be outside the domain of paediatricians, explaining their lower summary score. From the breakdown to urban and rural practice (see Table 35), it appears that the involvement in treatment tasks is not related to working in a city or in the countryside.

Table 34. Physician involvement in treatment and follow up of diseases, by region

Condition:	Vojvodina (N=96)			Central Serbia (N=95)			Belgrade (N=94)			Total (N=285)		
	% GPs*	% Paed.*	Valid N	% GPs*	% Paed.*	Valid N	% GPs*	% Paed.*	Valid N	% GPs*	% Paed.*	Valid N
Hypothyroidism	75 (10)	60 (20)	68/22	63 (26)	40 (28)	67/22	68 (17)	24 (4)	64/16	69 (18)	41 (17)	199/60
Chronic bronchitis	94 (4)	100 (-)	70/25	93 (3)	88 (4)	68/24	96 (3)	76 (8)	68/22	94 (3)	88 (4)	206/71
Hordeolum (stye)	79 (16)	88 (8)	70/24	71 (19)	76 (12)	66/24	74 (23)	72 (4)	68/21	75 (19)	79 (8)	204/69
Peptic ulcer	93 (4)	48 (20)	70/22	89 (6)	36 (32)	67/23	90 (90)	24 (8)	68/17	91 (6)	36 (20)	205/62
Herniated disc lesion	82 (16)	8 (16)	70/20	81 (10)	20 (4)	66/22	88 (9)	12 (4)	68/17	84 (11)	13 (8)	204/59
Acute cerebro-vascular accident	78 (14)	- (4)	70/19	56 (27)	8 (4)	65/21	57 (26)	- (4)	66/16	63 (22)	3 (4)	201/56
Congestive heart failure	76 (18)	4 (12)	68/19	77 (13)	16 (12)	65/21	70 (22)	8 (4)	67/15	74 (18)	9 (9)	200/55
Pneumonia	96 (3)	96 (-)	70/24	89 (6)	88 (4)	67/24	93 (6)	76 (8)	68/22	92 (5)	87 (4)	205/70
Peritonsillar abscess	73 (17)	84 (4)	70/23	47 (6)	68 (16)	66/22	67 (17)	56 (16)	67/21	62 (23)	69 (12)	203/66
Ulcerative colitis	61 (23)	28 (16)	70/21	40 (27)	32 (44)	66/21	49 (28)	24 (12)	68/15	50 (26)	28 (24)	204/57
Salpingitis	30 (28)	16 (12)	67/19	14 (29)	8 (36)	58/21	15 (16)	4 (20)	61/14	20 (24)	9 (23)	186/54
Concussion	40 (31)	44 (16)	67/20	23 (27)	32 (36)	62/21	26 (30)	32 (4)	64/15	30 (30)	36 (19)	193/56
Parkinson's disease	69 (14)	- (4)	70/19	63 (16)	- (-)	65/21	61 (15)	4 (-)	68/14	64 (15)	1 (1)	203/54
Uncomplicated diabetes (type II)	92 (7)	20 (8)	70/20	93 (1)	16 (16)	67/21	93 (4)	12 (-)	67/15	92 (4)	16 (8)	204/56
Rheumatoid arthritis	80 (3)	44 (12)	70/21	82 (9)	64 (12)	66/23	81 (12)	20 (12)	68/17	81 (11)	43 (12)	204/61
Depression	85 (13)	20 (12)	70/19	79 (14)	20 (48)	67/22	77 (13)	12 (12)	67/15	80 (13)	17 (24)	204/56
Myocardial infarction	70 (20)	- (4)	70/19	74 (14)	- (-)	66/21	62 (26)	- (4)	67/15	69 (20)	- (3)	203/55
Follow up TB care	49 (24)	28 (8)	69/19	39 (26)	44 (-)	62/22	42 (15)	12 (8)	64/15	43 (21)	38 (5)	195/57
Problems of menopause	52 (24)	4 (-)	68/19	43 (26)	8 (8)	63/21	39 (33)	- (-)	64/14	45 (28)	4 (3)	195/54
Amenorrhoea	35 (28)	28 (8)	68/20	29 (23)	20 (32)	59/22	23 (22)	16 (12)	63/15	29 (24)	21 (17)	190/57
TOTAL SCORE Treatment tasks**	3.14	2.24		2.91	2.26		2.94	1.99		3.00	2.18	

* Note: percentages are sum of the answers "(almost) always" and "usually"; percentages in brackets refer to "occasionally" being the doctor of first contact.
 ** For the calculation of the score, answers have been weighted as follows: seldom/never = 1; occasionally = 2; usually = 3; (almost) always = 4.

Table 35. Physician involvement in treatment and follow up of diseases, by urbanization

Condition:	Urban (N=224)			Rural (N=61)			Total (N=285)		
	% GPs*	% Paed.*	Valid N	% GPs*	% Paed.*	Valid N	% GPs*	% Paed.*	Valid N
Hyperthyroidism	71 (15)	43 (14)	150/51	61 (26)	30 (40)	49/9	69 (18)	41 (17)	199/60
Chronic bronchitis	94 (3)	88 (5)	156/61	94 (4)	90 (-)	50/10	94 (3)	88 (4)	206/71
Hordeolum (stye)	75 (20)	77 (8)	155/59	75 (18)	90 (10)	49/10	75 (19)	79 (8)	204/69
Peptic ulcer	91 (6)	37 (17)	156/53	88 (8)	30 (40)	49/9	91 (6)	36 (20)	205/62
Herniated disc lesion	84 (12)	12 (9)	156/51	84 (10)	20 (-)	48/8	84 (11)	13 (8)	204/59
Acute cerebro-vascular accident	64 (21)	3 (3)	152/48	63 (28)	- (10)	49/8	63 (22)	3 (4)	201/56
Congestive heart failure	76 (15)	9 (11)	151/47	69 (26)	10 (-)	49/8	74 (18)	9 (9)	200/55
Pneumonia	95 (3)	85 (5)	156/60	84 (12)	100 (-)	49/10	92 (5)	87 (4)	205/70
Peritonsillar abscess	64 (23)	68 (14)	154/58	59 (26)	80 (-)	49/8	62 (23)	69 (12)	203/66
Ulcerative colitis	54 (23)	26 (25)	155/49	39 (33)	40 (20)	48/8	50 (26)	28 (24)	204/57
Salpingitis	16 (22)	9 (21)	138/46	29 (31)	10 (30)	48/8	20 (24)	9 (23)	186/54
Concussion	29 (29)	37 (15)	145/48	31 (31)	30 (40)	48/8	30 (30)	36 (19)	193/56
Parkinson's disease	65 (13)	2 (-)	155/46	61 (22)	- (10)	48/8	64 (15)	1 (1)	203/54
Uncomplicated diabetes (type II)	92 (5)	14 (9)	155/48	94 (2)	30 (-)	49/8	92 (4)	16 (8)	204/56
Rheumatoid arthritis	79 (13)	40 (14)	156/47	86 (4)	60 (-)	48/9	81 (11)	43 (12)	204/61
Depression	79 (15)	17 (26)	155/47	84 (10)	20 (10)	49/9	80 (13)	17 (24)	204/56
Myocardial infarction	69 (18)	- (2)	155/47	69 (26)	- (10)	48/8	69 (20)	- (3)	203/55
Follow up TB care	42 (21)	28 (6)	147/49	49 (22)	30 (-)	48/8	43 (21)	28 (5)	195/57
Problems of menopause	44 (28)	5 (3)	147/46	47 (26)	- (-)	48/8	45 (28)	4 (3)	195/54
Amenorrhoea	26 (25)	20 (17)	142/49	37 (22)	30 (20)	48/8	29 (24)	21 (17)	190/57
TOTAL SCORE Treatment tasks**	3.00	2.16		3.01	2.29		3.00	2.18	

* Note: percentages are sum of the answers "(almost) always" and "usually"; percentages in brackets refer to "occasionally" being the doctor of first contact.

** For the calculation of the score, answers have been weighted as follows: seldom/never = 1; occasionally = 2; usually = 3; (almost) always = 4.

Preventive and medical technical procedures provided in PC

Involvement in the provision of medical procedures to patients (such as minor surgery) was measured with 16 items. Physicians could indicate whether they would provide the procedure “(almost) always”, “usually”, “occasionally”, “seldom/never” or “do not know”. The percentages in tables 36 and 37 refer to physicians who said that they would always or usually provide the procedure. The percentages in brackets refer to the category “occasionally”. At a glance, Table 36 shows that these clinical tasks are outside the core of the professional domain of Serbian GPs and paediatricians. The very low summary scores on the bottom line of the table need little further explanation.

In contrast to the previous tasks, these procedural tasks show parallel profiles for GPs and paediatricians, who are marginally involved in the listed procedures, but in those where they are involved they are both involved. This general picture applies to all three regions and to both urban and rural areas (see Table 37).

Table 36. Physician involvement in medical-technical procedures, by region

Procedure	Vojvodina (N=96)			Central Serbia (N=95)			Belgrade (N=94)			Total (N=285)		
	% GPs*	% Paed.*	Valid N	% GPs*	% Paed.*	Valid N	% GPs*	% Paed.*	Valid N	% GPs*	% Paed.*	Valid N
Wedge resection of ingrown toenail	18	12	71/25	1	29	70/24	6	5	69/22	9	6	210/71
Removal of sebaceous cyst from scalp	11	4	71/25	1	4	69/24	3	-	69/22	5	1	209/71
Wound suturing	33	29	69/24	3	-	66/24	16	10	67/20	18	13	202/68
Excision of warts	7	-	69/24	2	-	66/24	5	-	65/20	5	-	200/67
IUD insertion	1	-	69/21	5	-	66/24	3	-	63/16	3	-	198/61
Removal of rusty spot from cornea	4	-	69/23	2	-	66/24	2	-	66/19	3	-	201/66
Fundoscopy	1	-	69/23	2	-	66/24	2	-	67/20	2	-	202/67
Joint injection	10	-	69/21	5	-	66/24	6	-	66/18	7	-	201/63
Maxillary (sinus) puncture	2	-	68/21	9	-	65/23	2	-	65/18	1	-	198/62
Myringotomy of eardrum (paracentesis)	2	-	68/22	-	-	66/24	2	-	65/18	1	-	199/64
Applying plaster cast	1	-	69/22	2	-	66/24	5	-	63/20	3	-	198/66
Strapping an ankle	28	23	68/22	19	17	67/24	34	15	64/20	27	23	199/66
Cryotherapy (warts)	4	-	68/22	6	-	63/23	10	-	60/18	7	-	191/63
Setting up intravenous infusion	91	57	69/23	86	29	66/24	86	74	64/19	88	52	199/66
Immunization for flu or tetanus	99	100	69/24	88	83	67/24	96	96	66/25	97	93	202/73
Allergy vaccinations	36	4	67/24	42	25	67/24	28	16	64/19	35	15	198/67
TOTAL SCORE Medical procedures / prevention *	1.56	1.44		1.50	1.40		1.50	1.39		1.52	1.41	

* For the calculation of the score, answers have been weighted as follows: usually done by medical specialist = 1; usually done by other PHC doctor = 2; usually done by practice staff = 3; usually done by myself = 4

Table 37. Physician involvement in medical-technical procedures, by urbanization

Procedure	Urban (N=224)			Rural (N=64)			Total (N=285)		
	% GPs *	% Paed. *	Valid N	% GPs *	% Paed. *	Valid N	% GPs *	% Paed. *	Valid N
Wedge resection of ingrown toenail	8	5	159/61	12	10	51/10	9	6	210/71
Removal of sebaceous cyst from hairy scalp	5	2	159/61	6	-	50/10	5	1	209/71
Wound suturing	15	10	153/58	27	30	49/10	18	13	202/68
Excision of warts	5	-	151/58	4	-	49/9	5	-	200/67
IUD insertion	2	-	149/53	6	-	49/8	3	-	198/61
Removal of rusty spot from cornea	1	-	152/57	6	-	49/9	3	-	201/66
Fundoscopy	1	-	153/58	2	-	49/9	2	-	202/67
Joint injection	7	-	152/54	8	-	49/9	7	-	201/63
Maxillary (sinus) puncture	1	-	150/53	-	-	48/9	1	-	198/62
Myringotomy of eardrum (paracentesis)	1	-	150/55	-	-	49/9	1	-	199/64
Applying plaster cast	3	-	149/57	-	-	49/9	3	-	198/66
Strapping an ankle	23	23	150/57	41	22	49/9	27	23	199/66
Cryotherapy (warts)	8	-	145/54	4	-	46/9	7	-	191/63
Setting up intravenous infusion	88	46	151/57	88	89	48/9	88	52	199/66
Immunization for flu or tetanus	95	92	154/64	92	100	48/9	97	93	202/73
Allergy vaccinations	35	14	150/58	38	22	48/9	35	15	198/67
TOTAL SCORE Medical procedures /prevention *	1.51	1.40		1.55	1.52		1.52	1.41	

* For the calculation of the score, answers have been weighted as follows: usually done by medical specialist = 1; usually done by other PHC doctor = 2; usually done by practice staff = 3; usually done by myself = 4

Table 38. Physician involvement in activities for specific groups

Activity	Vojvodina (N=96)			Central Serbia (N=95)			Belgrade (N=94)			Total (N=285)		
	% GPs*	% Paed.*	Valid N	% GPs*	% Paed.*	Valid N	% GPs*	% Paed.*	Valid N	% GPs*	% Paed.*	Valid N
Screening for STDs	13	8	66/22	11	8	64/24	9	12	60/19	11	9	190/65
Screening for HIV / AIDS	14	8	66/22	14	4	64/24	13	16	60/18	14	9	190/64
TB Screening	17	16	65/22	13	20	63/23	12	4	58/17	14	13	186/62
Influenza vaccination programme for high-risk groups	89	72	68/24	66	56	67/24	90	72	67/21	81	67	202/69
Rehabilitative care	32	20	66/21	20	40	62/23	39	16	59/16	31	25	187/60
School health care	16	80	62/24	7	68	61/24	-	60	50/22	8	69	173/70
Cervical cancer screening	21	-	66/21	16	-	62/23	10	-	54/18	16	-	182/62
Breast cancer screening	55	-	67/21	37	-	64/23	55	-	60/18	49	-	191/62
Colon carcinoma screening	87	-	70/21	56	-	65/22	83	-	66/18	75	-	201/61
Anaemia screening	69	88	68/25	56	88	65/24	64	60	63/21	63	79	196/70
Screening infants for hip deformation	10	64	65/25	1	64	59/24	80	40	55/20	4	56	179/69
Screening for hearing and vision deficiencies	28	60	67/23	20	72	60/24	22	36	58/19	23	56	185/66
TOTAL coverage for Spec. groups	37.6%	34.7%		26.4%	35.0%		39.8%	26.3%		32.4%	31.9%	

Two additional questions dealt with the physicians' perception of unnecessary drug prescriptions and their opinion about the balance in their work between curative and preventive tasks. Results are presented in tables 38 and 39.

Table 39. Estimation of medically unnecessary prescriptions

	Vojvodina (N=96)		Central Serbia (N=95)		Belgrade (N=94)		Total (N=285)	
	%	Valid N	%	Valid N	%	Valid N	%	Valid N
Estimated % of patient contacts in which medically unnecessary prescriptions are made:								
• GPs	6.2	63	6.4	58	7.6	53	6.7	174
• Paediatricians	3.7	23	5.1	22	5.4	16	4.6	61

Results in Table 39 show that most GPs and paediatricians are not satisfied with the balance between curative and preventive tasks in their work. They would like to pay more attention to prevention and health education.

Table 39. Balance between curative and preventive tasks

Opinion	Vojvodina (N=96)			Central Serbia (N=95)			Belgrade (N=94)			Total (N=285)		
	% GPs*	% Paed.*	Valid N	% GPs*	% Paed.*	Valid N	% GPs*	% Paed.*	Valid N	% GPs*	% Paed.*	Valid N
I would like to spend more time on prevention and health education.	63	44	68 / 23	54	64	68 / 25	74	75	65 / 24	64	61	201 / 72
I would like to spend more time on curative tasks.	10	-	68 / 23	15	4	68 / 25	5	-	65 / 24	10	1	201 / 72
I am satisfied with the current balance between curative and preventive tasks.	27	56	68 / 23	31	32	68 / 25	21	25	65 / 24	26	38	201 / 72

Mother and child care /reproductive health

Results for mother and child health (MCH) and reproductive health (RH) are presented in Table 40. Immunization for children up to age 18 and paediatric surveillance are normal tasks of all paediatricians. Nevertheless about one out of six GPs also report to provide these services.

GPs in rural areas are much more involved in all four tasks (Table 40). Rural paediatricians are also more involved than urban colleagues, but only in family planning / contraception and routine antenatal care.

Table 40. Physicians providing services to all or most mothers and children, by region

Service	Vojvodina (N=96)			Central Serbia (N=95)			Belgrade (N=94)			Total (N=285)		
	% GPs*	% Paed.*	Valid N	% GPs*	% Paed.*	Valid N	% GPs*	% Paed.*	Valid N	% GPs*	% Paed.*	Valid N
Family planning and contraception	14	42	65/19	11	29	64/24	8	24	52/17	11	32	181/60
Routine antenatal care	19	40	64/20	11	38	62/24	12	50	49/16	14	42	175/60
Normal immunizations of children under age 18	26	100	66/25	8	96	61/24	10	100	49/24	15	99	176/73
Routine paediatric surveillance (under age 18)	30	100	66/25	16	96	62/25	10	100	49/23	18	99	177/73

Table 41. Physicians providing services to all or most mothers and children, by urbanization

Service	Urban (N=224)			Rural (N=61)			Total (N=285)		
	% GPs*	% Paed.*	Valid N	% GPs*	% Paed.*	Valid N	% GPs*	% Paed.*	Valid N
Family planning and contraception	9	33	132/51	16	78	49/9	11	32	181/60
Routine antenatal care	9	43	129/51	28	67	46/9	14	42	175/60
Normal immunizations of children under age 18	9	100	128/63	33	90	48/10	15	99	176/73
Routine paediatric surveillance (under age 18)	11	100	129/63	38	90	48/10	18	99	177/73

5. PATIENT RESPONSES ABOUT PC

The survey among patients was carried out in the practices of some of the physicians who participated in the physicians' survey. Field workers visited the practices and systematically asked every attending patient for his or her cooperation, until the target of 15 completed questionnaires was achieved. In this way it was ensured that the information gained from the patient survey applied to the same practices as the information from the survey among physicians. Further explanation of the approach can be found in Chapter 1. In the description of the results reference has been made to the health systems functions of the framework explained in Chapter 1.

5.1 Respondents' characteristics

The patient survey had responses from 1655 patients: 549 from Vojvodina, 580 from Central Serbia and 526 from the Belgrade region. As usual among health service patients, females were a majority. Almost two thirds of the questionnaires were completed by women; there were small differences among the regions in age distribution.

Table 42. Gender distribution of patients, urbanization

	Vojvodina (N=96)			Central Serbia (N=95)			Belgrade (N=94)		
	Urban	Rural*	Total	Urban	Rural*	Total	Urban	Rural*	Total
	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)
Male	140 (34)	48 (36)	188 (34)	129 (36)	95 (42)	224 (39)	170 (34)	15 (52)	185 (35)
Femlae	277 (66)	84 (64)	361 (66)	226 (64)	130 (58)	356 (61)	327 (66)	14 (48)	341 (65)
Total	417 (76)	132 (24)	549 (100)	355 (61)	225 (39)	580 (100)	497 (94)	29 (6)	526 (100)

* Including small towns and rural areas.

Table 43. Patients' age, occupation and living situation

Patients' background	Urban (N=224)		Rural (N=61)		Total (N=285)	
	Abs.	%	Abs.	%	Abs.	%
Age						
• up to 20 yrs	26	5	34	6	21	4
• 21 – 30	52	10	64	11	44	9
• 31 – 40	119	22	458	27	118	23
• 41 – 50	118	22	95	16	84	17
• 51 – 60	93	17	102	18	96	19
• Over 60	137	24	124	22	147	28
Total	539	100	577	100	510	100
Occupation						
• in school	36	7	34	6	30	6
• unemployed	66	12	104	17	48	9
• unable to work (disability)	2	0	9	2	6	1
• looking after family	30	6	42	7	15	3
• employee	247	45	229	39	261	49
• self-employed	22	4	26	5	10	1
• retired	137	25	128	22	153	29
• other	10	1	10	2	9	2
Total	550	100	582	100	532	100
Living situation						
• alone	58	11	44	8	63	11
• with parents	62	11	65	11	56	11
• with husband / wife	90	16	77	13	85	16
• with family (incl. children)	283	51	331	57	255	48
• with children	38	7	53	9	57	11
• other	21	4	16	2	16	3
Total	552	100	586	100	532	100

5.2 Accessibility of care

5.2.1 Financial access

Table 44. Services for which copayment from patients is required

Type of service	Vojvodina (N=549)		Central Serbia (N=580)		Belgrade (N=526)	
	Abs.	%	Abs.	%	Abs.	%
Visit to your doctor	277	50	230	39	247	46
Medicines or injections prescribed by your doctor	364	65	309	53	315	58
A visit to a specialist after referral by your doctor	283	51	246	42	261	48
Home visit by your doctor	159	29	80	14	98	18
Regular check up of baby or young child	29	5	29	5	16	3

Except for one, for all PC services listed in Table 44 required payment by substantial proportions of respondents, indicating financial barriers for many people accessing essential PC services, as 11% of the respondents delayed or avoided a visit to the doctor in the past twelve months for this reason (see Table 45).

Table 45. Patients reporting financial barriers to PC access, past 12 months

Decision taken in past year	Vojvodina (N=549)		Central Serbia (N=580)		Belgrade (N=526)	
	Abs.	%	Abs.	%	Abs.	%
Not to visit or delay a visit because I could not pay for the medicines	56	10	66	11	59	11

5.2.2 Geographical access and responsiveness

In this section results will be presented for CHC or ambulatory services, in the categories of attainability and accessibility, opening hours and convenience and patient-friendliness. As Figure 11 and Table 46 show, on average, at least two-thirds of the respondents answer they can reach their doctor and pharmacy within 20 minutes travelling time. The reported travel times to the dentist are longer than to the doctor and the pharmacy, but still half of the respondents could reach the dentist within 20 minutes. Hospitals are usually farther away. Around 20% can reach a hospital within 20 minutes.

Figure 11. Patients with under 20 minutes travel time

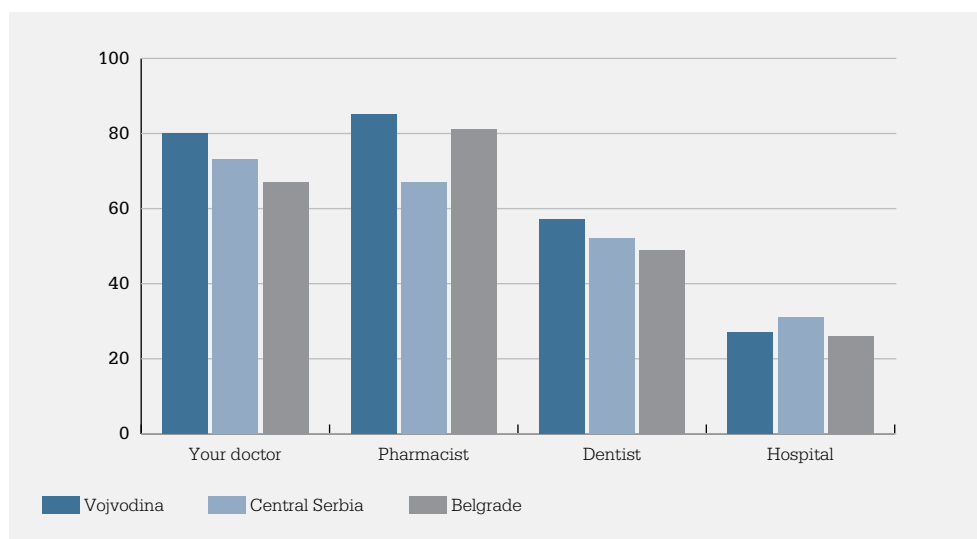


Table 46. Patients' travel time to PC providers

Provider and distance	Vojvodina (N=549)		Central Serbia (N=580)		Belgrade (N=526)	
	Abs.	%	Abs.	%	Abs.	%
Your doctor						
• up to 20 minutes	446	80	426	73	359	67
• 20-40 minutes	96	17	126	22	122	23
• 40-60 minutes	9	2	19	3	39	7
• more than 1 hour	1	0	8	2	16	3
• don't know	3	1	1	0	1	0
Total	555	100	580	100	537	100
Pharmacist						
• up to 20 minutes	440	85	369	67	396	81
• 20-40 minutes	69	13	133	24	65	13
• 40-60 minutes	5	1	37	7	17	4
• more than 1 hour	-	-	13	2	7	1
• don't know	3	1	1	0	2	1
Total	517	100	553	100	487	100
Dentist						
• up to 20 minutes	287	57	283	52	232	49
• 20-40 minutes	138	28	157	29	140	30
• 40-60 minutes	23	4	61	11	43	9
• more than 1 hour	20	4	29	6	27	6
• don't know	34	7	12	2	27	6
Total	502	100	542	100	469	100
Hospital						
• up to 20 minutes	135	27	176	31	126	26
• 20-40 minutes	214	42	229	41	197	41
• 40-60 minutes	104	20	102	19	103	21
• more than 1 hour	45	9	36	7	46	9
• don't know	12	2	8	2	13	3
Total	510	100	551	100	485	100

Table 47 shows the respondents' perceived quality of their PC facility, including accessibility and convenience, treatment by practice staff and opening hours and availability of service providers. Possible answers were: "Yes, I agree", "I agree somewhat", "I do not agree", and "I don't know". Percentages in the table refer to the number answering "Yes, I agree".

Table 47: The perceived practice quality, by region

Patients agreeing with following statements:	Vojvodina Region (N=549)		Central Serbia Region (N=580)		Belgrade Region (N=526)		Total (N=1655)	
	Abs.	%	Abs.	%	Abs.	%	Abs.	%
I can easily reach the practice by public transport.	368	66	435	74	422	78	1225	73
The practice/centre is well accessible for disabled and people with wheel-chairs.	231	42	367	63	207	38	805	48
The waiting room for patients is convenient.	366	66	342	58	312	58	1020	61
My CHC has a website.	168	30	152	26	152	28	472	28
At my practice there is a complaint mail box that I can use to submit a complaint if I am not satisfied.	357	64	483	82	300	56	1140	68
When the practice is open and I want to visit a doctor urgently it is possible to have the visit the same day.	438	79	450	77	384	71	1272	76
During opening hours it is easy to get a doctor on the telephone for advice.	299	54	291	50	258	48	848	50
When I visit the practice there is always at least one doctor available.	391	70	425	73	378	70	1194	71
When the practice is closed there is a telephone number to call when I get sick.	287	52	251	43	260	48	798	48
At my practice it is possible to visit a GP on Saturdays or Sundays.	274	49	351	60	272	51	897	53
At my practice it is possible to visit a paediatrician on Saturdays or Sundays.	117	21	284	49	182	34	583	35
At my practice it is possible to visit a gynaecologist on Saturdays or Sundays.	41	7	152	26	66	12	259	15
At my practice it is possible to visit a GP after 19:00 (at least once per week).	223	40	297	51	40	7	560	33
At my practice it is possible to visit a gynaecologist after 19:00 (at least once per week).	94	17	220	38	26	5	340	20
At my practice it is possible to visit a paediatrician after 19:00 (at least once per week).	128	23	250	43	29	5	407	24
I am satisfied about current opening hours of the practice.	442	80	479	82	414	77	1335	79
Staff at the reception desk are kind and helpful.	403	73	415	71	356	66	1174	70
Making an appointment with my doctor takes too much time.	79	14	80	14	46	9	205	12
I need to wait too long in the waiting room to see the doctor.	100	18	98	17	119	22	317	19

Table 48 presents the same results by urban and rural areas. On most of the items rural respondents are somewhat more positive than the urban, in contrast to results from various other countries where appreciation of patients in rural facilities is usually lower than that in urban facilities.

Table 48. The perceived quality of the practice, by urbanization

Patients agreeing with following statements:	Urban (N=1269)		Rural (N=386)		Total (N=1655)	
	Abs.	%	Abs.	%	Abs.	%
I can easily reach the practice by public transport.	934	73	291	74	1225	73
The practice/centre is very accessible for disabled and people with wheelchairs.	601	47	204	52	805	48
The waiting room for patients is convenient.	766	59	254	65	1020	61
My CHC has a website.	357	28	115	29	472	28
At my practice there is a complaint mail box that I can use to submit a complaint if I am not satisfied.	845	66	295	75	1140	68
When the practice is open and I want to visit a doctor urgently it is possible to have the visit the same day.	956	74	316	81	1272	76
During opening hours it is easy to get a doctor on the telephone for advice.	617	48	231	59	848	50
When I visit the practice there is always at least one doctor available.	904	70	290	74	1194	71
When the practice is closed there is a telephone number to call when I get sick.	596	46	202	52	798	48
At my practice it is possible to visit a GP on Saturdays or Sundays .	663	51	234	60	897	53
At my practice it is possible to visit a paediatrician on Saturdays or Sundays.	455	35	128	33	583	35
At my practice it is possible to visit a gynaecologist on Saturdays or Sundays.	162	13	97	25	259	15
At my practice it is possible to visit a GP after 19:00 (at least once per week).	368	29	192	49	560	33
At my practice it is possible to visit a gynaecologist after 19:00 (at least once per week).	243	19	97	25	340	20
At my practice it is possible to visit a paediatrician after 19:00 (at least once per week).	286	22	121	31	407	24
I am satisfied about current opening hours of the practice.	1028	80	307	78	1335	79
Staff at the reception desk are kind and helpful.	869	67	305	78	1174	70
Making an appointment with my doctor takes too much time.	146	11	59	15	205	12
I need to wait too long in the waiting room to see the doctor.	260	20	57	15	317	19

5.3 Continuity of care

5.3.1 Longitudinal and interpersonal continuity

Table 49 presents the results of the reported number of visits by respondents to various PC physicians and PC nurses. As respondents are not representative of the national population, frequencies in this table cannot be compared to the national average, for instance, as mentioned in Table 12 in Chapter 3. It is most likely that rare visitors to CHCs are under-represented. Furthermore, some patients have reported visits to more than one chosen doctor, which may be due to the scheme's novelty.

Although these visit data need to be interpreted with care, they seem to clarify some observations. First, taking all visits to chosen and other PC doctors into account, the visit frequency of our respondents seems to be very high. Furthermore, in addition to chosen doctors, respondents see various other PC physicians, so the position of chosen doctors seems to be far from exclusive.

Table 49. Patients' frequency of visits to their own and other PC physicians during the previous 12 months

Visit frequency past 12 months	Vojvodina (N=549)		Central Serbia (N=580)		Belgrade (N=526)		Total (N=1655)	
	Abs.	%	Abs.	%	Abs.	%	Abs.	%
My GP (chosen doctor)								
• 1-3 visits	124	27	126	26	140	30	390	28
• 4-6 visits	117	25	97	20	95	21	309	22
• 7-9 visit	26	6	26	5	40	9	92	7
• 10 or more visits	190	42	232	49	183	40	605	43
Total respondents	457	100	481	100	458	100	1396	100
Average annual visit frequency								
• GP patients	8.7		10.2		8.3		9.1	
• Paediatrician patients	4.0		3.0		4.0		3.6	
Other GP								
Total respondents	64	100	96	100	114	100	274	100
Average annual visit frequency								
• GP patients	3.2		4.5		4.1		4.0	
• Paediatrician patients	4.1		2.8		2.4		2.9	
My PC paediatr. (chosen doctor)								
• 1-3 visits	29	27	31	18	16	18	76	21
• 4-6 visits	31	29	56	32	27	31	114	31
• 7-9 visit	11	10	18	10	12	13	41	11
• 10 or more visits	37	34	68	40	33	38	138	37
Total respondents	108	100	173	100	88	100	369	100
Average annual visit frequency								
• GP patients	5.5		4.7		6.4		5.5	
• Paediatrician patients	9.0		9.8		7.9		9.1	
Other PC paediatrician								
Total respondents	36	100	45	100	43	100	124	100
Average annual visit frequency								
• GP patients	1.3		1.5		3.3		2.6	
• Paediatrician patients	3.9		3.3		3.4		3.5	
PC gynaecologist (chosen doctor)								
Total respondents	136	100	159	100	178	100	473	100
Average annual visit frequency								
• GP patients	2.2		2.4		2.6		2.4	
• Paediatrician patients	2.3		2.7		2.2		2.4	
Other PC gynaecologist								
Total respondents	11	100	11	100	22	100	44	100
Average annual visit frequency								
• GP patients	1.9		2.0		1.7		1.8	
• Paediatrician patients	1.0		2.0		4.0		2.5	
Occupational doctor (chosen)								
Total respondents	19	100	15	100	15	100	49	100
Average annual visit frequency								
• GP patients	6.3		2.3		2.0		3.5	
• Paediatrician patients	3.9		2.3		1.8		3.0	
Other occupational doctor								
Total respondents	21	100	21	100	24	100	66	100
Average annual visit frequency								
• GP patients	4.2		4.4		3.4		4.0	
• Paediatrician patients	1.9		1.0		2.6		2.1	

Table 50. Patients' frequency of visits to private PC physicians (outside CHC) and nurses during the previous 12 months

Visit frequency past 12 months	Vojvodina (N=549)		Central Serbia (N=580)		Belgrade (N=526)		Total (N=1655)	
	Abs.	%	Abs.	%	Abs.	%	Abs.	%
Private doctor (outside CHC)								
• no visits	388	70	443	79	360	68	1191	72
• 1-3 visits	136	25	101	18	139	26	376	23
• 4 or more visits	29	5	18	3	36	6	83	5
Total respondents	553	100	562	100	535	100	1650	100
Average annual visit frequency with private doctor								
• GP patients	0.7		0.5		0.9		0.7	
• Paediatrician patients	1.1		0.6		0.9		0.8	
Nurse								
• no visits	390	71	443	79	410	77	1243	75
• 1-3 visits	90	16	79	14	78	15	247	15
• 4-6 visits	29	5	19	3	25	5	73	5
• 7-9 visit	8	2	2	0	8	1	18	1
• 10-12 visits	16	3	13	2	6	1	35	2
• 13 or more visits	19	3	5	1	8	1	32	2
Total respondents	552	100	561	100	535	100	1648	100
Average annual visit frequency with nurse								
• GP patients	1.9		1.0		1.1		1.4	
• Paediatrician patients	0.8		0.4		0.7		0.6	

The next group of tables concern perceived functioning of the PC physician in the personal relationship with the patients. Important aspects in this evaluation are doctor-patient communication, patients' perception of the doctor's competence and their trust and confidence in the doctor. Tables 51 and 52 first show results on conditions for continuity and subsequently patients' evaluation of their doctor.

Table 51. Patient experiences with doctors, by region

Criteria	Vojvodina (N=549)		Central Serbia (N=580)		Belgrade (N=526)		Total (N=1655)	
	Abs.	%	Abs.	%	Abs.	%	Abs.	%
Length of time being a patient with my current doctor								
less than one year								
• GP patients	65	16	95	23	69	18	229	19
• Paed. patients	27	19	22	13	15	11	64	15
1 – 3 years								
• GP patients	215	52	151	37	107	27	473	39
• Paed. patients	61	44	83	49	40	30	184	41
more than 3 years								
• GP patients	126	30	141	34	209	53	476	39
• Paed. patients	34	24	52	31	64	48	150	34
I don't know								
• GP patients	7	2	26	6	9	2	42	3
• Paed. patients	18	13	11	7	14	11	43	10
I see the same doctor at each visit								
• GP patients	321	80	309	76	294	76	924	77
• Paed. patients	98	75	93	56	86	65	277	64
Estimated duration of a consultation								
Up to 5 minutes								
• GP patients	14	3	13	4	14	5	41	4
• Paed. patients	9	8	5	4	11	9	25	7
6-10 minutes								
• GP patients	102	28	110	30	101	30	313	29
• Paed. patients	35	30	50	35	43	37	128	34
11 - 15 minutes								
• GP patients	165	45	180	48	145	43	490	46
• Paed. Patients	48	41	50	35	38	33	136	36
more than 15 minutes								
• GP patients	89	24	67	18	75	22	231	22
• Paed. patients	25	21	38	27	25	21	88	23
Average length of a consultation (in minutes)								
• GP patients	15.0		14.5		14.5		14.7	
• Paed. patients	14.2		15.1		14.1		14.5	
Estimated time between making an appointment and visiting my doctor								
the visit is the same day								
• GP patients	188	47	153	37	147	37	488	40
• Paed. patients	45	34	86	51	58	46	189	44
I have to wait 1 day								
• GP patients	95	24	117	29	101	26	313	26
• Paed. patients	15	11	30	18	16	13	61	14
2-3 days								
• GP patients	61	14	92	22	60	15	213	18
• Paed. patients	16	12	14	8	14	11	44	10
more than 3 days								
• GP patients	36	9	25	6	10	3	71	6
• Paed. patients	19	14	8	5	8	6	35	8
I never make appointments								
• GP patients	14	4	11	3	67	17	92	7
• Paed. patients	24	18	19	11	16	12	59	14
I don't know								
• GP patients	9	2	13	3	8	2	30	3
• Paed. patients	14	11	12	7	15	12	41	10

Criteria	Vojvodina (N=549)		Central Serbia (N=580)		Belgrade (N=526)		Total (N=1655)	
	Abs.	%	Abs.	%	Abs.	%	Abs.	%
My doctor knows my personal situation								
• GP patients	294	73	309	76	273	71	876	73
• Paed. patients	52	40	86	52	65	50	203	48
My doctor knows the problems and illnesses that I had in the past (from my medical records)								
• GP patients	374	94	365	89	336	86	1075	90
• Paed. patients	100	76	133	80	99	76	332	78
My doctor takes sufficient time to talk to me								
• GP patients	364	90	346	85	320	82	1030	86
• Paed. patients	99	76	124	73	90	69	313	73
My doctor listens well to me								
• GP patients	386	96	376	92	351	90	1113	93
• Paed. patients	113	85	142	85	105	81	360	84
My doctor not just deals with medical problems but can also help with personal problems and worries								
• GP patients	232	59	244	62	196	53	672	58
• Paed. patients	38	30	63	39	34	26	135	32
My doctor gives clear explanation about my illnesses and prescribed medicines								
• GP patients	385	95	375	92	351	91	1111	93
• Paed. patients	201	77	138	82	94	72	334	78
My doctor would visit me at home if I would ask for it								
• GP patients	334	83	237	59	188	50	759	64
• Paed. patients	48	37	52	31	17	13	117	27
After a visit to my doctor I feel able to cope better with my health problem / illness								
• GP patients	352	87	337	82	291	76	980	82
• Paed. patients	79	61	120	71	72	55	271	63
When I have a new health problem, I go to my doctor before going to a medical specialist								
• GP patients	389	96	386	94	347	89	1122	93
• Paed. patients	123	93	152	90	109	83	384	89
My practice has sufficient medical equipment								
• GP patients	199	51	175	44	129	36	503	44
• Paed. patients	42	33	89	53	49	38	180	43

More than 80% of the patients of both GPs and paediatricians have been registered with their current doctor for more than one year. In general, the agreement of patients of paediatricians with the positive attributes is somewhat lower than with GPs, but 89% would first go to their own paediatrician before seeing a specialist. Patients were considerably less positive about the paediatrician knowing their personal situation, helping with personal problems or making home visits.

The relative appreciation of urban and rural respondents for their doctors is shown in Table 52, with consistent differences between them. Respondents from rural areas more often report that they can make same-day appointments and that the duration of consultations is longer. They are also generally more positive about their doctors. In rural areas many more respondents think that their paediatrician would make a home visit if requested, and they more often think their paediatrician has sufficient medical equipment.

Table 52. Patients' experiences with their doctor, by urbanization

Statements	Urban (N=1269)		Rural (N=386)		Total (N=1655)	
	Abs.	%	Abs.	%	Abs.	%
Length of time being a patient with my current doctor						
less than one year						
• GP patients	172	20	57	17	229	19
• Paed. patients	57	15	7	14	64	15
1 – 3 years						
• GP patients	335	38	138	41	473	39
• Paed. patients	165	42	19	39	184	41
more than 3 years						
• GP patients	347	39	129	38	476	39
• Paed. patients	130	33	20	41	150	34
I don't know						
• GP patients	26	3	16	5	42	3
• Paed. patients	40	10	3	6	43	10
I see the same doctor at each visit						
• GP patients	650	76	274	81	924	77
• Paed. patients	243	63	34	72	277	64
Estimated duration of a consultation						
up to 5 minutes						
• GP patients	31	4	10	3	41	4
• Paed. patients	22	7	3	7	25	7
6-10 minutes						
• GP patients	226	29	87	28	313	29
• Paed. Patients	121	36	7	16	128	34
11 - 15 minutes						
• GP patients	351	46	139	46	490	46
• Paed. patients	125	37	11	26	136	36
more than 15 minutes						
• GP patients	162	21	69	23	231	22
• Paed. patients	66	20	22	51	88	23

Statements	Urban (N=1269)		Rural (N=386)		Total (N=1655)	
	Abs.	%	Abs.	%	Abs.	%
My doctor knows my personal situation (e.g. work or home situation)						
• GP patients	618	72	258	77	876	73
• Paed. patients	173	46	30	64	203	48
My doctor knows the problems and illnesses that I had in the past (from my medical records)						
• GP patients	770	89	305	90	1075	90
• Paed. patients	289	76	43	90	332	78
My doctor takes sufficient time to talk to me						
• GP patients	723	84	307	91	1030	86
• Paed. patients	271	71	42	91	313	73
My doctor listens well to me						
• GP patients	790	92	323	95	1113	93
• Paed. patients	315	82	45	96	360	84
My doctor not just deals with medical problems but can also help with personal problems and worries						
• GP patients	455	55	217	66	672	58
• Paed. patients	113	30	22	49	135	32
My doctor gives clear explanation about my illnesses and prescribed medicines						
• GP patients	787	91	324	96	1111	93
• Paed. patients	294	77	40	83	334	78
My doctor would visit me at home if I would ask for it						
• GP patients	502	59	257	75	759	64
• Paed. patients	78	20	39	83	117	27
After a visit to my doctor I feel able to cope better with my health problem / illness						
• GP patients	688	80	292	86	980	82
• Paed. patients	232	61	39	83	271	63
When I have a new health problem, I go to my doctor before going to a medical specialist						
• GP patients	802	93	320	94	1122	93
• Paed. patients	339	88	45	96	384	89
My practice has sufficient medical equipment						
• GP patients	354	44	149	45	503	44
• Paed. patients	154	41	26	57	180	43

Table 53. Patients' perception of physicians' initiative in promoting healthy behaviour

Physicians' health promotion during normal visits and preventive clinics	Vojvodina (N=549)		Central Serbia (N=580)		Belgrade (N=526)		Total (N=1655)	
	Abs.	%	Abs.	%	Abs.	%	Abs.	%
Eating healthy								
Normal visits								
• GP patients	357	89	373	92	327	85	1057	89
• Paed. patients	97	72	144	88	92	68	333	77
Preventive clinics								
• GP patients	14	4	5	1	14	4	33	3
• Paed. patients	7	5	4	2	10	7	21	5
Physical exercise								
Normal visits								
• GP patients	329	86	342	87	286	80	957	85
• Paed. patients	88	68	127	80	82	66	297	72
Preventive clinics								
• GP patients	19	5	8	2	19	5	46	4
• Paed. patients	9	7	7	4	1	8	26	6
Use of alcohol								
Normal visits								
• GP patients	166	46	221	58	137	42	524	49
• Paed. patients	34	29	67	41	27	23	128	32
Preventive clinics								
• GP patients	14	4	10	3	23	7	47	4
• Paed. patients	7	6	9	6	8	7	24	6
Reduce or stop smoking								
Normal visits								
• GP patients	192	53	252	66	178	53	622	58
• Paed. patients	42	37	84	51	45	37	171	43
Preventive clinics								
• GP patients	21	6	11	3	22	7	54	5
• Paed. patients	9	8	10	6	11	9	30	8
Avoiding stress								
Normal visits								
• GP patients	288	77	338	87	256	75	882	80
• Paed. patients	47	41	90	57	53	44	190	48
Preventive clinics								
• GP patients	19	5	9	2	12	4	40	4
• Paed. patients	7	6	3	2	13	11	23	6
Safe sex								
Normal visits								
• GP patients	102	33	176	49	100	35	378	39
• Paed. patients	35	30	57	38	29	26	121	32
Preventive clinics								
• GP patients	15	5	12	3	17	6	44	5
• Paed. patients	10	9	10	7	13	12	33	9
Dangers of illicit drugs								
Normal visits								
• GP patients	103	31	189	51	104	34	396	39
• Paed. patients	33	29	59	38	24	21	116	30
Preventive clinics								
• GP patients	15	5	7	2	11	4	33	3
• Paed. patients	9	8	9	6	9	8	27	7

According to these results, both GPs and paediatricians almost exclusively talk about health maintenance during normal visits, and rarely attend preventive clinics.

5.4 Coordination of care and choice of provider

Table 54. Patients' freedom to choose and change their PC physician

Option	Vojvodina (N=549)		Central Serbia (N=580)		Belgrade (N=526)		Total (N=1655)	
	Abs.	%	Abs.	%	Abs.	%	Abs.	%
Patients assigned to their doctor								
• GP patients	7	2	31	8	24	6	62	5
• Paed. patients	6	4	15	9	14	10	35	8
Patients unable to change to another doctor								
• GP patients	37	9	45	11	30	8	112	9
• Paed. patients	7	5	3	2	4	3	14	3

Freedom to choose a doctor or to change from one to another does not seem to be an issue among respondents. Basically, it seems patients are well informed about their right to choose.

Table 55. Patients' experiences with information and cooperation, by region

Statements	Vojvodina (N=549)		Central Serbia (N=580)		Belgrade (N=526)		Total (N=1655)	
	Abs.	%	Abs.	%	Abs.	%	Abs.	%
If I visit another doctor than my own, he/she has all the necessary information about me								
• GP patients	189	48	188	46	124	33	501	43
• Paed. patients	34	26	86	52	33	26	153	36
When I am referred, my doctor informs the medical specialist about my illness								
• GP patients	237	60	249	61	193	51	679	58
• Paed. patients	39	30	101	60	40	31	180	42
If I have been treated by a medical specialist, my doctor knows the results								
• GP patients	383	92	369	89	332	86	1084	91
• Paed. patients	95	76	137	82	86	67	318	76
To see a specialist, I first need to visit my doctor for a referral								
• GP patients	388	97	396	96	361	93	1145	95
• Paed. patients	125	96	162	96	118	92	405	95
My doctor and the practice nurse work well together								
• GP patients	374	93	373	91	299	78	1046	87
• Paed. patients	105	81	145	86	98	76	348	82
Sometimes a nurse does the consultation, making it unnecessary to see my doctor								
• GP patients	154	39	129	32	88	23	371	32
• Paed. patients	28	22	42	25	36	28	106	25

Only a quarter to a third of the respondents have experienced nurse consultations separate from doctors' consultations. So, an independent role for nurses in treating patients seems to be an exception rather than the rule.

Table 56. Patients' experiences with information and cooperation, by urbanization

Statements	Urban (N=1269)		Rural (N=386)		Total (N=1655)	
	Abs.	%	Abs.	%	Abs.	%
If I visit another doctor than my own, he/she has all the necessary information about me						
• GP patients	338	40	163	48	501	43
• Paed. patients	127	34	26	55	153	36
When I am referred, my doctor informs the medical specialist about my illness						
• GP patients	454	54	225	67	679	58
• Paed. patients	153	40	27	57	180	42
If I have been treated by a medical specialist, my doctor knows the results						
• GP patients	777	91	307	90	1084	91
• Paed. patients	278	74	40	91	318	76
To see a specialist, I first need to visit my doctor for a referral						
• GP patients	818	95	327	97	1145	95
• Paed. patients	359	95	46	98	405	95
My doctor and the practice nurse work well together						
• GP patients	732	85	314	92	1046	87
• Paed. patients	307	81	41	87	348	82
Sometimes a nurse does the consultation, making it unnecessary to see my doctor						
• GP patients	241	29	130	39	371	32
• Paed. patients	89	24	17	38	106	25

Comparison of answers on information and cooperation by urban and rural region shows again more favourable data from rural respondents at several points. Rural respondents are more positive about information transfer from their doctor to other doctors, including a treating specialist. They also think more often than urban respondents that their doctor and nurse cooperate well. In rural areas nurses conduct independent consultations somewhat more frequently than in urban areas.

6. CONCLUSION

6.1 Summary of findings

The table below provides an overview of the results and conclusions, structured according to the health system functions, selected dimensions and proxy indicators, as outlined in the Primary Care Evaluation Scheme in Chapter 1.

Table 57. Summary of findings

Dimension	Information items	Selected proxies / findings	Background to findings	Source
Stewardship				
Policy development	Primary care as priority area	<ul style="list-style-type: none"> • Specific legislation developed concerning PC (PC): Yes • Ministry of Health department specifically dealing with PC: No 	<p>From 2002, several important policy documents related to PC have been issued. The policy "Better health for all in the third millennium" prioritized prevention and primary health care as the basis and point of entry of the health system.</p> <p>This division of responsibilities for PC at the Ministry was established in 2008. By 2010, CHCs should have been separated from secondary care facilities.</p>	National level survey
	Regional variation		<p>There is an ongoing process of decentralization of priorities and provision to municipalities. Municipal ability to develop health policy will largely depend on the economic development. Despite the existence of general regulation, regional differences in PC are likely to increase.</p>	National level survey
Conditions for the care process	Recent PC policy developments	<ul style="list-style-type: none"> • Primary-secondary care split • New capitation payment system with performance indicators • Health promotion centres • Implementation of human resource plans • Licensing scheme for health care workers from 1 January 2010 • Voluntary accreditation of CHCs • The chosen doctor is a largely but not fully implemented reform by which each citizen chooses his or her doctor of first contact. 		National level survey

Dimension	Information items	Selected proxies / findings	Background to findings	Source
Conditions for responsiveness	Involvement of professionals and patients in policy process		Since 2002 the Ministry of Health has created mechanisms to involve stakeholders and interest groups systematically in the development of policy documents. Besides, the Ministry has encouraged civil society initiatives to formulate their ideas and needs and to communicate these to the public.	National level survey
	Patient rights	Physicians reporting that a patient complaint procedure is in place in their ambulatory or policlinic: <ul style="list-style-type: none"> • GPs: 81% • Paediatricians: 88% 	The position of patients has formally been acknowledged. There are many organizations defending the interests of patients. Complaint procedures are obligatory, but still 19% of GPs and 12% of paediatricians reported not having such a procedure.	Physician survey.
Financing				
Incentives for providers		Employment status of PC physicians: 100% state employed	A capitation-based payment system is now being implemented with indicators of efficiency and quality of care.	National level survey
Financial access for patients		Patients reporting copayments for drugs prescribed in PC: 59%	Many patients reported copayments for visits to their doctor, prescribed medicines or injections, specialist visits on referral and home visits. Eleven per cent had abstained from a visit to their doctor for financial reasons.	Patient survey
Resource generation				
Professional development	Workforce	<ul style="list-style-type: none"> • % of all active physicians in Serbia working in PC: 25.5-28 • % of PC physicians who are GPs: 21.6 • Average age of GPs: 49 years • Average age of paediatricians: 51 years 	The core of the primary health care system is the team of chosen doctors, consisting of internists or occupational medicine doctors, specialists for adults, paediatricians for children, gynaecologists for women over 15, or dentists. The role of chosen doctor in PC is dominated by tasks related to preventive work, promotion of healthy lifestyles and health educational work with people in their territory.	National level survey
	Shortages	<ul style="list-style-type: none"> • 43% of GPs and 49% of paediatricians reported shortages of more than 6 months duration. 	If the average staff norms are applied, there is no lack of health workers in PC at the national level. However, there is a strong variation in supply of physicians. There are CHCs with oversupply of physicians, in addition to CHCs where physicians have workloads far above the national norm. About half of the responding GPs and paediatricians affirmed staff shortages existing for more than six months. Shortage in Central Serbia seemed to be higher than in the other regions.	National survey / physician survey

Dimension	Information items	Selected proxies / findings	Background to findings	Source
	Quality improvement mechanisms	<ul style="list-style-type: none"> Number of hours GPs or paediatricians report spending on professional reading, etc. per month: <ul style="list-style-type: none"> » GPs: 17.5 hours » Paed.: 15.9 hours Physicians reporting that they frequently use clinical guidelines: <ul style="list-style-type: none"> » GPs: 61% » Paed: 41% 	<p>The licensing scheme for medical professionals was restructured in 2009.</p> <p>Formal licensing requirements exist for physicians, chosen doctors and nurses. Accreditation for CHCs is not obligatory.</p> <p>Relicensing of physicians depends on having collected a minimum number of points for accredited activities of CME.</p> <p>The quality of (primary) health care services in Serbia is extensively monitored at various levels with use of many clinical and other indicators.</p> <p>Most generally used are internal control measures within the CHC, practice inspection by supervisors and external clinical auditing. Obligatory periodic tests of knowledge and skills of physicians and nurses are rarely or never used. Doctors are not obliged to follow guidelines; rather their use is recommended. No national guidelines for nurses have been developed.</p>	National level survey/ physician survey
	Human resources planning		Recent human resource plans aim to achieve a more rational distribution of staff in line with the official norms and standards. This activity will be further rolled out in the coming years.	National level survey
	Organization of professionals	<ul style="list-style-type: none"> 4 out of 5 medical universities in Serbia offer a postgraduate programme in general medicine / GP 	Family Medicine has not been recognized as a medical specialty. The number of professors of GP strongly varies among the medical faculties. In the academic year 2007/2008 10.5% of medical graduates chose to enroll in a postgraduate programme in GP, which is far below the 21% of all Serbian doctors who are working as PC GPs. GPs, paediatricians and gynaecologists are organized in several sections and societies involved in professional development, medical education and scientific activities.	National level survey

Dimension	Information items	Selected proxies / findings	Background to findings	Source
Medical equipment		<ul style="list-style-type: none"> Physicians with a computer available in the practice: <ul style="list-style-type: none"> » GPs: 61% » Paed: 57% Number of items of medical equipment reported to be available to physicians (from a list of 30 items): <ul style="list-style-type: none"> » GPs: 13 items (= 43%) » Paed.: 16 items (=53%) 56% of GPs' patients and 57% of paediatricians' patients found equipment was insufficient Waiting time for lab results: <ul style="list-style-type: none"> » GPs: 3.9 days » Paed: 1.5 days Waiting time for X-ray results: <ul style="list-style-type: none"> » GPs: 7.4 days » Paed: 1.3 days 	<p>A substantial proportion of physicians are not using a computer, but in most practices other staff do so, primarily to store patient data. It seems that computerized patient information is used for other purposes than for the physicians' clinical work.</p> <p>The results suggest that the equipment that physicians, and in particular GPs, have at their disposal is not compatible with a comprehensive package of preventive, curative and rehabilitative PC tasks.</p> <p>The sharp contrast between the regions in the availability of several items points to opportunities for improvement.</p> <p>X-ray and laboratory facilities were fully available by a large majority of respondents.</p> <p>Waiting times until results of these diagnostics are available strongly varied between regions and were generally much longer for GPs than for paediatricians. In Central Serbia GPs had to wait much longer for lab results than elsewhere. In Vojvodina GPs had to wait much longer for X ray results than in the other regions.</p>	Physician/patient survey
Delivery of care				
<i>Accessibility</i>				
Geographical access		<ul style="list-style-type: none"> Patients reporting up to 20 minutes travel to GP or paediatrician: 73% 	Patients could generally easily reach the PC practice by public transport. The majority of patients reported travel times of less than 20 minutes to reach their preferred PC doctor, pharmacist or dentist. Hospitals were generally further away from home, resulting in travel times of more than 40 minutes for the majority of patients.	Patient survey
Organizational access	Practice population	<ul style="list-style-type: none"> Reported number of patients per GP: 1197 patients Reported number of patients per paed.: 975 patients 	The average number of patients that GPs reported to be registered with them was well below the national norm of 1600. The average number of children reported by paediatricians seemed to be closer to the national norm. Paediatricians in Central Serbia reported the lowest number (845), followed by those in the Belgrade region (916) and Vojvodina (1171).	Physician survey

Dimension	Information items	Selected proxies / findings	Background to findings	Source
	Workload	<p>Reported number of:</p> <ul style="list-style-type: none"> • Office consultations per day per GP: 39 • Office consultations per day per paediatrician: 43 • Home visits per week per GP: 4 • Home visits per week per paediatrician: 2 • Working hours per week per GP: 35.2 hours • Working hours per week per paediatrician: 36.0 hours 	<p>GPs and paediatricians had a similar workload, with small differences between rural and urban practices. The number of working hours among paediatricians varied by region (in Vojvodina on average 32 hours, while in both other regions this was considerably higher at 38 hours per week). Home visits were sparsely made by GPs and paediatricians. Per month GPs reported to spend 17.5 hours on reading professional journals or medical information, including the internet. Vojvodina was below this average and Central Serbia above. Paediatricians spend 16 hours per month on keeping up to date. Those in Belgrade were below the average. In addition, physicians spend about one day per month (5 to 6 hours) on following courses.</p>	Physician Survey
	Patients' access and availability of services	<ul style="list-style-type: none"> • Reported visiting frequency of patients (utilization rate): <ul style="list-style-type: none"> » GP patients: 9.1 visits per year » Paed. patients: 3.6 visits per year • Reported average length of a patient consultation per patient: <ul style="list-style-type: none"> » GP patients: 14.7 min. » Paed. patients: 14.5 min. • Physicians offering same day consultation 90% • Patients reporting to have same day consultation if demanded <ul style="list-style-type: none"> » GP patients: 77% » Paed. patients: 64% • Physicians offering evening opening at least once per week 43% 	<p>The position of chosen doctors is far from exclusive. Patients reported a high visit frequency to their chosen PC physician and various other PC physicians. Same day and weekend visits (at least once per month) were usually possible. GPs were more available on weekend days than paediatricians and gynaecologists. Even though patients experienced limited access during out-of-office hours (in particular in the Belgrade region), the majority of patients reported satisfaction with current opening hours. Nevertheless, the results indicate several opportunities to improve access during (e.g. by telephone) and outside of office hours (e.g. in the evening).</p>	<p>Patient survey</p> <p>Physician survey</p>
<i>Coordination</i>				
Cohesion within PC	Practice management		<p>83% of the physicians shared their unit with other GPs and to a much lesser extent with paediatricians (49%). The CHCs in Vojvodina seemed to be broader, given the collaboration with medical specialists. Little collaboration was reported between GPs and paediatricians.</p>	Physician survey

Dimension	Information items	Selected proxies / findings	Background to findings	Source
	Collaboration	<ul style="list-style-type: none"> Physicians reporting working with other PC physician(s) in same premises: 51% Physicians reporting to have regular face-to-face meetings with: <ul style="list-style-type: none"> Family nurses: GPs: 15%; Paed: 11% Midwives: GPs: 19%; Paed: 7% Pharmacists: GPs: 1%; Paed: - 	<p>Shared practices with other GPs, paediatricians, dentists, practice and community nurses and laboratory technicians were normal.</p> <p>There appeared to be a low level of structured cooperation and teamwork, both within PC and between the primary and secondary care levels. Organized exchange of information between chosen doctors seemed to be not well developed and most doctors had no regular meeting with nurses. There were very few signs of structured cooperation between medical doctors across levels of care.</p>	<p>Physician survey</p> <p>Patient survey</p>
Coordination with other care levels	Referral system	<ul style="list-style-type: none"> Number of referrals to medical specialists in 4 weeks time: 82 <ul style="list-style-type: none"> rural: 85 urban: 81 Referral rate (% of all office and home care contacts) <ul style="list-style-type: none"> GPs: 12.4% Paed: 4.7% Rural: 10.3% Urban: 9.9% Number of hospital admissions ordered by PC physicians per 1000 patient contacts: 135 Number of pharmaceutical prescriptions by PC physicians per 1000 patient contacts: 1566 	<p>More than 80% of patients in all 3 regions reported they would first visit their GP or paediatrician with a new health problem before seeking specialist care.</p> <p>Physicians, in particular GPs, reported very high referral rates. By far the most referrals were made to internists, neurologists, surgeons, ophthalmologists and ENT specialists.</p> <p>The average referral rate (referrals as a percentage of all patient contacts in the office and during home visits) of GPs (12.4%) was more than 2.5 times higher than that of paediatricians (4.7%).</p> <p>Central Serbian GPs reported 1.4 times more referrals than in Vojvodina and the Belgrade region.</p>	<p>National level survey</p> <p>Physician survey</p> <p>Patient survey</p>
	Collaboration with secondary level		<p>Contacts between PC physicians and medical specialists were mainly on a case basis. Most GPs indicated sometimes seeking the advice of an internist, surgeon, neurologist, dermatologist, ENT specialist or ophthalmologist. In contrast to GPs, most paediatricians asked advice from secondary level paediatricians and few from internists.</p>	<p>Physician survey</p>

Dimension	Information items	Selected proxies / findings	Background to findings	Source
<i>Continuity</i>				
Informational continuity		<ul style="list-style-type: none"> Physicians reporting that they keep medical records of all patient contacts on a routine basis: -GPs: 92% <ul style="list-style-type: none"> » Paediatricians: 96% Physicians reporting to routinely use referral letters: <ul style="list-style-type: none"> » GPs: 92% » Paediatricians: 99% 	<p>Even though keeping record of all clinical information of patients was daily routine for almost all physicians in the three regions, the conditions for clinical information could be improved. Physicians had difficulties retrieving information, for instance for preventive monitoring. This limits efficient outreach activities. Paediatricians in Vojvodina reported more favourably in this respect than those in both other regions.</p> <p>Almost all respondents indicated using referral letters.</p> <p>Use of computers strongly differed among regions. In Belgrade not using a computer was exceptional, while in Central Serbia it was more or less the rule. Computers were mainly used for writing prescriptions and keeping clinical records, and to a lesser extent for writing referral letters. The results suggested a lack of Internet access.</p>	<p>Physician Survey</p> <p>Patient survey</p>
Longitudinal continuity		<ul style="list-style-type: none"> Patients reporting having been with their GP for at least 1 year: 78% Patients reporting having been with their paediatrician for at least 1 year: 75% Patients reporting they did not choose their GP but were assigned: 5% Patients reporting they did not choose their paediatrician but were assigned: 8% 	<p>A large majority of the patients of both GPs and paediatricians have been registered with their current doctor for more than one year. In Belgrade, a larger proportion of respondents indicated that they had been with the current doctor for more than three years than did those in the other two regions.</p> <p>Only very few respondents reported having been assigned to their current doctor and, similarly, very few indicated they could not change to another.</p>	<p>Patient survey</p>
Interpersonal continuity		<ul style="list-style-type: none"> 39% of the patients have been with their GP for more than three years 34% of the patients have been with their paediatrician for more than three years 	<p>About two thirds of patients would generally see their own doctor each visit. Consultations took on average 15 minutes in all regions.</p> <p>In general, patients were somewhat more positive about the qualifications of GPs than of their paediatricians. Rural patients were more positive about their doctor than urban patients.</p> <p>Personal skills of doctors were well appreciated. Most patients thought that their doctor knew their personal situation. Patients were not sure if their doctor would be the right person for discussing non-medical problems that impacted on health. Furthermore, patients were reserved about their doctor's preparedness to make home visits.</p>	<p>Patient survey</p>

Dimension	Information items	Selected proxies / findings	Background to findings	Source
<i>Comprehensiveness</i>				
Practice conditions	Convenience	<ul style="list-style-type: none"> 48% of patients reported that the centre was well accessible for disabled and people in wheelchairs. 	Wheelchair access to PC centres was reported to be problematic, particularly in Vojvodina and Belgrade. The majority of patients were satisfied with the convenience of the waiting rooms and the prompt and friendly treatment at the reception desk.	Patient survey
	Information materials	<p>Information materials reported to be available in the waiting room on various topics.</p> <p>Highest:</p> <ul style="list-style-type: none"> healthy diet: 84% smoking cessation: 78% CVD risks: 76% <p>Lowest:</p> <ul style="list-style-type: none"> social services: 22% contraception: 24% 	The availability of information materials, such as leaflets or posters, made available in the waiting room of CHCs or ambulatories could be improved.	Physician survey
Services delivery	Population groups served	<ul style="list-style-type: none"> Consolidated score for the GP as doctor of first contact (based on 18 items; range of score 1-4): 2.06 Same for paediatrician: 1.73 	<p>The position of paediatricians in the first contact was more clear-cut than that of GPs. The results suggest that GPs lack a clear clinical domain in the first contact. The summary score of 2.06 is very low compared to GPs in other countries.</p> <p>GPs in Vojvodina have a more comprehensive role in the first contact than GPs in both other regions.</p> <p>Paediatricians in urban and rural practice have identical roles in the first contact with health problems. GPs in urban CHCs, however, see a wider spectrum of health problems in the first contact than their rural colleagues.</p>	Physician survey
	Involvement of PC physicians in the treatment of diseases	<ul style="list-style-type: none"> Consolidated score for the provision of treatment of diseases by GPs (based on 20 items; range of score 1-4): 3.00 Same for paediatricians: 2.18 	<p>The treatment profile of GPs seemed to be clearer than the first contact profile. GPs reported more involvement in the treatment of patients with the listed diagnoses than paediatricians.</p> <p>Compared to their colleagues in Belgrade, paediatricians in Central Serbia and Vojvodina were more involved in the treatment of patients with the listed diagnoses. GPs in Vojvodina had a somewhat broader treatment profile than GPs in both other regions.</p> <p>The involvement in treatment tasks was not related to working in a city or in the countryside.</p>	Physician survey

Dimension	Information items	Selected proxies / findings	Background to findings	Source
	Provision of preventive and medical technical procedures	<ul style="list-style-type: none"> Consolidated score for the provision of medical procedures and prevention by GPs (based on 16 items; range of score 1-4): 1.52 Same for paediatricians: 1.41 Coverage of public health activities (based on 12 items = 100%) by GPs on a routine basis: 32% Same for paediatricians: 32% Involvement in cervical cancer screening programme GPs: 16 % 	<p>GPs and paediatricians were practically not involved in preventive and medical technical procedures, but in the procedures where they were involved they were both involved. These procedures were: immunization for flu or tetanus, intravenous infusion, allergy vaccination, ankle strapping and wound suturing.</p> <p>The overall percentage of involvement for GPs as well as paediatricians in several screening programmes was 32%, which leaves significant room for improvement.</p>	<p>Physician survey</p> <p>Patient survey</p>
	Provision of mother / reproductive and child health care	<ul style="list-style-type: none"> GPs providing routine antenatal care: 14% Paediatricians providing routine antenatal care: 42% 	<p>GPs were rarely involved in the provision of mother and child health services. Paediatricians mostly provided child immunizations and routine paediatric surveillance. A minority of paediatricians were involved in the provision of routine antenatal care, family planning and contraception care.</p> <p>In general, rural physicians were more involved in mother and child health services than urban physicians</p>	Physician survey
	Perceived quality of prescribing	<p>Patients estimated to receive medically unnecessary prescriptions:</p> <ul style="list-style-type: none"> GPs: 6.7% Paediatr: 4.6% 		Physician survey
	Perceived balance between curative and preventive work	<p>Satisfied with current balance:</p> <ul style="list-style-type: none"> GPs: 26% Paediatr: 38% <p>Would like to spend more time on prevention and health promotion:</p> <ul style="list-style-type: none"> GPs: 64% Paediatr: 61% 		Physician survey
Community orientation		<ul style="list-style-type: none"> Physicians reporting regular meetings with local authorities: 22% 	There were very few reported structured connections with the community.	Physician Survey

ANNEX I. GLOSSARY OF PC TERMS

Accessibility: the patients' ability to receive care where and when it is needed, given possible physical, financial or psychological barriers (10).

Comprehensiveness: the extent to which services provided comprise curative, rehabilitative and supportive care, as well as health promotion and disease prevention (16).

Confidentiality: the right to determine who has access to one's personal health information (1).

Continuity: the ability of relevant services to offer interventions that are either coherent over the short term both within and among teams (cross-sectional continuity), or are an uninterrupted series of contacts over the long term (longitudinal continuity) (10).

Coordination: a service characteristic resulting in coherent treatment plans for individual patients. Each plan should have clear goals and necessary and effective interventions, no more and no less. Cross-sectional coordination means the coordination of information and services within an episode of care. Longitudinal coordination means the interlinkage among staff members and agencies over a longer period of treatment (10).

CHC: a comprehensive PC facility, usually including a number of (rural) health posts.

Financing: function of a health system concerned with the mobilization, accumulation and allocation of money to cover the health needs of the people, individually and collectively, in the health system (8).

Family medicine teams: Family medicine teams can vary from country to country. The core team usually encompasses the general practitioner and a nurse, but can consist of a multidisciplinary team of up to 30 professionals, including community nurses, midwives, medical attendants, dentists, physiotherapists, social workers, psychiatrists, speech therapists, dieticians, pharmacists, administrative staff and managers (21). In 2003, WHO described a PC team as a group of "fellow professionals with complementary contributions to make in patient care [; t]his would be part of a broader social trend away from deference and hierarchy and towards mutual respect and shared responsibility and cooperation" (22). By definition, family medicine teams are patient-centred and therefore their composition and organizational model cannot but change over time; it is a flexible construct.

General practice: General practice is a term now often used loosely to cover the general practitioner and other personnel as well, and is therefore synonymous with PC and family medicine. Originally, it was meant to describe the model of the most significant single player in PC: the general practitioner or PC physician, while family medicine originally encompassed more the notion of a team approach. Whenever the notion of a solo practitioner (general practice) versus team-based approach (family medicine) is relevant, the distinction should be made. According to Atun (23), the specificity of the general practitioner is that he/she is "the only clinician who operates in the nine levels of care: prevention, pre-symptomatic detection of disease, early diagnosis, diagnosis of

established disease, management of disease, management of disease complications, rehabilitation, palliative care and counselling”.

Performance (or composite goal performance): the extent to which the health system relates goal attainment to what could be achieved in the given context of the country (1).

Primary health care (PHC): This term should be used when it is intended to refer to the broad concept elaborated in the Declaration of Alma Ata (1978) with its principles of equity, participation, intersectoral action and appropriate technology and its central place in the health system (24).

Primary care (PC): is more than just the level of care or the gate-keeping – it is a key process in the health system. It is the first contact, accessible, continued, comprehensive and co-ordinated care. First contact care is accessible at the time of need. Ongoing care focuses on the long-term health of a person, rather the short duration of the disease. Comprehensive care is a range of services appropriate to the common problems in the respective population. Coordination is the role by which PC involves other specialists that the patient may need (23). Primary care is a subset of primary health care.

Primary Care Evaluation Tool (PCET): is an instrument developed for the WHO Regional Office for Europe to examine Member States’ health system functions and typical characteristics of PC delivery systems. The tool considers policy and regulation as well as supply- and-demand aspects. It is intended to support ministries of health and other stakeholders in monitoring the progress of their PC-related policies and reforms and to set new priorities on the basis of evidence-based information with the aim of further strengthening the PC level.

Proxy indicator: Indirect measure or sign that approximates or represents a phenomenon in the absence of a direct measure or sign.

Resource generation: the provision of essential inputs to the health system, including human capital, physical capital and consumables (1).

Responsiveness: is a measure of how the system performs relative to non-health aspects, meeting or not meeting a population’s expectations of how it should be treated by providers of prevention, care or non-personal services (not a measure of how the system responds to health needs, which shows up in health outcomes). Enhancing responsiveness to the expectations of the population, includes: respect for people (including dignity, confidentiality and autonomy in health decisions) and client orientation, including prompt attention, access to social support networks, quality of basic amenities and choice of provider) (1).

Stewardship: a function of a government responsible for the welfare of the population, and concerned with the trust and legitimacy with which its activities are viewed by the citizenry. It includes the overseeing and guiding of the working and the development of the nation’s health actions on the government’s behalf. The components of stewardship are: health policy formulation (defining the vision and direction for the health system), regulation (setting fair rules of the game with a level playing field) and intelligence (assessing performance and sharing information) (1,8).

REFERENCES

1. *The World Health Report 2000: Health systems: improving performance*. Geneva, World Health Organization, 2000 (http://www.who.int/whr/2000/en/whr00_en.pdf, accessed 8 September 2008).
2. WHO Regional Committee for Europe resolution EUR/RC55/R8 on Strengthening health systems as a continuation of the WHO Regional Office for Europe's Country Strategy "Matching services to new needs". Copenhagen, WHO Regional Office for Europe, 2005 (http://www.euro.who.int/Governance/resolutions/2005/20050920_2, accessed 16 December 2008).
3. Murray C, Frenk J. *World health report 2000: a step towards evidence-based health policy*. *Lancet*, 2001, 357:1698–1700.
4. Atun RA et al. Introducing a complex health innovation; Primary health care reforms in Estonia (multimethods evaluation). *Health Policy*, 2006, 79:79-91 (http://www.praxis.ee/data/atun_et_al_phc_2006.pdf, accessed 10 December 2008).
5. Kelley E, Hurst J. Health care quality indicators project. *Conceptual framework paper*. Paris, Organization for Economic Cooperation and Development, 2006 (OECD Health Working papers no. 23) (<http://www.oecd.org/dataoecd/1/36/36262363.pdf>, accessed 8 September 2008).
6. Sibthorpe, B. *A proposed Conceptual Framework for Performance Assessment in Primary Health Care. A Tool for Policy and Practice*. Canberra, Australian Primary Health Care Research Institute, 2004 (http://www.anu.edu.au/aphcri/Publications/conceptual_framework.pdf, accessed 10 December 2008).
7. Watson, DE et al. *A results-based logic model for primary health care: laying an evidence-based foundation to guide performance measurement, monitoring and evaluation*. Vancouver, Centre for Health Services and Policy Research, 2004.
8. Health Systems Performance: Glossary [web site]. Geneva, World Health Organization, 2001 (<http://www.who.int/health-systems-performance/docs/glossary.htm>, accessed 8 September 2008).
9. Starfield, B. *Primary Care. Balancing health needs, services and technology*. New York, Oxford University Press, 1998.
10. Health Evidence Network. What are the arguments for community-based mental health care? Annex 2. Key principles for balanced community-based mental health services [web site]. Copenhagen, WHO Regional Office for Europe, 2004 (http://www.euro.who.int/HEN/Syntheses/mentalhealth/20030903_1, accessed 12 December 2008).

11. Starfield B et al. Continuity and coordination in PC: their achievement and utility. *Medical Care*, 1976, 14:625–636.
12. Saultz JW. Defining and measuring interpersonal continuity of care. *Annals of Family Medicine*, 2003, 1:134–143 (<http://www.annfammed.org/cgi/content/full/1/3/134>, accessed 10 December 2008).
13. Reid R, Haggerty J, McKendry R. *Defusing the confusion: Concepts and measures of continuity of healthcare*. Ottawa, Canadian Health Services Research Foundation, 2002 (http://www.chsrf.ca/funding_opportunities/commissioned_research/projects/pdf/defusing_e.pdf, accessed 10 December 2008).
14. Boerma WGW. Coordination and integration in European PC. In: Saltman RB, Rico A, Boerma WGW, eds. *Primary Care in the Drivers Seat? Organizational reform in European PC*. Maidenhead, Open University Press, 2006 (http://www.euro.who.int/Document/E87932_chapt1.pdf, accessed 8 September 2008).
15. Starfield B. Primary care and health. A cross-national comparison. *Journal of the American Medical Association*, 1991, 266:2268–2271.
16. Boerma WGW. *Profiles of general practice in Europe. An international study of variation in the tasks of general practitioners*. Utrecht, NIVEL, 2003 (<http://www.nivel.nl/pdf/profiles-of-general-practice-in-europe.pdf>, accessed 5 September 2008).
17. Boerma WGW, Fleming DM. *The role of general practice in primary health care*. Copenhagen, WHO Regional Office for Europe, 1998.
18. Meads G. *Primary care in the twenty-first century – an international perspective*. Oxford, Radcliffe Publishing, 2006.
19. Atun R. *What are the advantages and disadvantages of restructuring a health care system to be more focused on PC services?* Copenhagen, WHO Regional Office for Europe, 2004 (Health Evidence Network report; <http://www.euro.who.int/document/e82997.pdf>, accessed 9 February 2007).
20. *Primary Health Care: Report of the International Conference on Primary Health Care, Alma-Ata, USSR, September 6-12 1978*. Geneva, World Health Organization, 1978.
21. Boerma WGW et al. *Evaluation of the organization and provision of PC in Belarus. A survey-based project in the regions of Minsk and Vitebsk*. Copenhagen: WHO Regional Office for Europe, 2009.
22. Kringos DS et al. *Evaluation of the Organizational model of PC in Turkey; a survey-based pilot project in two provinces of Turkey*. Copenhagen, WHO Regional Office for Europe, 2008.

23. Kringos DS et al. *Evaluation of the Organizational model of PC in the Russian Federation; a survey-based pilot project in two districts in the Moscow Region*. Copenhagen, WHO Regional Office for Europe, 2008.
24. Kringos DS et al. The breadth of PC: a systematic literature review of its core dimensions. London, BMC Health Services Research 2010, 10:65. <http://www.biomedcentral.com/1472-6963/10/65>

SUMMARY

Although the strengthening of Primary Care (PC) services is a priority of health reforms in many countries of eastern, central and western Europe, backgrounds and reasons for reforms are not similar. In western Europe emphasis on PC reflects an approach to rising costs and changing demand as a result of demographic and epidemiological trends. Central and eastern European countries, as well as former Soviet Union countries, are struggling to fundamentally improve the performance of their entire health systems. PC is now being reorganized in many countries as bringing adequate and responsive health services closer to the population.

In many countries in transition health reforms are part of profound and comprehensive changes of essential societal functions and values. PC reforms are not always based on evidence, and progress is often driven by political arguments or interests from specific professional groups rather than based on sound evaluations. However, policy makers and managers increasingly demand evidence about progress of reforms and responsiveness of services.

This report evaluates PC developments in Serbia based on a methodology that characterizes a good PC system as comprehensive, accessible, coordinated and integrated, that ensures continuity, and that recognizes that all health system functions outlined in the WHO Framework are taken equally into consideration to improve the overall health system: financing, service delivery, human and other resources such as appropriate facilities, equipment and drugs, necessary legal frameworks and regulations and proper direction of the system. It thus offers interested policy-makers and stakeholders a structured overview of the strengths and weaknesses of a country's organization of PC services, including the voices of the professionals and patients concerned.