



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

A survey-based project in the regions of Minsk and Vitebsk

Primary care in the WHO European Region

---

**Cover photo**

Oleg Jarovenko

**Design, layout & production**

Phoenix Design Aid, Denmark



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

A survey-based project in the regions of Minsk and Vitebsk



# 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 towards this by drawing on the health systems functions such as governance, financing and resource generation, as well as the characteristics of a good primary care service delivery system: accessibility, comprehensiveness, coordination and continuity. This report gives an overview on the findings for Belarus, including aspects of the provision of tuberculosis and reproductive health services.

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

Address requests about publications of the WHO Regional Office for Europe to:

Publications  
WHO Regional Office for Europe  
Scherfigsvej 8  
DK-2100 Copenhagen Ø, Denmark

Alternatively, complete an online request form for documentation, health information, or for permission to quote or translate, on the Regional Office web site (<http://www.euro.who.int/pubrequest>).

## Keywords

PRIMARY HEALTH CARE  
EVALUATION STUDIES  
HEALTH SYSTEMS PLANS – organization and administration  
HEALTH CARE REFORM  
HEALTH POLICY  
TUBERCULOSIS  
REPRODUCTIVE HEALTH SERVICES  
QUESTIONNAIRES  
BELARUS

## © World Health Organization 2009

All rights reserved. The Regional Office for Europe of the World Health Organization welcomes requests for permission to reproduce or translate its publications, in part or in full.

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.

The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by the World Health Organization in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

All reasonable precautions have been taken by the World Health Organization to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either express or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall the World Health Organization be liable for damages arising from its use. The views expressed by authors, editors, or expert groups do not necessarily represent the decisions or the stated policy of the World Health Organization.

# TABLE OF CONTENTS

<b>Abbreviations</b> .....	<b>4</b>
<b>Acknowledgements</b> .....	<b>5</b>
<b>Foreword</b> .....	<b>6</b>
<b>Executive Summary</b> .....	<b>7</b>
<b>1 Evaluating primary care: backgrounds and application</b> .....	<b>15</b>
1.1. The theoretical framework of the Primary Care Evaluation Tool . . . .	15
1.2. Overview of the development and pilot testing of the Primary Care Evaluation Tool .....	23
1.3. Overview of the implementation of the Primary Care Evaluation Tool in Belarus .....	25
<b>2 Introduction to Belarus</b> .....	<b>28</b>
2.1. The country .....	28
2.2. Population and health .....	29
2.3. The health care system .....	30
<b>3 Primary care in Belarus: national situation and context</b> <b><i>Results based on the national level questionnaire</i></b> .....	<b>33</b>
3.1. Stewardship aspects .....	33
3.2. Resource generation aspects .....	45
3.3. Financing aspects .....	49
3.4. Aspects of primary care service delivery .....	50
3.5. TB and reproductive health services .....	51
3.6. Actual topics in primary care development .....	54
<b>4 GPs and district therapists about their position in primary care</b> <b><i>Results of the survey</i></b> .....	<b>57</b>
4.1. Respondents' characteristics .....	57
4.2. Accessibility of care .....	59
4.3. Continuity of care .....	62
4.4. Coordination of care .....	63
4.5. Comprehensiveness of care .....	67
4.6. TB and reproductive health services .....	81
<b>5 Patients about primary care in the regions of Minsk and Vitebsk</b> <b><i>Results of the survey</i></b> .....	<b>91</b>
5.1. Respondents' characteristics .....	91
5.2. Accessibility of care .....	93
5.3. Continuity of care .....	98
5.4. Coordination of care .....	102
<b>6 Summary, conclusions and recommended actions</b> .....	<b>105</b>
<b>Annex 1 Glossary of terms on primary care</b> .....	<b>116</b>
<b>Annex 2 Reproductive health services</b> .....	<b>118</b>
<b>References</b> .....	<b>135</b>

# ABBREVIATIONS

BCA	biennial collaborative agreement between WHO Europe and Member States
DOT	directly observed treatment of TB
DOTS	the basic package that underpins the Stop TB Strategy
GP	general practitioner
IUD	intrauterine device
MDR TB	multi-drug resistant TB
MoH	Ministry of Health
NGO	non-governmental organization
NIVEL	Netherlands Institute for Health Services Research
PC	primary care
PCET	primary care evaluation tool
RH	reproductive health
STI	sexually transmitted infection
TB	tuberculosis
WHO	World Health Organization

# ACKNOWLEDGEMENTS

The World Health Organization (WHO) Regional Office for Europe expresses appreciation to all those who contributed to the achievements of this project.

The project implementation team:

**Principal writers:**

Wienke G.W. Boerma, NIVEL  
Martina Pellny, WHO Regional Office for Europe  
Therese A. Wieggers, NIVEL  
Dionne S.Kringos, NIVEL  
Valentin Rusovich, WHO Regional Office for Europe, Belarus

**Reviewers and contributors:**

Pierpaolo de Colombani, WHO Regional Office for Europe  
Gunta Lazdane, WHO Regional Office for Europe  
Elena Voronko, BelMAPO, Belarus  
Ludmila Zhilevich, Ministry of Health of Belarus

Valuable inputs and advice were provided by the national working group of this project:

Ludmila Zhilevich, MoH, Department of primary health care  
Ludmila Gurinovich, MoH, Department of primary health care  
Alexander Barsukov, MoH, Head gynaecologist  
Elena Adamenko, MoH, Head therapist  
Galina Volzhankina, MoH, Department of the organization of medical care  
Eduard Glazkov, MoH, Department of international relations  
Hennady Hulup, BelMAPO, Rector  
Elena Voronko, BelMAPO, Department of general practice  
Ludmila Bogush, Specialist in general practice  
Vladislav Podpalov, Vitebsk University, Department of continuous medical education for therapists  
Konstantin Egorov, Vitebsk University, Department of polyclinic therapy  
Raisa Hursa, Minsk State Medical University, Department of polyclinic therapy  
Taissia Borovaya, Health Care Authorities Minsk Region, Department of medical care  
Stepan Zhukov, Health Care Authorities Vitebsk Region  
Elena Scrahina Research institute for pulmonology and TB  
Oleg Kalechic, Research institute for pulmonology and TB  
Vjacheslav Grankov, Trade union of medical workers  
Michail Kiselev, Belarussian Association of Physicians  
Egor Zaitsev, Head of the WHO Country Office in Belarus

*The project is grateful for the participation of all patients, primary care providers, field workers and local organizers in the regions of Minsk and Vitebsk, Belarus.*

# 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 recent World health report 2008, which urges countries to act on evidence that access to primary care 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 and responsibilities in population health and the organization and delivery of health care, thereby changing the context for framing and implementing health policy.

This report evaluates developments in primary care in Belarus, using a methodology that characterizes a good primary care system as one that is comprehensive, accessible, coordinated and integrated; that ensures continuity; and that recognizes that all health system functions outlined in the WHO framework are considered equally in work 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 finally all necessary legal frameworks and regulations are in place, and the system is steered by effective leadership. The report thus offers a structured overview of the strengths and weaknesses of a country's organization and provision of primary care services – including the voices of the professionals and patients concerned – to interested policy-makers and stakeholders. The report focuses on structural performance, and provides for a list of proxy indicators. It does not, however, examine the process or outcome of care itself, and thus its quality - but signifies a first and very important step towards a baseline on how primary care processes and outcomes can best be improved. We at the WHO Regional Office for Europe hope that this report will contribute to the further primary care reform in Belarus.

We thank the many collaborators who have generously contributed to this project with their ideas and insights. We also would like to gratefully acknowledge the financial assistance of the Netherlands Ministry of Health, Welfare and Sport in the framework of the Partnership Programme between the WHO Regional Office and the Netherlands.

**Enis Bariş, MD, PhD**

Director, Country Health Systems (DCS)  
WHO Regional Office for Europe



# EXECUTIVE SUMMARY

This report summarizes the main results of the WHO Primary Care Evaluation Tool, which was implemented in Belarus in 2008 and 2009 using 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 Belarus, an agreement that lays out the main areas of work for collaboration between the parties. Further partners were the Netherlands Institute for Health Services Research (NIVEL) – a WHO Collaborating Centre for Primary Care – and other stakeholders in the Belarus health system, such as national policy experts, institutes for medical education, regional authorities, primary care physicians and their patients.

## Introduction

The Primary Care Evaluation Tool (PCET) addresses both supply- and demand-side aspects of primary care. It is intended to support ministries of health and other stakeholders in the health system to monitor the progress of their primary care-related policies and reforms in order to set new priorities on the basis of evidence-based information with the aim of further strengthening the primary care level.

## Methods

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 are organized. The health system functions are: stewardship, resource generation, financing and service provision. The framework of the Primary Care Evaluation Tool encompasses these four functions, together with the key characteristics of primary care services, including: accessibility to services, continuity of care, coordination of care and comprehensiveness. Furthermore, for each of the primary care functions and characteristics, a number of key dimensions and subthemes were identified, and, in a second step, translated into one or more indicators or appropriate proxies. In order to evaluate the complexity of primary care systems, information is gathered on different levels, from the demand side as well as the supply side. The PCET therefore consisted of three instruments: a checklist of questions concerning the health system and status of primary care at the national level; a questionnaire for primary care physicians/ general practitioners (GPs); and a questionnaire for patients. Together, the three questionnaires covered the primary care functions identified with the dimensions and items derived from the framework. Moreover, some additional questions were included in each questionnaire exploring tuberculosis and reproductive health services. The questionnaires for GPs and patients were prestructured, with precoded answers. The questions for the national level contained both prestructured and open ended questions, as well as statistical data to be filled in.

The tool has been implemented in autumn 2008 in two regions of Belarus: Minsk (excluding Minsk city) and Vitebsk. The three questionnaires were respectively completed by national policy experts and other stakeholders in the health system; district therapists, GPs and their patients. Data were processed and analysed between November 2008 and February 2009. The survey approach implies that results rely on self reported behaviour or experiences of respondents.

## Results

**At national level** (based on information gathered by the PCET health system questionnaire and interviews with national policy experts)

### Stewardship

The centralized hierarchical health care system in Belarus, funded and provided by the state, left very little space for regional health policy development. Variations in the quality of service provision however existed, for example between urban and rural areas and between areas with different levels of economic activity. Overall, health system reforms in Belarus proceeded by incremental change and primary care reform started relatively late compared to other countries. Only in 2007 a special department for primary care was established in the Ministry of Health. A primary care model based on GPs was adopted – but only applied in rural areas. In addition, as perceived by some stakeholders, GPs can not act as gatekeeper as this would violate the patients' constitutional right of access to any health care. Nevertheless citizens are assigned to health care facilities based on where they live. In order to practice as a GP, the completion of a retraining course is obligatory. A state programme launched in 2006 was a major step towards implementation of the GP model in rural areas. So far, however, no significant change was realized in the allocation of financial resources in favour of primary care. Recruitment and retention of GPs continued to be difficult, despite some rise in salaries.

NGOs and patient organizations were hardly involved in health policy development; the role of other stakeholders was limited. There is no specific law on patients' rights, but there was extensive regulation for reporting on patient satisfaction and dealing with patients complaints.

### Financing

Although services were officially free of charge, most patients needed to pay for prescribed drugs. The payment scheme for professionals in primary care, mainly based on salaries, hardly contained any incentives for good performance.

### Service provision

#### » General

At the national level, data about the demand for primary care services and the utilization of primary care services has been extremely scarce. Similarly, no validated data are available on the provision of services by GPs, therapists and paediatricians; or on referrals to medical specialists or prescribed medicines. Accordingly, for this type of information we will rely on the findings of the PCET surveys among physicians and patients.

#### » TB services

The WHO-recommended Stop TB Strategy has been formally adopted only recently. TB screening at the primary care level is still focusing on large groups of the population, rather than on population at risk. In rural areas, TB services have been more integrated in primary care than in urban areas, where TB care is still predominantly provided by specialized (categorical) facilities and specialists.

» Reproductive health services

The many check ups and interventions that pregnant women are expected to undergo do not conform to international, evidence-based recommendations. The fragmented provision of reproductive health care services by many providers at different levels and specialized (categorical) facilities has been an unfavourable condition for continuity and coordination of care.

***At general practitioner and patient level*** (based on the answers given by the respondents to the PCET questionnaires)

#### **Accessibility of care**

The geographic distribution of primary care services was good in the Minsk Region, as well as in the Vitebsk Region. Primary care practices (polyclinics or ambulatories) are in most cases staffed by GPs, therapists, community nurses and laboratory technicians, and sometimes also by practice nurses, midwives, feldshers, and dentists. The practices were well accessible during opening hours, except when patients wanted advice by telephone. The accessibility during out-of-hours was moderate and could be improved. This could also be the chance to reorganize ambulance services that receive a high number of non-emergency cases after opening hours. Patients were satisfied with the way they were treated, but less so with their waiting time from appointment until consultation. GPs responding to the survey were responsible for almost 2100 patients which was far above the norm of 1200. Also therapists had larger practices than the norm. Physicians spent on average 18 minutes per consultation, and provide about 27 home visits per week. GPs had much lower numbers of referrals to medical specialists than therapists. In general, physicians working in rural ambulatories had lower referral rates than those in towns and cities.

#### **Coordination of care**

Coordination of care among PC physicians was not optimal. Only 27% of GPs and therapists worked with other PC physicians on the same or close premises. Also face-to-face-meetings with colleagues to discuss patient cases were not frequently reported. Physicians had regular contact with neurologists, surgeons, and gynaecologists, and to a lesser extent with dermatologists, internists and paediatricians. Although GPs and therapists to some extent acted as de facto gatekeepers to secondary care, their coordinating role for the care process could be improved, for example through multidisciplinary teamwork for patients with chronic diseases. There were indications that integration of TB services into primary care could be further improved and brought in line with latest insights and recommendations especially with regard to screening methods. Reproductive health services, especially for pregnant women, were numerous and provided in a fragmented way by many providers at different levels including specialized facilities.

#### **Continuity of care**

Patients were usually assigned to their physician based on where they live - and were unsure about possibilities to change. They were overall satisfied with the care and treatment received when seeing a doctor. The care by their GP or therapists was generally appreciated but they felt that the doctor would probably not be aware of their personal circumstances and problems. Physicians regularly kept medical

records and used clinical guidelines. Computers were rarely used in primary care, especially in the Minsk region.

### Comprehensiveness of care

GPs had a strong position and therapists a somewhat weaker position as the doctor of first contact with health problems. Both types of provider were highly involved in the treatment and follow-up of common diseases. However their involvement in medical technical procedures (such as minor surgery) was very low. Despite a widespread lack of training among GPs and therapists for reproductive health services, a majority of GPs and a minority of therapists provided these services. Mother and child care was primarily provided by GPs, and to a lesser extent by therapists and the same was true for TB care. Most GPs appeared to be involved in the detection and follow up of TB care; however the level of integration of those tasks into primary care varied between urban and rural areas. In particular, the strict directly observed treatment (DOT) of TB patients in primary care was not optimal.

**Table 1: Overview of selected (proxy) indicators by primary care function for the Minsk and Vitebsk regions in Belarus**

Functions	Selected dimensions/proxy indicators	Findings Physicians (N=212) Patients (N=1704)
Stewardship/ Governance	Department in Ministry of Health (MoH) specifically dealing with primary care (PC)	Yes (since 2007)
	% of ambulatories/polyclinics with patient complaint procedure reported to be known by the patients	75%
Financing	Employment status of PC physicians	State employed (salaried)
	% patients reporting co-payments for drugs prescribed in PC	75%
Resource generation	% of active physicians in Belarus working in PC	12.4%
	% doctors working in PC who are GP	9.9%
	Average age of GPs	49 years
	Average age of therapists	45 years
	Hours GPs or therapists spend on professional reading (per month)	20 hours
	Medical universities with a department of general practice / family medicine	1*)
	Average number of items of medical equipment available to GPs (from a list of 30 items)	24 items
	% of physicians reporting no or insufficient access to a laboratory	1%
% of physicians reporting no or insufficient access to X-ray facility	4%	
Service delivery	% of physicians with a computer in the centre/practice	27%
	Access to services	
	% of patients living within 20 minutes travel from GP or therapist	62%

Functions	Selected dimensions/proxy indicators	Findings Physicians (N=212) Patients (N=1704)
	Average number of registered patients per GP	2086
	Average number of registered patients per therapist	2109
	Average number of patient consultations per day per GP	30
	Average number of patient consultations per day per therapist	31
	Average number of home visits per week per GP	27
	Average number of home visits per week per therapist	28
	Average working hours of GP per week	43
	Average working hours of district therapist per week	41
	Average length of patient consultations (minutes)	18
	Reported average contact rate (frequency) by patients per year	4
	% PC physicians offering evening opening at least once per week	78 %
	% Patients stating to have a same day consultation on demand	76 %
	% of all practice and home care contacts referred to specialist secondary services by GPs or by therapists **)	GPs: 3.03% Therap: 5.75%
	% of all practice and home care contacts referred to specialist secondary services by doctors from urban or rural settings **)	Rural: 3.23% Urban: 6.53%
Coordination	% of PC physicians sharing premises with other PC physicians	27%
	% of PC physicians having regular meetings with practice nurses	68%
	% of PC physicians having regular meetings with midwives	74%
	% of PC physicians having regular meetings with pharmacists	55%
Continuity	% physicians reporting to keep medical records routinely	90%
	% of patients being assigned to their GP (not chosen)	79%
	% of patients with their GP for at least 1 year	79%
Comprehensiveness	% of physicians answering to frequently use clinical guidelines	86%
	% of physicians with a computer available in the practice	27%
	% of items of medical equipment reported to be available to physicians (from a list of 30 items)	80%
	Score for GPs' role in first contact care for a selection of 18 health problems (range of score 1 (never) - 4 (always))	2.52
	Score for therapists' role in first contact care for a selection of 18 health problems (range of score 1 (never) - 4 (always))	1.74
	Score for GPs' involvement in the treatment of a selection of 19 diseases (range of score 1 (never) - 4 (always))	3.10
	Score for therapists' involvement in the treatment of a selection of 19 diseases (range of score 1 (never) - 4 (always))	2.79

Functions	Selected dimensions/proxy indicators	Findings Physicians (N=212) Patients (N=1704)
	Score for GPs' involvement in the provision of a selection of 16 preventive and medical-technical procedures (range of score 1 (never) – 4 (always))	1.56
	Score for therapists' or team members involvement in the provision of a selection of 16 preventive and medical-technical procedures (range of score 1 (never) – 4 (always))	1.26
	Coverage of public health activities (based on 7 items = 100%) by GPs on a routine basis	81%
	Coverage of public health activities (based on 7 items = 100%) by therapists on a routine basis	61%
	% physicians involved in cervical cancer screening programme	GPs: 65% Ther: 25%
	% physicians providing family planning / contraception services	GPs: 56% Ther: 32%
	% GPs providing routine antenatal care	77%
	% therapists providing routine antenatal care	53%
	% GPs trained specifically for counselling TB patients	78%
	% therapists trained specifically for counselling TB patients	45%
	% physicians involved in TB follow up treatment	GPs: 88% Ther: 53%
	% of PC physicians having regular meetings with local authorities	79%
<p>*) This is BelMAPO. Two other institutions (out of 5) offer GP training, but not in separate departments.  **) Self-referrals are not included in these figures; calculations are from the last 4 weeks</p>		

### Summary of recommended policy action

- Results of the evaluation have shown – especially with regard to comprehensiveness of care - that properly trained GPs make a difference in primary care in Belarus compared to therapists. It is therefore advisable to speed up the implementation of the GP based PC model in all rural facilities of Belarus;
- Equally, results have demonstrated that the GP-based PC model is feasible in the urban environment as well. Therefore the policy vision on PC should be expanded to the whole of primary care in the country;
- The service profile of GPs in rural practice points to possibilities of a gate keeping role for GPs that are trained for it. It is recommended to explore these possibilities and, consequently, to consider a redefinition of the tasks and responsibilities of GPs;
- Efficiency in primary care can be improved by a critical review of administrative and reporting requirements, an upgrade in the computerisation of practices, a delegation of non-medical tasks from physicians to other health workers such as nurses or lay persons in the community and by providing training for staff on rational practice management;

- Revising currently used indicators for the performance of services in primary care is recommended. Outcomes of these indicators are only indirectly related to efforts or impacts made by primary care workers;
- In order to recruit and retain the necessary number of GPs and nurses for a strong primary care system, human resources plans need to be developed and the respective training capacities need to be developed. Only physicians who have completed a postgraduate specialisation in general practice or family medicine should work as a GP. The current system of obligatory placement of medical graduates in primary care should be considered as a temporary emergency measure until numbers and skills of GPs reach international standards;
- Effective financial payment schemes for primary care doctors should be designed that take into account aspects of individual performance (for instance a capitation based payment scheme with additional fee-for-service elements or a small number of pay for performance indicators that are easy to generate);
- Tipping the balance towards PC implies a shift in funding with more resources for PC and a consequent reduction of resources for the secondary and hospital sector. A shift in funding should be transparent and be implemented in parallel to the revision of the task profiles of primary care workers, for example when GPs take over certain TB or reproductive health services that are now provided by specialists;
- For a broad acceptance of reforms, it is advisable to involve stakeholders into the policy process and its implementation, including NGOs and representatives of patients;
- Ambulance services should no longer overlap with primary care. It is advisable to design and stepwise implement a new out-of-hours scheme with a separation of emergency care and primary care services;
- GPs and therapists should become more involved in providing medical technical procedures. The medical curriculum should pay sufficient attention to the skills needed to provide these services;
- Both the capacity for GP training and education and the status of general practice will benefit from a rapid establishment of respective academic departments for general practice at all medical universities in Belarus and the creation of professorships in general practice / family medicine;
- Cost effectiveness of TB services can be improved by a stronger integration of specific TB services into primary care, also in urban areas. Detection of TB, as well as DOT and patient support can be effectively provided from primary care level. This requires health care workers trained for these tasks;
- The current focus of TB screening is on large low-risk population groups. The cost effectiveness of TB screening can be improved by following WHO recommendations and concentrating on higher risk categories;

- The evaluation into the provision of reproductive health services has further shown that the review of existing medical standards for reproductive health services is highly recommended. The many obligatory checkups for example for pregnant women do not correspond with internationally recognized practices and guidelines;
- Reproductive health services are currently provided in a fragmented way by many providers in different settings. It is recommended to reduce the number of providers involved in reproductive health, to clearly define their tasks and relations (for instance in protocols and pathways) and to create conditions for teamwork within and between levels of care that allow a more integrated provision of reproductive health;
- Reproductive health is an important aspect in primary care for which physicians need to be sufficiently trained;
- Patients can be more active in primary care by promoting their role in prevention and self care. Information and health education are major means to this end and a prime task for health workers in primary care. Training in how to communicate effectively with patients should be part of any curriculum of staff working in primary care;



# I EVALUATING PRIMARY CARE: BACKGROUNDS AND APPLICATION

## 1.1. The theoretical framework of the Primary Care Evaluation Tool

### Why evaluate primary care?

Although the strengthening of primary care services is a priority of health reforms in many countries, in both central, eastern and western Europe, the backgrounds to and reasons for the reforms are not similar. In western Europe, emphasis on primary care is expected to provide an answer to questions of rising costs and changing demand resulting from demographic and epidemiological trends. Central and eastern European countries, as well as countries formerly belonging to the Soviet Union, are struggling to fundamentally improve the performance and cost effectiveness of their entire health systems. Primary care, which used to be poorly developed or nonexistent in these countries, is now being developed to improve the cost effectiveness of the overall system and to bring adequate and responsive health services closer to the population. 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 measurements of performance 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. This situation is changing. Stakeholders in health care, governments not the least, are increasingly held accountable for their activities and this requires evidence, for instance on the progress of reforms.

In addition, demographic and epidemiological changes bring about the need for health systems to adapt to new health demands of the population. This requires evaluation of the responsiveness of health services from the patients' perspective. 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 finally their care is managed – at the primary care level or beyond.

Further, evaluations and performance assessments should be explained within the respective (country) context. Only then, performance information can 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 is generated and made available to other stakeholders in the health care system, as well as that the necessary analytical capacity is available (3).

A final major requirement of evaluations and performance assessments is to start from a proper framework from which measures are developed. Deriving indicators from an accepted framework advance the relevance of the (proxy) indicators and the good coverage of areas identified in the framework. The following sections describe the framework used to develop the Primary Care Evaluation Tool (PCET).

### **Evaluating primary care and the health systems framework**

A health system can be defined as a structured set of resources, actors and institutions related to the financing, regulation and provision of health actions that provide health care to a given population. Health action is conceived as any set of activities whose primary intent is to improve or maintain health. 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 (4).

Health systems aim to achieve three fundamental objectives (1,4) as shown below.

- *Improved health* (for instance, better health status and reduced health inequalities);
- *Enhanced responsiveness to the expectations of the population*, encompassing:
  - » Respect for the individual (including dignity, confidentiality and autonomy);
  - » Client orientation (including prompt attention, access to services, quality of basic amenities and choice of provider);
- *Guaranteed financial fairness* (including households paying a fair share of the national health bill; and protection from financial risks resulting from health care).

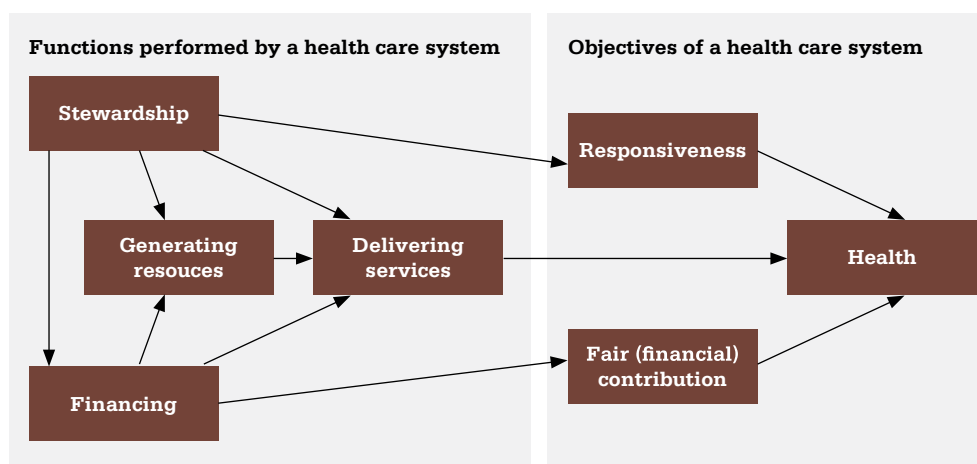
The level of attainment of these goals ultimately reflects the performance of the system as a whole. However, as there are variations in both health conditions and health systems across countries, the country context needs to be taken into account when comparing the performance of health systems. Thus,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

The WHO health system performance framework (see Fig. 1) indicates that performance is determined by the way in which the following four key functions are organized (3):

- *stewardship*
- *generating resources*
- *financing*
- *service provision*.

Indeed other approaches to performance measurement can be found in the international literature (5,6,7,8), however, these all use similar insights or related concepts. The four functions can be applied to the whole health system of a country – or, for example, to the primary care level only – with specific sub characteristics for the service provision function in primary care.

**Figure 1: WHO health system functions and objectives**



### What is the meaning of the four system functions?

#### Stewardship

Stewardship is an overriding function (but broader than regulation), in that it oversees all basic health system functions. It has direct and indirect effects on the outcomes of a health system (1). Stewardship encompasses the tasks of 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 the rules for the health system; 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 sub functions: overall system design, performance assessment, priority setting, regulation, intersectoral advocacy and consumer protection (4). 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 these 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 knowledge/ information. It is crucial that the quantity and quality of human resources is adequately matched to the demand for services across the various levels of health care 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 human (physical) resource planning, and a regulatory framework for assuring high quality service provision and consumer protection falls under the stewardship function – however, the actual state of affairs relating to workforce volume and distribution and professional development (training, continuous medical education, research, knowledge production) is usually measured 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, in the health system (9). The financing function in health systems is defined by Murray and Frenk (4) as “the process by which revenues are collected from primary and secondary sources, accumulated in fund pools and allocated to provider activities”. Three sub functions 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. The allocation of funds to cover the costs (staff, durables and running costs) of specific health service interventions by health providers (institutional or individual) is purchasing (4). The way these sub functions 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 (4). 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 (and there are four key characteristics that define “good provision”; see below) – it is not what the health system is.

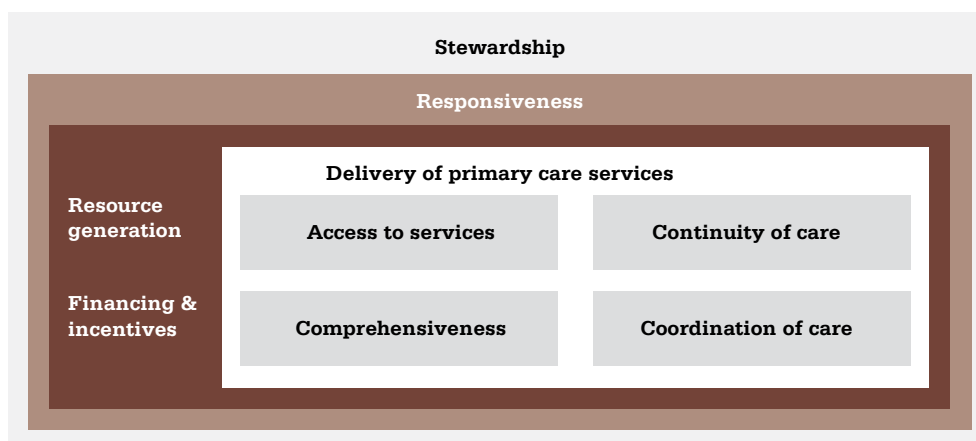
## The Primary Care Evaluation Framework

The characteristics of primary care vary from country to country, and there are different definitions of what constitutes primary care (see also Annex 1). However, a comprehensive or well-developed primary care 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 (10).*

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

**Figure 2: Primary Care Evaluation Framework**



**What is the meaning of the four key characteristics of a “good” primary care system?**

**Access to services**

In general, access to health services can be defined as the ease with which health care is obtained (6). Alternatively, it can be defined as “the patients’ ability to receive care where and when it is needed” (11). There are various barriers of a physical, psychological, sociocultural or financial nature that can restrict accessibility. Included in the PCET scheme are, for instance, geographical limitations (distance to and distribution of general practices = geographical access), and factors related to the organization of primary care practice (office opening hours, distant consultations, timeliness = organizational access), as well as the costs incurred by patients (cost-sharing, co-payments = financial access).

**Continuity of services**

An important feature of primary care is that health care interventions should be geared to patients’ health care needs over a longer period and cover successive episodes of care/treatment. A general definition of continuity is the “follow-up from one visit to the next” (12). 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)” (11).

Several levels of continuity can be distinguished (13): first, informational continuity that relates to an organized body of medical and social history about each patient, accessible to any health care professional caring for the patient. Second, there is longitudinal continuity, which points to a specific locus where a patient customarily receives health care from an organized team of providers in an accessible and familiar environment. Third, interpersonal continuity, which is defined as an ongoing personal relationship between the patient and the care provider, is characterized by personal trust and respect (13). Furthermore, Reid et al. (14) add another level, namely, 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 primary care is the entry point to health care and often serves a gatekeeping function to other levels of care, the coordination of services at primary care level is an important determining element in the responsiveness of health services provision and the health system as a whole. The potential for problems in coordination are particularly evident at the interface between primary and secondary care, or between curative care and other (public health) services in the field of health promotion (15). 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” (9). More specifically, it can be defined as “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 refers to the interlinkages among staff members and agencies over a longer episode of treatment (11). In the PCET scheme, the various dimensions of coordination encompass collaboration within the same primary care practice, within the same level between primary care providers (e.g. GPs, community nurses, physiotherapists, etc.) and between primary care and other levels of care through referral systems.

### **Comprehensiveness**

Comprehensiveness can be defined as the extent to which a full range of services is either directly provided by a primary care physician or other provider or specifically arranged elsewhere (16). In the primary care setting, comprehensiveness refers to the fact that services comprise curative, rehabilitative and supportive care, as well as health promotion and disease prevention (15, 17). The comprehensiveness of services is not only manifested in the specific range of services provided but also, and related to that, refers to the practice conditions, facilities and equipment, as well as the professional skills level of the primary health service provider. In addition, the community orientation of primary care workers 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 primary care and the facilitating conditions. The Primary Care Evaluation Scheme, which in turn forms the basis of the Primary Care Evaluation Tool (PCET), is structured as follows:

- stewardship
- financing and incentives
- resource generation

- delivery of primary care, subdivided into:
  - » accessibility
  - » continuity care
  - » coordination of care
  - » comprehensiveness of services.

Table 2 shows that, for every primary care system function, a number of key dimensions have been identified. Each dimension has, in turn, been translated into one or more information items or proxy indicators for the dimension.

**Table 2: Overview of selected functions, dimensions and information items**

Function	Subfunction	Dimension	Selected Items/Proxies
<b>Stewardship</b>		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
<b>Resource generation</b>		Workforce volume	Numbers and density
		Professional development	Role and organization of professionals
			Education in PC
			Scientific development and quality of care
		Professional morale	Job satisfaction
		Facilities and equipment	Medical equipment
			Other equipment
<b>Financing and incentives</b>		Health care/PC financing	PC funding
		Health care expenditures	Expenditures on PC
		Incentives for professionals	Entrepreneurship
			Mode of remuneration
		Financial access for patients	Cost sharing / co-payment for PC
<b>Delivery of Care</b>	<b>Access to services</b>	Geographical access	Distance to PC practice
			Distribution of PC physicians

Function	Subfunction	Dimension	Selected Items/Proxies
		Organizational access	List size
			PC provider workload
			PC outside office hours
			Home visits in PC
			Electronic access
			Planning of non-acute consultations
		Responsiveness	Timeliness of care
			Service aspects
			Clinics for specific patient groups
	<b>Continuity</b>	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
	<b>Coordination</b>	Cohesion within PC	PC practice management
			Collaboration among general practitioners/family doctors
			Collaboration of PC physician with other primary care workers
		Coordination with other care levels	Referral system/gatekeeping
			Shared care arrangements
	<b>Comprehensiveness</b>	Practice conditions	Premises, equipment
		Service delivery	Medical procedures
			Preventive, rehabilitative, educational activities
			Disease management
		Community orientation	Practice policy
			Monitoring and evaluation
			Community links
		Professional skills	Technical skills

In order to evaluate the complexity of any primary care system, information is gathered on different (administrative) levels, and from the supply and demand sides, i.e. from health providers and patients. Therefore, the Primary Care Evaluation Tool consists of three separate questionnaires:



- a questionnaire concerning the situation of primary care policies and structures at national level;
- a questionnaire for primary care physicians / GPs; and
- a questionnaire for patients.

Together, the three questionnaires cover all identified primary care functions, their dimensions and information items, as derived from the scheme. The questionnaires for GPs and patients are prestructured, with precoded answers. The questionnaire for the national level contains prestructured and open ended questions on the health system, as well as a list on statistical data to be provided.

## **1.2. Overview of the development and pilot testing of the Primary Care Evaluation Tool**

The development of the Primary Care Evaluation Tool (PCET) started in February 2007 and was completed in May 2008 when the final instrument became available to be used by WHO in its health system support activities with Member States. The successive stage of development, from desk research via discussion of dimensions and proxies to pilot implementations and the international review meeting to discuss experiences and results, has been described in more detail in (18,19).

### **Literature review**

As a first step, the researchers at NIVEL conducted a directed literature study on the basis of the WHO health system performance framework (1). The literature review aimed to gather information on possible ways to operationalize the key primary care system functions. Particular attention was paid to primary care indicators and existing (primary care) performance measurement and evaluation tools and questionnaires. This resulted in a preliminary listing of dimensions and items for the tool.

### **First exchange with experts from the WHO region**

The outcomes of the literature study were discussed in an international meeting held in March 2007. Major objectives of the meeting were to discuss and reach consensus on key concepts and definitions used, to discuss and validate the provisional set of dimensions, proxy indicators and information items and to improve the first version of the scheme (see Table 2) in order to develop the questions for the questionnaires. Also first steps were made for the pilot implementation of the provisional tool.

### **Drafting, validating and translating of 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 countries where the Primary Care Evaluation Tool would be piloted: Turkey and the Russian Federation. Terms were adapted for the national situations and, on request of health authorities in the two Member States, some additional questions were included on topics related to national priorities on primary care. These final versions were translated into the respective country languages

in a check and double-check procedure. The translations were first made into the local language with inputs from an expert in primary care and subsequently back-translated and compared with the original version.

### **Two pilot implementations**

The provisional tool has been pilot tested in two provinces in Turkey and two districts in the Moscow region, Russian Federation. Under the supervision of the WHO Regional Office for Europe and the respective ministries of health of the pilot countries, 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 and 15 April 2008. The review meeting resulted in a revision of the three questionnaires, with a focus on the following changes:

- Questions were made more factual; avoiding to ask for opinions;
- The sequence of topics and questions was reordered;
- The national level questionnaire was changed into a questionnaire/template for a more comprehensive background document to be prepared by a small team of local experts and subsequently discussed and validated in a focus group meeting directed by WHO;
- The questionnaires for patients and physicians were reduced in size;
- The terminology and wording throughout the questionnaires were made more consistent;
- In addition to the results of the surveys other complementary sources of information should 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 should have the possibility 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 should contain a set of proxy indicators.

After revision of the tool, the PCET was available to be used in countries. For information of counterparts in Member States, an 'implementation scheme' was produced in which subsequent steps for the implementation of the PCET are described.

### **1.3. Overview of the implementation of the Primary Care Evaluation Tool in Belarus**

#### **The BCA context**

The Primary Care Evaluation Tool 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 Belarus. It was agreed that the tool would pay extra attention to the role of primary care in reproductive health and tuberculosis. First preparations for the implementation of the tool were made during a visit of WHO representatives to Belarus from 27 to 30 April 2008. As project partners, the Netherlands Institute for Health Services Research (NIVEL), in its capacity as WHO Collaborating Centre, and Belmapo, the Institute for Postgraduate Medical Education in Minsk, Belarus, were assigned. The project effectively started in June 2008.

#### **Country visit for information and planning**

From 16 to 20 June 2008 a researcher from NIVEL visited Belarus to inform counterparts – together with staff from the WHO country office – on the purpose and activities related to the implementation of the tool, and to prepare further methodological and logistic steps. In particular:

- the translated questionnaires were explained and discussed with the national working group established for this project and the partner institute Belmapo, including the Vitebsk Medical University;
- questions on reproductive health and tuberculosis services were formulated and shared to be added to the core of the tool;
- the steps and procedures for the implementation of the tool were explained and discussed with the above mentioned partners and the Regional Health Authorities of Minsk Region and Vitebsk Region;
- the further planning of activities was discussed with the national coordinator, including the identification of the target populations of physicians and patients, the sampling procedure and the organisation of the fieldwork.

#### **Preparation and implementation of the surveys**

It was suggested by the Ministry of Health to implement the PCET in the Minsk Region and the Vitebsk Region. In the past decade, pilot reform projects in primary care have taken place in these two regions. This may have resulted in a slightly positive bias towards the situation in primary care compared to the situation in other regions of the country.

The planning of the fieldwork including the selection of the study population, the sample of physicians and patients, was made as follows: For physicians, a minimum of 200 respondents were targeted (50 district therapists and 50 GPs in each region). Taking non-responses into account, a total of 235 physicians were approached and included in the initial sample. In the Minsk Region 12.5% of therapists (every 8th) and 50% of GPs (every other) were selected, while in the Vitebsk Region 50% of GPs and 16.8% of therapists (every 6th) were selected from official staff lists made available by the Regional Health Authorities. In case of illness or unavailability, the next physician on the list was included.

The survey among patients was planned as follows: The target population was determined as a practice population of 50% of the included physicians. A minimum of 15 completed questionnaires per physician was targeted. A fieldworker would visit each of the selected primary care practices and randomly ask visiting patients to fill in the questionnaires – on a voluntary basis – until 15 patients had agreed to do so. For patients under the age of 18 an accompanying adult would be asked.

Fieldworkers had a crucial role in the data collection among patients. They approached and informed the patients and distributed and collected the questionnaires among patients and the physicians of the primary care facilities they were visiting. Distribution of questionnaires to the physicians who were not visited by fieldworkers was done by the Regional Health Authorities. These questionnaires were returned in sealed envelopes to be processed at Belmapo in Minsk. Fieldworkers were recruited by Belmapo and instructed on their task by staff from WHO and NIVEL. The fieldworkers training addressed the following topics:

- explanation of the context and objective of the survey;
- the basic principles and structure of the tool and the type of questions used;
- the specific topics and questions of the questionnaires;
- how to approach and assist respondents; how to establish a good rapport by clearly explaining the purpose of the survey and stressing confidentiality; how to deal with non-response; and how to minimize bias caused by the field worker (neutrality, patience, aloofness);
- creating a suitable environment for patients to fill in the questionnaire;
- checking readability and completeness of responses;
- logistics, such as allocation of fieldworkers to the locations, planning, transport etc.

#### **Information gathering at the national level**

The questionnaire / checklist for the national level of primary care was completed by a small team of experts at the Ministry of Health. The answers and the collected statistical data were translated into English and sent to WHO, NIVEL and local experts of the national working group. Subsequently, a discussion and validation meeting with 12 of these experts was organized in Minsk on 10 October 2008. The meeting aimed to check and consider the answers in a broader perspective and to gather more detailed information where possible and necessary. Results and outcomes can be read in chapter 3 of this report.

#### **Data processing, analysis and reporting**

Data entry was carried out at Belmapo in Minsk. A data-entry programme 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 presented by WHO and NIVEL to the national working group on 17 and 18 March 2009 in Minsk. On the basis of suggestions for changes,

requests for additional analyses and additional information made at this meeting and further peer reviewer the draft report was revised and finalized in June 2009. Details on the application of the PCET in Belarus are summarized in Table 3.

**Table 3: Overview of the implementation process in Belarus**

Elements of the Implementation	Explanation
<b>Target groups</b>	<ul style="list-style-type: none"> <li>• PC physicians (district therapists and GPs)</li> <li>• Patients (visiting PC facilities)</li> <li>• Health care experts (national)</li> </ul>
<b>Locations</b>	<ul style="list-style-type: none"> <li>• Minsk Region (excluding Minsk city)</li> <li>• Vitebsk Region</li> </ul>
<b>Type of data collection</b>	<ul style="list-style-type: none"> <li>• PC physicians: survey using prestructured questionnaires (disseminated by field workers and Belmapo)</li> <li>• Patients: survey using prestructured questionnaires (disseminated by field workers)</li> <li>• Health care experts: mixed questionnaire and meeting for validation / consensus</li> </ul>
<b>Sampling method</b>	<ul style="list-style-type: none"> <li>• PC physicians : random sample in 2 regions</li> <li>• Patients: the first 15 patients visiting selected physicians</li> <li>• Health care experts: identified by local partner / WHO</li> </ul>
<b>Planned sample sizes</b>	<ul style="list-style-type: none"> <li>• PC physicians: 235 (123 GPs+112 Therapists), as follows: <ul style="list-style-type: none"> <li>» Minsk Region: 61/122 GPs + 50/400 Therapists<sup>1</sup></li> <li>» Vitebsk Region: 62/124 GPs + 62/369 Therapists</li> </ul> </li> <li>• Patients 1755 (with ~50% of sampled physicians; each 15 patients), as follows <ul style="list-style-type: none"> <li>» Minsk Region: 30 GPs x 15 patients = 450 25 Therapists x 15 patients = 375</li> <li>» Vitebsk Region: 31 GPs x 15 patients = 465 31 Therapists x 15 patients = 465</li> </ul> </li> <li>• Health care experts: at least 10 (to be selected on the basis of their expertise)</li> </ul>
<b>Response rate</b>	<ul style="list-style-type: none"> <li>• Physicians: 212</li> <li>• Patients: 1704</li> </ul>
<b>Instructions</b>	<ul style="list-style-type: none"> <li>• Local coordinator: methodology of sampling and recruitment</li> <li>• Regional Health Authorities: identification of study populations; lists of GPs and therapists; logistics of surveys</li> <li>• Fieldworkers: explanation of questions; how to approach and assist respondents; quality aspects</li> <li>• Respondents : introduction/instruction in the questionnaires</li> </ul>
<b>Coordination of field-work</b>	<ul style="list-style-type: none"> <li>• Local coordinator: overall responsibility</li> <li>• Regional Health Authorities: information of PC facilities; coordination of transport; recollection of 50% of questionnaires</li> <li>• Fieldworkers: information of respondents; correct administration of data collection in their facilities, collection of questionnaires</li> <li>• NIVEL: general supervision during and after field visit</li> </ul>
<b>Period of data collection</b>	13 – 31 October 2008
<b>Data entry</b>	At Belmapo (Minsk)
<b>Analysis &amp; reporting</b>	At NIVEL (Utrecht, Netherlands)

<sup>1)</sup> 61/122 GPs means: 61 GPs randomly selected from a total population of 122 (=50% sample). Similarly: e.g., 50/400 Therapists means: 50 Therapists randomly selected from population of 400 (=12.5% sample), etc.

## 2 INTRODUCTION TO BELARUS<sup>2</sup>

### 2.1. The country

Belarus is a relatively low lying landlocked country in Eastern Europe, situated north of Ukraine, west of the Russian Federation, east of Poland and south-east of Lithuania and Latvia. It has a shrinking population, which now amounts to 9.65 million. About 18% of the population is living in the capital Minsk. The population density is relatively low, with 46.9 inhabitants per km<sup>2</sup>. Belarus became independent in 1991, after the dissolution of the Soviet Union. The country was one of the founders of the Commonwealth of Independent States (CIS). As indicated on the map in figure 3, Belarus is administratively divided into the following six regions (or oblasts): Brest, Gomel, Grodno, Mogilev, Vitebsk, and Minsk region. Minsk city is an independent administrative entity of its own. The regions and the capital are subdivided into districts (rayons) which have their own authorities. The Primary Care Evaluation Tool (PCET) was implemented in the regions of Minsk and Vitebsk. Vitebsk Region has a population of almost 1.3 million and is situated in the north of the country. With 32 inhabitants per km<sup>2</sup> it has the lowest population density in Belarus. Besides the capital Vitebsk, with approximately 340.000 inhabitants, important cities in the region are Orsha (about 125.000 inhabitants) and Navapolatsk (about 107.000 inhabitants). Vitebsk region maintains strong economic ties with the neighboring countries Latvia, Lithuania and the Russian Federation. The population of the Minsk region amounts to some 1,5 million. Major cities in the region are Borisov, which is an important industrial centre with about 150.000 inhabitants; Soligorsk, with well over 100.000 inhabitants and Maladzyechna which has a population of almost 100.000. Social and economic life in the Minsk region has a strong orientation on the nation's capital which is located in the heart of the region, but which – in administrative terms – is not part of it.

**Figure 3: Map of the Republic of Belarus<sup>3</sup>**



<sup>2</sup> As background source and for more information see (20, 21)

<sup>3</sup> Source: [www.geographicguide.net/europe/maps-europe/maps/belarus-map](http://www.geographicguide.net/europe/maps-europe/maps/belarus-map)

## 2.2. Population and health

Table 4 summarizes key indicators for Belarus, compared to averages of the Russian Federation and the Member States of the European Union before 2004 (EU-15).

**Table 4: Selected demographic, health and life style indicators**

Indicator	Belarus		Rus.Fed.		EU-15	
Population 0-14 yrs (%)	14.8		14.8		16.0	
Population 65+ yrs (%)	14.6		14.0		17.6	
Population density (p. sq km)	46.9		n.a.		n.a.	
Population growth rate 2005-2007 (%)	-1.33		n.a.		n.a.	
Live birth rate (p. 1000 pop.)	10.7		10.4		10.7	
Total fertility rate (children p.woman)	1.37		n.a.		1.58	
Death rate (p. 1000 pop.)	13.7		15.3		9.3	
Life expectancy at birth (in yrs)	Male	64.6	Male	60.5	Male	77.4
	Female	76.3	Female	73.3	Female	83.0
Abortions (p. 1000 live births)	447		951		247 (EU total)	
Tuberculosis incidence (p.100.000)-official (estimated)	55.2 (61)		89.7 (107)		9.2 (13.1)	
HIV incidence (p. 100.000 pop)	7.5		27.5		6.14	
Regular smokers (% 15+)	Male	52.8	n.a.		Poland	M: 37
	Female	8.7				F: 23
					Netherl.	M: 32.0
						F: 26.3

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

Table 4 shows the shrinkage of the Belarus population between 2005 and 2007. Recently, however, the birth rate has slightly improved and is now on the level of the EU-15, slightly above the birth rate in the Russian Federation. The fertility rate (a computed indicator for the number of children per woman) has also increased and was 1.37 in 2007, which is somewhat lower than in the EU-15. The death rate is higher than the average in EU-15 but lower than in the Russian Federation. Life expectancy for men and women are way below the EU-15 averages, but three to four years above those in the Russian Federation. The rate of abortions has decreased over the last years, but continues to be at a much higher level than in the EU-15. In the Russian Federation, however, the abortion rate is more than twice that in Belarus. The incidence of tuberculosis is increasing and six times higher than in the EU-15 but considerably lower than in the Russian Federation. Latest WHO estimates for Belarus on TB register 61 TB incidences, 69 TB prevalences and 8 TB mortality cases per 100,000 population (22). Belarus is one of the 18 high priority countries for TB in the WHO European Region (23) and one of the 27 high burden countries globally for multidrug resistant TB (MDR-TB), which is estimated at 10% and 44%, respectively, among new and previously-treated TB cases. The incidence of HIV is slightly above the EU-15 average but far below the average in the Russian Federation. In the use of tobacco, men and women in Belarus differ strongly. More than half of the male population above the age of 15 years is smoking, while only 9% of women smoke. No comparable averages are available for the Russian Federation or EU-15, but data from

Poland and the Netherlands can be used for comparison. In Belarus a considerable smaller proportion of women is smoking (9%) than in Poland (23%) as well as in the Netherlands (26%). The situation among men is completely different. Many more men are smoking in Belarus (53%) compared to Poland (37%) and the Netherlands (32%).

### 2.3. The health care system

The strict hierarchical and centralized organization of today's Belarus health care system still shows features of the previous Semashko system. The organization of health care is similar to the administrative division of the country. At the national level, the overall responsibility for the health care system is with the Ministry of Health, which holds a dominant role in financing and service provision. Regional and district authorities are responsible for the organization and funding of primary and secondary care services at their level, according to the framework set by the Ministry of Health. Privatisation of health services or delegation of responsibilities to non-governmental bodies is practically absent. The funding of the health care system is primarily through general taxation, with the exception of some out-of-pocket payments mainly for pharmaceuticals. Social health insurance has not been introduced as a funding mechanism in Belarus.

**Table 5: Health care supply indicators**

Indicator	Belarus	Rus.Fed.	EU-15
Hospitals (all) (p.100.000 pop)	7.2	4.5	3.1
Hospital beds (p.100.000 pop)	1123	966	554
Physicians (p.100.000 pop)	484	431	338
Physicians in primary care (%)	12.4 % *)	n.a	31.1 % (EU total)
Nurses (p.100.000 pop)	1198	806	805
Average length of stay (at hospital)	11.4 days	13.6 days	9.4 days
In-patient care admissions (p.100 pop)	28.5	23.7	17.2
Outpatient contacts per person	13.6 / yr.	9.0	6.8 (EU total)

WHO HFA database at <http://data.euro.who.int/hfadb> (yr: 2007 or 2006)  
 \*) Based on data collected for the PCET in Belarus; in WHO HFA database: 7.8%

The key indicators listed in Table 5 characterize the available resources and the production of the Belarus health care system in comparison with the Russian Federation and the EU-15. The abundant supply of secondary care services is reflected both in the large number of hospitals and the available beds. These outnumber the average in the Russian Federation and are double of those in the EU-15 average countries. The strong specialist and hospital orientation of the Belarus health care system (or its weak primary care orientation), is also evident from the distribution of physicians and the hospital admission rate. Belarus has an extremely high supply of physicians. Related to the population, Belarus has 12% more physicians than the Russian Federation and 43% more than the EU-15 average countries. However, only a modest proportion of physicians are working in primary care facilities (well over 12%, according to data collected for the PCET). This is in sharp contrast to the EU countries where almost one third of the physicians is primary care-based. Furthermore, the overall in-patient admissions are much higher in



Belarus (28.5%) than in the Russian Federation (23.7%) and the EU-15 countries (17.2%). The average length of stay in hospitals is somewhat lower in Belarus than in the Russian Federation, but higher than in the EU-15. The relative number of nurses in Belarus is almost 50% higher than in both the Russian Federation and the EU-15.

Supply of human resources is excessive, but not evenly distributed. There are shortages of physicians and nurses in primary care facilities, especially in rural areas. Primary care services are provided differently in cities and the countryside, as will be explained shortly. At the secondary level there are district and regional hospitals. District hospitals provide general secondary care services, while regional hospitals deal with more complex cases. Hospital beds are not only used for acute care but also for social and long-term care. One of the heritages of the previous Semashko system is the continued existence of categorical or parallel health care systems, for instance for the army, railway employees and civil servants from ministries. Access to these services, including special hospitals, is restricted to current or retired employees of these enterprises or ministries and their families. Health reforms since 2000 have focused on the strengthening of primary care and preventive care, as well as the introduction of output based funding mechanisms. However, achievements so far have been modest, since the chosen evolutionary approach only allows taking small steps. Other reform objectives that have been recently discussed are to improve the efficiency and quality of health care services, to give more autonomy to health facilities in spending their budgets and to introduce better financial and non-financial incentives for health care personnel.

### **Primary care**

In towns and cities primary care is provided by general physicians (district therapists and district paediatricians) as well as medical specialists, jointly working in polyclinics. No gatekeeping exists; patients can directly access medical specialists. In large cities there are categorical adult and paediatric polyclinics, which are often housed in separate premises. Polyclinics can be very large, with catchment areas of more than 50.000 inhabitants. Polyclinics usually have the following categories of specialists for outpatient consultations: surgery, ENT, ophthalmology, neurology, endocrinology, cardiology, gynaecology and TB specialists. Additionally, there are diagnostic facilities, like laboratory, X-ray, ultrasound and endoscopy. Specialists in polyclinics are called 'narrow specialists' to distinguish them from the (higher level) hospital specialists. In rural areas there are two types of primary care facilities: ambulatories and FAPs (feldsher–midwife points). In ambulatories district physicians (therapists for adults and paediatricians for children) or emerging (retrained) general practitioners provide primary medical care. In addition to a minimum of one doctor, there are usually other team members such as a dentist, a feldsher, a midwife, 2 or 3 nurses, a physiotherapy nurse, a laboratory assistant and auxiliary staff (such as cleaners and drivers). In remote areas the basic unit of primary care is the FAP, which is staffed by a feldsher or midwife only. In parts, working conditions in FAPs are rather poor.

An important additional feature in Belarus primary care is the ambulance service, in particular for emergencies and out of office hours. The threshold for the deployment of ambulances is low and, henceforth, the supply of ambulances for making numerous home visits is large. The workload in primary care to a large extent consists of preventive routines and administrative tasks. A large proportion of the population is required to have regular preventive health check-ups, for which different specialists need to be

seen. For instance, in their first year, babies are seen twice by all the main specialists and after their first year, annually. Women with a normal pregnancy should make at least a dozen visits to a gynaecologist during the time of pregnancy – in addition to the regular visits to a midwife. Annual check-ups are provided for school children, students, war veterans, all patients from the Chernobyl zone, drivers, patients with chronic diseases (including hypertension or diabetes), and certain professional groups. Furthermore, district physicians are responsible for authorizing sick leave from the first day of illness, which usually requires a home visit to the patient, certain immunizations, and specific opportunistic screening procedures (i.a. for TB and cancer). Routine check-ups and other 'obligatory' patient contacts partly explain the extremely high number of outpatient visits in Belarus compared to CIS and EU countries (see Table 5). Finally, physicians and nurses in primary care have considerable duties in statistical reporting to all main specialists on morbidity and medical services provided.

# **3 PRIMARY CARE IN BELARUS: NATIONAL SITUATION AND CONTEXT**

## **RESULTS BASED ON THE NATIONAL LEVEL QUESTIONNAIRE**

This chapter is an overview of current primary care in Belarus. It will consider aspects of policy and legislation, financial arrangements, workforce, education of providers, quality assurance and the role of patients in primary care. Two additional services will be dealt with in relation to primary care, namely, tuberculosis and reproductive health.

The information for this chapter resulted from answers on the national level questionnaire, and comments and additions made by experts at the occasion of a validation meeting. Statistical backgrounds were contributed by the Ministry of Health. Where indicated, some information has been added from a recent review of the Belarus health care system (20).

This chapter provides the overall context and background for the results of the surveys among physicians and patients in the regions of Vitebsk and Minsk that are described in chapter 4 and 5. In describing the results, reference has been made to the health systems functions and selected dimensions used in the Primary Care Evaluation Scheme outlined in Table 2.

### **3.1. Stewardship aspects**

#### **3.1.1. Dimension: policy development**

##### **Early primary care policy**

In contrast to other countries in the region, after independence, Belarus has adopted an approach of incremental change in the health care system. No immediate and fundamental reforms have been implemented; changes have been modest and implementation was on a limited scale rather than nationwide.

In the second half of the 1990s, primary care and general practice were introduced in Belarus in the context of relatively small bilateral development and implementation pilot projects. In addition to training of physicians and nurses and paying attention to required practice conditions, the focus of these projects was on policy development, in which the Ministry of Health was the main partner. This resulted in first policy initiatives on primary care, such as Prikaz<sup>4</sup> No242, entitled, 'Regarding the gradual transition of the organization of primary care towards the principles of general practice', issued by the Ministry of Health in September 1998. The prikaz contained a description of duties, responsibilities and rights of the new profession of general practitioner; and dealt with

---

<sup>4</sup> A prikaz is an administrative directive, issued by the central or a regional (health) authority, specifying technical details of how something needs to be carried out.

the qualification requirements and practice conditions of GPs. Additionally, the position and tasks of GP nurses were specified.

By the end of that year, in December 1998, another directive on general practice was issued by the Ministry: 'Prikaz No384, on the organization of outpatient medical care in polyclinics to adults and children and measures on implementation of general practice'. This prikaz aimed to speed up the implementation of general practice, in particular by improving the equipment in GP practices and with the development of clinical guidelines for diagnostics and treatment in general practice.

For the sake of clarity, it should be stressed that both policy documents focused on primary care in rural practices only. In those days, general practice and GPs were not considered an option for primary care in cities. Furthermore, in the absence of additional resources for primary care services, the effects of both prikazy were limited. No fundamental change in the allocation of financial resources was realized and the continuing severe shortage of health care staff in rural areas was another obstacle.

### **Major vision and plans for primary care**

The vision and major plans for current and future primary care in Belarus have been primarily formulated in two governmental papers and a State Programme. The governmental papers were a decree issued in 2000 concerning a new method of healthcare financing, and a 'Concept' on the development of health care for the period 2003-2007. The State Programme aimed to revitalize rural areas. These papers and the State Programme are described here:

#### **Decree on the Improvement of Financing Mechanisms in Health Care**

This Decree from the Council of Ministers (No. 1225, 10 August 2000), announced the per capita financing for health care nationwide following a pilot in the Vitebsk region. The roll out of this new financing mechanism was detailed in a joint Ministerial Circular from the Ministry of Health and the Ministry of Finance (No. 40/101, 29 September 2000). In collaboration with the Regional Authorities in Vitebsk, both ministries had jointly undertaken the pilot in that northern region which aimed to test more efficient ways of redistributing resources for health care, especially primary care and preventive services. In addition to the per capita financing, a scheme of contracting was introduced for physicians in primary care. The Decree and the subsequent circular defined annual budgetary and planning norms, both for the national level and each Region individually, including the city of Minsk.

The aims of the measures detailed in the Ministerial Circular were:

- to improve an efficient use of resources by prioritizing primary care and prevention as more economic types of health care services over hospital care;
- to concentrate resources on areas of healthcare where they have the greatest economic and clinical impact;
- to accomplish a territorial redistribution of resources in order to reduce inequalities in the volume, conditions and accessibility of medical services;

- to provide the health care management at de-central level with more autonomy to allocate resources in line with regional and local situations and needs;
- to reduce regional inequalities in access and quality of medical care by reducing imbalances in the provision of ambulatory and hospital facilities for different populations.

The intended measures were very ambitious, as they meant a first break with the principle of input based financing in the Belarus health care system. Possibly for that reason, it took years before the measures became effective. After they were reiterated in other circulars and decrees, eventually in 2004 they started to be implemented. And still today full implementation has not yet been achieved. Nevertheless, in the Belarus context the measures were a major step and a first recognition of the value of primary care for an efficient provision of health care services.

#### **Concept<sup>5</sup> on the Development of Healthcare in the Republic of Belarus for 2003-2007**

This policy document contained a guiding vision on the way the health care system should develop in the period 2003-2007. The concept was adopted by the Council of Ministers on 8th October 2003 (by resolution No. 1276). Besides stressing major principles of the Belarus health care system – universal and free access to health care services financed from the state budget – it provided an outline of the transition to a new primary care-based model of service provision. Reallocation of resources should follow this new priority. The main points of the document were:

- to effectuate the measures previously announced in the decree and circular mentioned above (the roll out of per capita budgeting according to set norms);
- to develop necessary legislation for a new health care financing model, based on per capita financing rather on volume of supply;
- to develop and implement regional health care programmes;
- to focus all health care sectors on the major health issues affecting the working population (in particular, cardiovascular disease, stroke, accidents);
- to improve strategies on prevention and health education;
- to develop standards of medical care at the primary, secondary and tertiary level;
- to complete the implementation of the GP based model of primary care, including proper equipment, in all rural areas by the year 2005;
- to continue and intensify the combat against tuberculosis, alcoholism, drug addiction and sexually transmitted diseases;
- to introduce resource saving technologies;

---

<sup>5)</sup> The working concept should be understood as being a policy document of a strategic nature.

- to prioritize activities which have shown to be most cost effective;
- to improve the quality of care by standardizing medical technology and harmonizing management systems;
- to introduce output related payment systems for healthcare personnel (and thus allowing them to improve their income);
- to develop a unified IT system for the health services.

An interesting element in the Concept was an initial opening for the GP model to urban health services. The GP model seemed to be no longer exclusively reserved for rural areas. The Concept stated that, depending on local circumstances, GP practices could be established in outskirts of cities. Furthermore, on a pilot basis, GP departments could be tried in urban polyclinics to experiment with a division of tasks (and cooperation) between GPs and narrow medical specialists.

The broad scope made the Concept ambitious and although not all aims have been achieved, significant aspects have been implemented. For instance rural hospitals were transformed into social care facilities and rural ambulatories started to be health centres with GPs. It turned out to be difficult to realize the major aim to reduce the number of unnecessary hospitalizations, emergency calls and appointments with narrow specialists. Apart from the lack of trust of patients in the new GP system and the low prestige of GPs, the general shortage of physicians in primary care was an obstacle to really strengthen this level of care. The allocation of resources in the health care sector continues to favour hospital care over primary care.

#### **State Programme<sup>6</sup> for the Revival and Development of Rural Areas**

For the realization of the aims of the above mentioned Concept, the 2006 State Programme for the Revival and Development of Rural Areas has paid a significant contribution and continues to do so. The scope of the State Programme, covering the period 2006-2010, was broader than just health care. In general, it aimed to narrow the existing gap in the standards of living between rural and urban households. A major health care aim was to implement the model of general practice in all rural ambulatories by the year 2010. To this end the medical equipment in ambulatories and the constructional state of premises were to be improved and physicians currently working in the ambulatories (therapists and paediatricians) should be retrained to be GPs. The combined effect of the Concept and the State Programme have resulted in investments in rural primary care and a better quality of and improved access to services for the rural population.

#### **Other policy measures**

In addition to the major policy initiatives mentioned above, other policy measures with relevance for primary care have been taken. These have a more limited scope and are more technical in nature. They will be described briefly here:

---

<sup>6)</sup> State Programmes usually have a broad scope, are funded from the Republican budget and run outside the MoH.

- In **2001**, the Prikaz No132 of the Ministry of Health was issued “About measures on improvement of primary care to the population in the Republic of Belarus”. The prikaz contained an extension of tasks of GPs with regard to medical check ups and sickness certification. With routine checkups of school children, children in kindergartens, students and war veterans, no narrow specialists would be involved unless results would give rise to a referral.
- In January **2002**, the Ministry of Labour and Social Defence issued Statement No6 “About improvement of remuneration of health care workers of the system of the Ministry of Health that are financed from the state budget”. The document introduced a form of output related payment for GPs. GPs could earn a bonus of 40% on top of their basic salary if targets were achieved related to the numbers of ambulance visits, hospital admissions, referrals to medical specialists, and the proportion of all contacts treated by themselves. It was expected that this Statement would help to improve the quality of primary care services, that better conditions would be created for the recruitment of GPs and that GPs would be better motivated for their job.
- Later that year, in July **2002**, another prikaz (Ministry of Health No116) came into effect “About structuring of the documentation performed by GPs”. This prikaz was a reaction to complaints from GPs about the burden of administrative tasks and multiple reporting. The prikaz listed all required statistical forms and reports to be made by GPs. Reports and forms not approved by the ministry would be skipped and prohibited.
- In February **2005**, the Ministry of Labour and Social Defence produced a Statement by which the salary for district therapists, district paediatricians, GPs and district nurses was increased by 40% of the basic salary.
- In May **2005**, the Ministry of Health issued Prikaz No95 “About approval of the number of salary units of the medical workers in ambulatories”. This document set norms for the catchment populations of primary care workers. The norm for GPs was 1200 inhabitants (of all age groups and both sexes) for one salary unit; for district therapists the norm was 1700 inhabitants and for district paediatricians 800 children. For nurses and midwives the norm per salary unit was 1500 women above the age of 15 years. This prikaz made an end to situations in which physicians and nurses, due to shortages, worked for much larger populations than the official norm, but were not paid accordingly.
- Also in **2005**, the National Programme of Demographic Security 2006-2010 was published. Although this was not an exclusive health care programme, it had implications for the provision of health services. As an answer to the downward demographic trend in the country, the programme introduced comprehensive annual mass screenings of the total population for cardiovascular diseases, lung diseases (including TB), diabetes mellitus, as well as gynaecological diseases and cancer. This approach would absorb a considerable proportion of the resources in primary care.

### **Intentions for future policy plans in primary care**

The above-mentioned 2006 State Programme of Revival and Development of Rural Areas continues to be the most important framework for the future development of primary

care in Belarus. It envisages the full implementation of the GP model in rural areas, including retraining of district therapists and paediatricians to be GPs and an upgrading of premises and equipment along with a general improvement of working conditions for GPs and nurses.

At present two other State Programmes are being developed: a State Programme on Primary Care Development and a State Programme on Ambulance Care. These programmes are expected to contain the following major elements:

- A gradual shift in financing from hospital sector to polyclinic and primary care;
- To accomplish full staffing of all primary care facilities with physicians and nurses;
- To expand the functions and responsibilities of nurses;
- To develop new services, like day surgery clinics and home medical care;
- To invest in the equipment of polyclinics;
- To separate high emergency and low emergency care; low emergency care not to be dealt with by the ambulance services;
- To integrate reproductive health and tuberculosis care into the primary care level.

It is expected that policy on primary care in Belarus will become more articulate in the near future. The State Programme on Primary Care Development will be more detailed than previous documents, and the implementation of GP-based models of primary care in urban setting no longer seems to be a taboo. However, the resistance against GPs in urban practices is expected to be much stronger than in rural areas, because of competing interests and attitudes strongly favouring specialist care.

### **Central and regional powers**

In the hierarchy of the Belarus health care system the Ministry of Health is at the top. The central government and the ministry bear the overall responsibility for the system, which implies establishing health care priorities, playing a key role in regulation and setting norms for care and service provision. Regional and district health authorities are responsible for local health care financing and provision. However, their role in decision making is limited. The prevailing top-down policy development and implementation process leaves little room for sharing power.

In addition, as the responsibility for health care funding was assigned to local authorities, inequities between some of the richer urban and poorer rural areas increased.

### **Primary care at the Ministry**

Until recently, primary care was organized jointly with specialist care within the Ministry of Health. Only in January 2007 a special Department for Primary Health Care was established at the Ministry. The department of primary care is responsible for outpatient and polyclinic medical care, supply of medicines in primary care and the ambulance services.



Representatives of the Ministry reported the following effects of the creation of the department:

- Relations with other ministries have improved;
- More systematic, integrated and less fragmented working;
- Primary care has received a higher priority within the ministry;
- Increased attention for the patients' perspective;
- Increased attention for improvement of services in rural areas.

### **Regional differences in primary care**

Although Regional Health Care Authorities formally own the hospitals and polyclinics in their region their freedom to make health policy according to regional priorities is not sufficient to conclude that there are regional or district differences in the way primary care is organized and services are provided. Regional and District Health Authorities follow the central regulations and directives of the Ministry of Health. However, although the models of organization and provision are uniform throughout the country, the way they are shaped in practice are not necessarily equal. Since the role of local funding has increased, some differences do exist between wealthy and poorer areas. In particular, in areas with strong manufacturing companies health care services are usually better than in areas where this economic base is absent. Related to this is the general difference between urban and rural areas. Due to vast territories with low population density, the provision of primary care in the rural areas heavily relies on the extensive network of feldsher posts (FAPs), which are staffed by feldshers and midwives, but where usually no physicians are practicing. Medical care by physicians in the rural areas is provided through ambulatories. So, the access to medical care by populations living in remote areas is limited.

### **3.1.2. Dimension: professional development**

#### **Licensing and (re-)accreditation**

##### **Physicians**

Formal requirements do exist for physicians to work in primary care; this applies both to physicians working in the public sector and to the very few working in the private sector.

The following requirements apply:

Firstly, only the following types of physicians are allowed to work in primary care: therapists (irrespective of whether they are working in a primary care setting or in a hospital); paediatricians (again, no difference is made regarding place of work); GPs (having completed one of the official retraining courses). Other specialists who aim to work in primary care should first pass the GP retraining course.

Secondly, physicians in primary care need to re-certify every 5 years, for which they are formally obliged to follow at least 80 hours of continuing medical education (CME).

Usually these hours are spent at standard courses organized by BelMAPO (the Institute for Postgraduate Medical Education in Minsk). Participation in conferences approved by the Ministry of Health or Regional Health Authorities may also count to complete the CME obligation. Physicians who fail to meet this re-certification requirement, or fail to pass the exam, will not enter a higher qualification category and miss the related reimbursement. As a consequence they may also be posted to a (lower) position which is compatible with the lower qualification.

### **Nurses and midwives**

For nurses and midwives, the recertification scheme is also set at 5 years intervals. However, the number of hours spent on continuing education is only 40 in 5 years. Continuing education for nurses and midwives is organized by Nurse Colleges for Continuing Education. As with physicians, participation in approved conferences may count as continuing education. Failure to pass has similar consequences as with physicians.

### **Indicators for quality in primary care**

The following major process and outcome indicators were reported to be routinely used on a yearly basis by the Ministry of Health to monitor the quality of primary care services:

- Availability of medical staff (physicians, nurses, midwives); number of vacancies;
- Number of patient contacts in primary care (including direct access contacts with medical specialists in polyclinics);
- Perinatal and infant death rate;
- Birth rate in the practice population;
- Death rate in the practice population (broken down to causes of death);
- Absenteeism due to sickness (per 100 workers of practice population; broken down to illness categories; indicates the effectiveness of health care workers);
- Primary work disability in the practice population (number of new cases of long term incapacity for work due to trauma or disease);
- Percentage of population 18 years and older screened by means of small scale chest x-ray (fluorography) (for detection of TB and other lung diseases);
- Percentage of female population 17 years and older covered by Pap smear test (indicates early detection of cervical cancer);
- Hospital admissions per 1000 population per year;
- Ambulance visits per 1000 population per year;
- 'Poor medical care': absolute number of advanced stage cancers or TB cases (such cases are investigated; used as an indicator for poor motivation);
- Grounded complaints of patients (absolute numbers).

No information was available on how these indicators were used to monitor the quality of primary care and which values on the indicators would give rise to improvement actions.

### 3.1.3. Dimension: conditions for the care process

#### *PC workforce norms*

Table 6 provides an overview of the national norms for the (maximum) number of population that GPs, therapists, paediatricians and midwives should work for. These staff norms are centrally determined by the Ministry of Health. In reality, physicians and midwives usually work for considerably larger populations than the national norms. Major reasons for this higher workload are the staff shortages which frequently occur.

**Table 6: Number of population per full time primary care worker; official norms**

Type of PC worker	Number of population (per FTE)
GP	1200
District Therapist	1700
District Paediatrician	800*)
Midwife	1500**)
*) Children up to 18 years	
**) Female population above the age of 15	

Table 7 shows to what extent shortages exist in the availability of a number of primary care professions.

**Table 7: Regional or national shortages reported for a number of primary care professions**

primary care professions	No shortage	Shortage in some regions	Severe shortage nation wide
GPs		√	
Primary care nurses		√	
Gynaecologists		√	
Dentists	√		
Pharmacists	√		
Primary care midwives		√	
Physiotherapists	√		
District Therapist			√
District Paediatrician			√

Severe shortages all over the country were reported to exist among district therapists and district paediatricians. These are the professions from which physicians are recruited to be retrained as GPs. For GPs, however, shortages only exist in some regions. This is also true for primary care nurses, primary care midwives and gynaecologists. No shortages were reported for dentists, pharmacists and physiotherapists. The reason

for regionally occurring shortages is that some regions are less attractive to work and live in. Sparsely populated regions, such as the region of Vitebsk, are considered less attractive. For the regions of Gomel and Mogilev, situated respectively in the south-east and east of the country, the reason for being unattractive continues to be the radiation from the Chernobyl disaster.

### **Mode of practice**

No information was available about the number or proportion of GPs working in different types of practice (solo practice; small group 2 or 3 GPs; larger group of 4 or more GPs; mixed practice with GPs and medical specialists).

### **Primary care gatekeeping**

Patients in the Belarus health care system have not been formally required to visit a GP or district therapist or district paediatrician first before they can be treated by a medical specialist.

At present district therapists and district paediatricians have very limited professional possibilities and, consequently, they are not positioned to act as gatekeeper to the specialist services. In urban polyclinics the district therapists and district paediatricians simply lack the essential equipment to perform basic medical investigations or procedures, for instance, in fields of ENT, ophthalmology, neurology and surgery. Consequently these activities belong to the domains of the respective specialists. Furthermore, district therapists and paediatricians are not authorized to perform 'complex checkups' (meant to detect ENT, neurological, eye pathology and orthopedic abnormalities); nor are they authorized to issue sick leave certificates in the mentioned areas.

## **3.1.4. Dimension: conditions for responsiveness**

### **The role of stakeholders**

Besides the Ministry of Health, stakeholders in the Belarus primary health care system primarily have a background in medical education, professional associations and trade unions. As mentioned before, the Ministry of Health has a dominant role in determining the strategy and implementation of primary care and monitoring the progress of reforms.

Among the medical educational institutes that have a role in primary care policy development are BelMAPO (the Belarus Academy for Continuing Medical Education) and the Medical Universities in the country. These institutes contribute to decision-making related to education and qualification of medical professionals.

The Belarus Association of Physicians is an important partner of the Ministry to discuss new policy papers and contribute to the development of health care programmes. Under the umbrella of the Association of Physicians, BAVOP (the Belarus Association of GPs) contributes to the policy process by making proposals for the promotion of family practice in the context of primary care.

Finally, trade unions of medical workers are involved to defend labour conditions and aspects of social security for physicians, nurses, midwives and other staff in the health care sector.

Above mentioned stakeholders and the Ministry of Health have regular meetings each month. During these meetings, called collegium, the Ministry and the other representatives exchange information and opinions related to projects, plans and other relevant issues related to health care. Such collegiums do exist at the national level as well as in each region.

### **The role of NGOs**

Although there are many NGOs in Belarus, their role in the health care system is small. Many NGOs are active in coping, often with foreign aid, with the health effects of the Chernobyl disaster in 1986. Besides, there are associations and informal initiatives of patients united by the same (chronic) diseases, who incidentally approach the Ministry of Health with specific proposals to improve services or terms for their members. However, there is very little opportunity for non-governmental organizations in Belarus to play a structural role in the health policy-making process. In Belarus, no formal organizations exist to defend the interests or rights of patients.

### **Patients' choice**

Access to health care is a right of Belarus citizens that has been embedded in the constitution. Today's understanding of this right implies that patients should have direct access to any service of their choice. Any restriction of this choice, even if it would be for the sake of efficiency or a fair allocation of resources, is currently considered a violation of this basic right and therefore unacceptable. This interpretation of the right of access to health care has become a major obstacle for health care reforms aiming at a more rational and efficient use of resources, for instance, by the introduction of a referral system for access to specialized services. As long as primary care is perceived by the public as inferior to secondary care, the introduction of an obligatory triage in primary care will not be feasible. This situation seriously restricts a further development of primary care in the country.

The basic right of access does not prevent that citizens are not free to register with the ambulatory or polyclinic of their choice. The area where people live determines to which primary care centre they are assigned. However, within that centre they can register with the doctor of their choice. This situation applies equally to young people (aged 18 years) and older ones. Apart from prevailing rights and rules, it is a matter of fact that many patients encounter various kinds of limitations in the use of health care services. Geographical conditions may seriously constrain patients' choice and access may be difficult because of long distance. Sometimes appropriate and timely care is only available at diagnostic centres in the private sector or at special locations of public facilities, where out-of-pocket payment applies.

### **Patient rights and feed back**

The above mentioned right of access was laid down in the Constitution in 1994, and subsequently amended in 1995, 1996 and 2004. Section II, Article 45 of the Constitution states: "Citizens of the Republic of Belarus shall be guaranteed the right to health care, including free treatment at state health care establishments. The state shall make health care facilities accessible to all of its citizens."

### **Specific legislation / regulation**

No specific legislation has been made on patients' rights. However, in Chapter 29 of the Law on Health, a number of patients' rights and obligations are dealt with, including patients' informed consent.

### **Patient complaints**

Since the central management of the health care system is very sensitive to the opinion of patients and users of health care services, a lot of regulation has been devoted to patient surveys and dealing with patient complaints. These subjects have been regulated in detail in the following documents:

- The Law "About inquiries of citizens" (from June 1996, updated November 2004);
- Decree of the President No 2 of January 2005 "About improving the work with the population";
- Ministerial Instruction No 234 "About approving the instruction on dealing with patient's inquiries in the Ministry of Health" (March 2007). The instruction specifies how to deal with written patient inquiries; how to react to complaints and proposals in the complaints book; the required procedure in polyclinics and hospitals concerning personal interviews with complaining patients; the work of telephone "hot lines" at the Ministry or at regional authorities for prompt handling of patients' complaints;
- Decree of the President of the Republic of Belarus No 2 of January 2005 requires all public offices, including primary care facilities, to have a centrally registered book for complaints and proposals that should be handed to the patient (or client) on first request. Within 15 days, the management of a health care facility should provide the patient with a written answer. All complaints and proposals in the book are being evaluated by the health care authorities.

Complaints about the organization of services can be dealt with by the specialist or manager in question. Other complaints are treated by complaint committees which exist in all health care facilities. Also issues about health care services raised in the media are taken very seriously and usually reacted upon by health authorities.

### **Patient participation / satisfaction**

The importance of assessing patient satisfaction is well understood by the Ministry of Health. A special prikaz obliged the administrations of all outpatient facilities to conduct quarterly patient satisfaction surveys and to report the results to their health authorities. For small facilities these frequent investigations are burdensome. The reliability of the results may also be questioned, since the surveys are usually conducted by the staff of the healthcare facilities rather than an independent external body. Another source of bias results from the fact that managers are not encouraged to report negative results.

### 3.2. Resource generation aspects

#### 3.2.1. Dimension: PC workforce

**Table 8: Absolute and relative numbers of medical and non-medical workers in primary care**

Active providers	Number (in 2007)	As % of: *)
GPs	525	all PC physicians: 9.9%
District Therapists	2.944	all PC physicians: 55.3%:
District Paediatricians	1.856	all PC physicians: 34.8%
All PC Physicians*)	5.325	All physicians in Belarus: 12.4%**)
PC Nurses	21.129	All nurses in Belarus: 18.2%***)
PC Midwives	≈ 2.532	n.a.
Feldshers	≈ 3.742	n.a.

\*) Calculated as the sum of GPs, therapists and paediatricians; ambulance doctors are excluded  
\*\*) Total number of active physicians: 42.825 (2007); According to WHO HFA database 7.8% of all physicians is working in PC  
\*\*\*) Total number of active nurses: 116.337 (2006)

As reported in the introductory chapter, the physician and nurse density in Belarus is extremely high. In contrast to the physicians, the nurses' workforce in the country has been stable over the past decade. At present there are no signs that the trend of growing supply of physicians is curbing (20).

Of all active physicians in the country a modest one-eighth is working in primary care ambulatories or polyclinics. The large majority of physicians working at the primary level are the traditional 'tandem' of district therapists and district paediatricians. Although retraining of GPs has existed since the mid 1990s, the current number of active GPs is only 525, which is 10% of the effective physician capacity in primary care facilities. It seems a large portion of retrained GPs cannot be retained in primary care.

The number of nurses in primary care is 21.129, which is 18% of all active nurses in the country. In primary care the nurse – physician ratio is 4:1, while in the whole of health care this is 2.7:1.

The number of midwives and feldshers working in primary care is 2.532 and 3.742 respectively. These numbers should be taken with some reservation since the boundary between both professions seems to be ambiguous.

#### 3.2.2. Dimension: professional development

##### Professional organizations and journals

The Belarus Association of GPs, which is a section of the Belarus Association of Physicians, has been erected as a volunteer organization in the context of a bilateral primary care project in the late 1990s. The Association currently has about 250 members; so, almost half of the active GPs in the country have joined.

The Association is involved both in professional development, such as developing clinical guidelines for GPs, and scientific activities, such as practice-based research and evaluations. On an incidental basis, the Ministry of Health is asking the Association for advice in primary care matters. The activities of the Association are limited by lack of financial resources.

No specific professional journal on Family Medicine or General Practice does exist in Belarus. Scientific articles and other papers on primary care and general practice are being published in the journal 'Medicine'.

### Medical education

In Belarus the following Universities or Institutes are involved in medical education and continuing medical education:

- Belarus State Medical University (Minsk);
- Vitebsk State Medical University (Vitebsk);
- Grodno State Medical University (Grodno);
- Gomel State Medical University (Gomel);
- Belarus Medical Academy for Continuous Education (BelMAPO; Minsk).

**Table 9: Medical educational institutes involved in (re)training of GPs; characteristics of the GP (re)training programmes; number of produced GPs**

Institutes with GP education	Number of professors in GP	Duration of GP (re)training programme	Months spent in PC during (re)training	Number of GPs turned out
Vitebsk State Medical University (Dept. of CME)	none	6 months (re-training of therapists and paediatricians)	2 months	about 200 (since 2001)
Belarus Medical Academy for Continuing Education (BelMAPO)	none	6 months (re-training of therapists and paediatricians)	2 months	about 600 (since 1998)
	none	24 months (postgraduate specialization)	6 months	38 (since 2000)

GP training is not well distributed over the country. Only two out of five medical educational institutes in Belarus offer (re)training programmes for general practice: Vitebsk State Medical University and the Minsk based Belarus Medical Academy for Continuing Education (BelMAPO). A full postgraduate specialization for general practice is available only at BelMAPO, and its capacity is limited.

As of today in Belarus, family medicine or general practice has not been acknowledged as an academic discipline (it does not appear in the medical 'nomenclature' of academic



disciplines); there are no professors in general practice or family medicine. Getting on the list was reported to be a complicated process, but 'things were moving'. It is likely, however, that resistance in the medical world against this new speciality is another major reason for this situation.

Trainees of the retraining courses spend 2 months out of the total 6 months in a primary care setting. For the full specialization this is 6 months during the 2 years that this course takes altogether.

Since the introduction of GPs in Belarus, now more than 10 years ago, about 838 GPs have been (re)trained, most of them in the short courses. Two comparisons are relevant to be made here. Firstly, if the total number of GPs needed is estimated at 8000, it must be concluded that the educational capacity is not sufficient for a decisive implementation of the GP model in Belarus primary care. The current total production of GPs from BelMAPO and Vitebsk State Medical University is stable at an amount between 90 and 100 GPs. Secondly, of all trained GPs (about 838), more than one-third are currently not working as GPs. This erodes the effectiveness of the medical educational capacity for primary care and is another indication that primary care is not an attractive place to work. This situation is a threat to the ambitions of the Ministry of Health with primary care.

#### **Quality assurance**

Command and control is the dominant mode of management in the Belarus health care system. The quality of health care services is controlled by strict medical and administrative instructions, multiple inspections, frequent and detailed reporting and sanctions if rules and norms are not respected.

Each primary care facility is regularly inspected by his or her main supervisor: the head physician in the district. Additionally, the medical files of primary care physicians are subject to inspection by different medical specialists from the district hospital. Each medical specialist pays attention to specific aspects of his or her specialty when examining the medical files. Each specialty may also have its own specific requirements related to clinical reporting. In this way, primary care physicians have multiple supervisors, among which the coordination may leave to be desired.

Another measure aiming at maintaining the quality of services is the testing of medical knowledge and skills, performed every five years, as an element of the recertification of physicians, nurses, midwives and feldshers.

A measure pertaining to primary care facilities is the obligation to deliver a standard report quarterly, developed by the Ministry of Health and the Regional Authorities, called the "Model of outcomes". The indicators required for the report are related to mortality and morbidity in the practice population; sickness certificates produced; screening activities; referrals and hospital admissions and ambulance visits. In addition to these performances, each primary care facility, even the smallest, is required to report the results of the periodically held standard patient satisfaction survey. These surveys strongly focus on patients' possibly lacking access to services; rather than on the quality of the care itself.

All information from 'the Model' and the patient surveys are centrally processed. They are the basis of the aggregated reports used by the health administration to evaluate the districts and regions in the country. In addition to these routine reports incidental 'parallel investigations' can be conducted from outside the health care sector, for instance by the presidential administration.

### **Clinical practice guidelines**

A large number of clinical guidelines have been produced for specific use in primary care. Some examples of important guidelines for the daily work of GPs and other primary care physicians are:

- Arterial hypertension;
- Bronchial asthma;
- Diabetes Mellitus (type 2);
- Community acquired pneumonia;
- Emergency medical care in case of cardiac infarction.

Altogether more than 400 standards of diagnostic procedures and treatment have been developed, not just for the primary care level, but also for secondary and tertiary care.

The initiative and management of the development of clinical guidelines is exclusively with the Ministry of Health. Medical expertise is delivered by relevant national centres of expertise and other medical specialists. Normally, clinical guidelines, also those for use in primary care, are developed by medical specialists without inputs from GPs or other primary care physicians.

Guidelines are printed and distributed free of charge to all primary care facilities. They can also be accessed at the website of the Ministry of Health.

In 2003 a book was published with 70 clinical guidelines with particular relevance for primary care. This book was distributed to all ambulatories. Updates are made per topic and linked to (series of) lectures on these topics.

There are no special guidelines for nurses. The only non-physician medical workers authorized to diagnose and treat patients are feldshers. In their clinical work feldshers are bound to comply with the above mentioned guidelines developed for the primary care level under the auspices of the Ministry of Health

## **3.3. Financing aspects**

### **3.3.1. Dimension: PC financing and expenditures**

Primary care facilities are state owned, but financed by global budgets and controlled by District Health Care Authorities, usually based at the district hospitals. The volume of the budget is related to the number of inhabitants in the catchment area of the facility,

without correction for case mix. Primary care providers are state employed but salaries are paid from local budgets (20).

### 3.3.2. Dimension: (financial) incentives

#### Payment mechanisms

Salary scales for health care workers are set at the national level, with standard increments largely based on years of service, qualifications, and position held. Physicians and nurses working in the private sector (such as pharmacies, dental clinics and diagnostic centres) can earn significantly more. The private sector, however, is very small. In general, salaries contain little financial incentives, except the need to regularly update training in order to climb on the salary scale. Some bonuses are applied to attract and retain primary care doctors in rural regions, but because the overall wage level is so low, the incentive is not that effective (20).

Currently there are no GPs or district therapists working privately. Although, basically, the level of remuneration is based on the number of working hours, the salary of GPs and district physicians depends on many elements. The physician has a core salary tariff which is the basis for the calculation of additional salary components. If, for instance, a physician (or nurse) in primary care has a larger catchment population than the official norm (due to vacancies) than they eligible to receive up to 1.5 times the core salary tariff, under the condition that extra hours are worked. Additionally, the salary depends on the number of working years, on the number of years working, on working in primary care as a district therapist, paediatrician or GP; on the place of work (as mentioned, in rural places there is extra payment); on the qualification category of the physician (classified as: no category; 2nd category; 1st category; highest category). Finally, physicians can qualify for a monthly bonus depending on their results in the 'Model of outcomes' (the previously mentioned set of performance indicators), that are evaluated every three months.

#### Income levels

A question asked about the (estimated) average gross income of a 40-year-old physician of several medical specialties. Results are displayed in Table 10.

**Table 10: (Estimated) gross monthly incomes of a number of medical professionals at age 40, working in the Belarus public health care system**

Medical professionals	Gross monthly income (US \$ / EU €)
GPs	\$ 500,- / € 345,-
District Therapists	\$ 450,- / € 310,-
District Paediatricians	\$ 450,- / € 310,-
Gynaecologist	\$ 400,- / € 275,-
Specialist Internal Medicine	\$ 500,- / € 345,-
Cardiologist (in polyclinic)	\$ 350,- / € 240,-

Table 10 seems to indicate that it is not the salary that makes medical students decide not to choose for primary care. GPs are among the better paid in this list of medical

professionals. The question is, however, how much more \$ 50 (or € 35,-) per month means compared to the average of \$ 450. It seems, that in the Belarus context all salaries mentioned in the table are low compared to other non-medical professions with a similar level of education and responsibility. Fifty dollars or 35 Euros more may not be enough to compensate for low prestige in general, and for difficult working conditions or deprived living conditions in rural areas.

### 3.3.3. Dimension: financial access

Despite the constitutional phrase that ‘the state shall make health care facilities accessible to all of its citizens’, there are financial barriers to access. Indeed, consultations of GPs or district physicians are free, but for most people, drugs prescribed in primary care (but also elsewhere) need to be paid out of pocket. Only specific groups of the population and patients with specific diseases are exempted from paying for drugs or are paying less. Certain categories of disabled people, for instance, pay only 10% of the cost of prescribed drugs. Since no uniform rules exist for payment of prescribed drugs, the situation may differ. The fact, however, that drugs in primary care for example for chronic diseases are not free of charge creates other unwanted effects: patients that can not afford drugs demand to get referred to a hospital where the needed drugs are free of charge.

## 3.4. Aspects of primary care service delivery

### 3.4.1. Data on utilization and provision of services

Routinely collected data on indicators of demand and utilization of services in primary care are sparsely available and cannot be broken down to type of practice setting or to GPs and district physicians specifically. Data on primary care include the activities of narrow specialists working in polyclinics.

Furthermore, no data are available on referrals (without hospitalization) from primary to secondary care; nor are data available on prescriptions made in primary care. Data about prescriptions made by GPs, district doctors and narrow specialists would give insight in aspects of quality of care as well as in major expenditure in health care.

**Table 11: Indicators of demand and utilization of primary care services**

Indicators	Rate
Number of patient contacts in primary care per 1000 population per year	<b>12.7 contacts *)</b> (per 1000 population)
Number of referrals made in primary care to medical specialists per 1000 patient contacts	<b>n.a. **)</b>
Number of hospital admissions from primary care per 1000 population per year	<b>274 admissions *)</b> (per 1000 population)
Number of medicine prescriptions made in primary care per 1000 patient contacts	<b>n.a.</b>
*) including those with/from specialists working in polyclinics; no separate data for GPs **) on the basis of the survey among physicians net referral rates were calculated	

More details on services delivered in primary care will be presented in chapter 4, which is devoted to the results from the survey among GPs and district therapists.

The content of the next two sections gives an overview on two specific services, tuberculosis services and reproductive health services – services that are provided in primary care to a certain extent but across other levels of care as well. A specific focus was taken in how far services are organized and managed in parallel to the primary care sector or as an integrated item.

### **3.5. TB and reproductive health services**

#### **3.5.1. TB services**

##### **Policy development**

Belarus is implementing the internationally recommended Stop TB Strategy and addressing some major challenges such as pursuing high quality DOTS expansion and enhancement and ensuring adequate MDR TB interventions. Coordination has been ensured between the “Tuberculosis Programme, 2005-2009” by the Ministry of Health, the 5-year grant of the Global Fund (for AIDS, TB and Malaria) and the technical assistance by the WHO Regional Office for Europe on Stop TB Strategy.

The following ministerial orders were issued since 2006:

- October 2006: endorsement of the TB treatment card and TB register in line with WHO recommendations;
- June 2008: introduction of direct involvement of PC staff in the distribution of anti-TB drugs, including direct supervision of its intake by patients;
- November 2008: establishment of a National Coordination Working Group on TB to coordinate all TB activities in the country, aiming to revise and develop national regulations in conformity to the Stop TB Strategy, including the integration of TB care at PC level;
- January 2009: approval of latest TB treatment protocols (including MDR TB).

##### **Financing**

The bulk of the funding for TB care comes from the centralized budget. This includes the financing of TB facilities – either providing inpatient or outpatient care – of salaries, equipment and most other commodities that are funded by the regional budget. All TB care provided in PC and at district level (such as small X-ray of the lungs – ‘fluorography’ – tuberculin skin testing and basic treatment and follow up) is financed from district budgets. TB health services in Belarus are also benefiting from additional external resources from the grant of the Global Fund to fight AIDS, Tuberculosis and Malaria, which finances quite a number of activities, including training of staff and patient support.

### **Delivery of care**

Successful TB treatment includes a mix of specialized and routine care, usually provided in different settings, in which the compliance of the patient until the end of the treatment is of utmost importance. In Belarus pathways for TB care are different for adults and children and in urban and rural areas. Primary care is involved in the prevention and detection of TB. In urban areas and district cities, TB care outside hospitals is provided by TB specialists working in polyclinics or TB outpatient facilities ('dispensaries'). In rural areas, GPs are more involved in both TB case detection and outpatient care after hospital discharge.

### **Prevention and early detection**

Shortly after birth, children are BCG vaccinated at the birth clinic. At the age of 7 there is a revaccination for those who show negative tuberculin skin testing, which is conducted annually for all children from the age 1 year and up to 17th year old. The district paediatricians, or in rural areas GPs, are responsible for screening of TB in children. In the case of hyperallergic reactions, the child is referred to the district phthysiologist (TB specialist) for further investigation.

For adults, district therapists or GPs in rural areas organize population screening by means of fluorography. Special attention is paid to screening among certain categories of the population; for example population groups that are at higher public risk than other groups when infected such as school teachers, staff in kindergartens, workers in pubs and restaurants. Other groups of special attention are alcohol abusers, those released from prisons and patients with certain chronic diseases. In rural areas fluorography is performed either at mobile units or at X-ray cabinets in the nearest polyclinic. It is the responsibility of the district therapist or GP to secure that inhabitants belonging to the risk categories above are screened. If people are unable to visit clinics for TB screenings, the physician should organize other ways to take fluorography and/or sputum for bacteriologic investigation. If a person is indicative of TB disease, patients are referred for treatment to the regional TB hospital (TB dispensary).

### **Treatment and care**

Upon detection of TB, the first phase of the treatment, the so called intensive phase, is always provided in the regional TB hospital. After hospital discharge, the second phase of the treatment, the so-called continuation phase, is ensured by primary care. In rural facilities, the continuation phase of treatment is the responsibility of the district therapists and GPs. Necessary TB drugs are provided to the patients by the feldsher or nurse of the rural ambulatories under the conditions of directly observed treatment (DOT). Lay people are not allowed to assist in the continuation phase of TB treatment. In cities, the continuation phase of treatment is provided through phthysiologists (TB specialist) working in outpatient TB dispensaries or special 'TB cabinets' organized in district polyclinics. TB treatment provided in primary care is supervised by the district and regional phthysiologists.

### **Information and education**

Information and education for patients on the treatment and care of TB is organized by the regional TB dispensary as well as by health care workers in primary care. Regional TB dispensaries are also responsible for keeping medical workers in primary care up to date on TB care and providing them with the latest instructions from the health administration.

### **3.5.2. Reproductive health services**

Measures aiming to improve reproductive health services are part of a more general policy to divert the negative demographic trend in Belarus. This section will deal with the involvement of primary care providers in the provision of reproductive health services.

#### **Organization and provision**

Reproductive health services are differently organized in urban and rural areas. In rural areas, for these services women have the choice either to have the first contact with a midwife, who is part of the team in an ambulatory, or directly visit a gynaecologist at a district polyclinic. In addition to this optional first contact position, midwives are responsible for the yearly routine screening for cervical cancer (by taking a sort of Pap smear) among the women population of 18 years and older. Together with GPs or district therapists midwives also conduct opportunistic screening for breast cancer. This screening is performed by palpation and carried out routinely, irrespective of the reason for the visit by the woman. Finally, midwives administer prescriptions made by district gynaecologists for treatment of common gynaecological problems.

Pregnant women without health problems are primarily supervised by midwives with regular referrals to medical specialists. The schedule of visits to the midwife is monthly until 20 weeks; twice per month from 20 to 30 weeks and weekly from week 30 of the pregnancy. Furthermore, in the course of the (normal) pregnancy there are three routine obligatory visits to a district gynaecologist for ultrasound checks; and two obligatory visits to an ophthalmologist, an endocrinologist and an ENT specialist. Diagnostic and treatment of extra genital pathology during the pregnancy belongs to the domain of the district therapists or GPs. In urban areas reproductive health services are provided at the special women's consultation departments in the polyclinics. All services mentioned above are performed by gynaecologists, who may be assisted by midwives who may carry out treatments prescribed by gynaecologists or take preventive or diagnostic smears.

#### **Pro-reproduction policy**

Recently, new regulation from the Ministry of Health has been implemented to stimulate 'reproductive capacity'. As a consequence of this new outreaching policy, reproductive age women, the "potential delivery group" (age 18-45), are invited for an interview with their GP or district therapist about their plans to become pregnant. At this occasion they are referred to a district gynaecologist and other specialists for checkups and, if necessary, treatment in order to improve their 'reproductive potential'. If no pregnancy is planned, women are referred to a gynaecologist for a family planning and contraception advice.

#### **Interface with other levels**

The first contact for reproductive health services is either with midwives in rural areas or with gynaecologists at the women's consultation departments at the urban polyclinics. Secondary level reproductive health care is provided by specialist facilities at district level. Also found at district level are the birth clinics or 'delivery houses' which are the location for uncomplicated deliveries. Reproductive health facilities at regional level include the regional delivery houses and regional women's' consultation departments where more complicated pregnancies and deliveries are dealt with and gynaecological operations are performed.

### **Supervision**

Supervision on reproductive health services provided at the primary level is organized at district level. In each district hospital there is a position of head district gynaecologist who is responsible for the supervision of all reproductive health services in the district, including those provided in primary care facilities.

## **3.6. Actual topics in primary care development**

### **Vision on primary care**

The policy vision on primary care in Belarus is strongly influenced by a concern over the situation of the rural population, in particular the inequity between urban and rural areas in access to and quality of health care services. The introduction of general practice was considered to be a means of coping with these problems. A training programme for GPs has been developed and rural ambulatories have been renovated. It seems that the confidence of the rural population in GPs and the utilization of GP provided services are growing. However, the implementation process is proceeding slowly. The proportion of rural ambulatories with newly trained GPs is small and the training capacity is not sufficient to catch up in the short term. The need to improve the efficiency and quality of services, also in cities and towns, has not resulted in a comprehensive vision on primary care, including urban areas. Despite some isolated GP pilots in outskirts of Minsk, the traditional model of polyclinics with segmented provision by specialists has not been abandoned yet. A clear vision on primary care and a leading role of the central government can help to counter the negative public perception of general practice as inferior to specialist care.

### **Shift in financing**

Another challenge is to overcome the current hesitation to really shift the financing from secondary and hospital sector towards the primary care level. It seems the further implementation of general practice and other primary care favouring reforms is stagnating at the point that real choices have to be made in this respect. Resources from not well used capacity in hospitals and the secondary level are needed to speed up reforms in primary care and modernise the health care system generally.

### **Staff shortage**

Inequities in the current health care system are related to the persisting understaffing in rural health care facilities. The current situation in which inexperienced young doctors are obliged to work in primary care is not a real solution. The challenge is to recruit and retain well trained GPs in rural ambulatories. A payment system taking qualifications, workload and performance into account, is a major instrument. But there is more than payment alone. Workload and responsibilities seem to be considerably higher in rural ambulatories than in polyclinics, and this is not always acknowledged by supervising managers and specialists. Besides, more attention could be paid to improving the working conditions and breaking professional isolation in rural areas. Giving rural GPs access to the internet, to distance learning facilities and expert systems could be beneficial for their competence as well as their motivation and job satisfaction.



Another possible way to cope with physician shortages is to reconsider the division of roles between GPs and nurses. There may be space to delegate tasks to nurses, particularly in the care of people with chronic conditions.

### **Efficiency and EBM**

There are clues that also in primary care the efficiency of service provision can be improved. At present GPs and other primary care workers are involved in statistical reporting, certification and other procedures which can be reduced or delegated. Furthermore, it seems that the effectiveness of preventive routines can be improved by focusing more on high risk population groups, rather than on the total population. Finally, an assessment of currently practised diagnostic procedures and treatments – for instance, those related to chronic diseases – against the latest evidence might reveal possibilities for improvement. Both efficiency and evidence based practice in primary care would benefit from the implementation of a better – computerized – information system in primary care. (Such a system is available and has been waiting to be piloted since 2004).

### **Ambulance services**

It is agreed that the current abundant deployment of ambulance care services is absorbing resources disproportionately and that it does not significantly improve access to services for the rural population. Ambulance care should be supplemental rather than overlap primary care services. Fewer ambulances should be better equipped for real emergencies. Telephone triage should reduce the use of ambulances for non-emergency cases. Non-emergency cases during office hours should be the exclusive domain of home visiting GPs or nurses in primary care. For evenings, nights and weekends other schemes may be in place.

### **Training of GPs**

Another challenge is to expand and improve the training of GPs. The current capacity is not sufficient to produce enough GPs. GP training is currently available only at two out of five medical educational institutes in the country. Expansion of GP training to the Medical Universities in Magilev, Grodno and Gomel would not expand the training capacity but would most probably facilitate the recruitment of GPs from these regions as well. Furthermore, the status and content of the training programme might deserve attention. The establishment, on a short term, of professors in General Practice at all Medical Universities and the introduction of general practice in the undergraduate curriculum would be major steps.

### **TB services in primary care**

Nowadays, 'stop TB strategies' are oriented towards strengthening the general health care system. The following implications from modern TB care promotion are examples to show this wider approach (24):

- Identification of “dos” actions that national TB programmes should do for strengthening the health system, of “don't's” actions and of non-negotiable features indispensable for TB control;
- Promotion of health system strengthening in applying to the respective component of the Global Fund grant;

- Training of (primary) health care workers and their managers for new approaches of detection and patient-centred treatment (e.g. the Practical Approach to Lung Health – PAL);
- Free of charge provision of anti-TB drugs and creating a sustainable system of procurement and distribution of anti-TB drugs to all relevant health care facilities;
- Development of new ways of service delivery close to where patients are living or working;
- Identification of factors that may make patients interrupt or stop treatment and take these factors into account in the treatment process.

At present, the Belarus health care system, and the TB services in particular, are not in a shape that all of these requirements are met. The effectiveness of the current approach in TB detection, in which the mass screening through fluorography has a dominant place, may need to be examined. Furthermore, attention should be paid to the quality and quantity of the available workforce for TB care. For instance, over the last decade the number of TB specialists in the country has shown a downward trend and many of them are nearing the age of retirement.

#### **Reproductive health services in primary care**

The problems with reproductive health services are to some extent the same as those with other services and to some extent specific for these services. Generic deficiencies are related to: an inefficient or poor division of tasks; lack of coordination; lack of resources; lack of knowledge and skills among health care workers. Integrated provision of reproductive health care services requires that tasks are clearly defined and as much as possible are provided by one provider; that providers are trained for these tasks and that conditions for teamwork are met (including the availability of information). Integrated provision would imply that antenatal care would be coordinated and structured on the basis of protocols. This would formalize the detection of risks during pregnancy, improve coordination and allow reducing the large number of different providers currently involved in routine antenatal care. This would also alleviate the burden of health care visits for pregnant women.

# 4 GPs AND DISTRICT THERAPISTS ABOUT THEIR POSITION IN PRIMARY CARE

## RESULTS OF THE SURVEY

This chapter contains the results of the survey among the primary care physicians in the Minsk and Vitebsk Regions. The results are based on their answers. The survey for physicians has dealt with the following topics: workload and use of time, access and availability of services to patients, aspects of quality of care, use of clinical information, coordination and cooperation, available medical equipment, and several dimensions of clinical task profiles. Firstly, respondents in both regions will be shortly characterized.

### 4.1. Respondents' characteristics

The survey had a total of 212 responding primary care physicians; 112 in the Minsk Region (1 case with missing data on urbanisation) and 100 in the Vitebsk Region (see Table 12). In both regions a majority of respondents were GPs (Minsk Region: 65%, Vitebsk Region: 59%), and a larger majority (Minsk Region: 77%, Vitebsk Region: 73%) worked in rural practices. Respondents made a substantial proportion of the total primary medical workforce. In the Minsk Region, 12.5% of therapists and 50% of GPs have been included. In the Vitebsk Region the responding GPs also made 50% of the GP population, while the sample of therapists was 16.8% of the therapists in that region.

**Table 12: Numbers of responding GPs and therapists in primary care**

Physicians	Minsk Region (N=112)		Vitebsk Region (N=100)		Total	
	Urban (N)	Rural (N)	Urban (N)	Rural (N)	Abs.	%
GPs	8	64	11	48	131	62.1
Therapists	18	21	16	25	80	37.9
<b>TOTAL</b>	<b>26</b>	<b>85</b>	<b>27</b>	<b>73</b>	<b>211</b>	<b>100</b>

From Table 13 can be derived that primary medical care is usually provided by women: three quarters of the responding physicians (74.9%) were female. So, on the basis of this information there is no reason to suppose that, in the current situation, general practice is more attractive as a medical career for men than for women. However, relatively more men than women have completed a postgraduate or a retraining programme: 74% versus 58%.

**Table 13: Gender of urban and rural physicians in primary care**

Physicians	Minsk Region (N=112)		Vitebsk Region (N=100)		Total	
	Urban (N)	Rural (N)	Urban (N)	Rural (N)	Abs.	%
GPs						
• Female	6	43	11	31	91	43.1
• Male	2	21	0	17	40	19.0
Therapists						
• Female	17	17	12	21	67	31.8
• Male	1	4	4	4	13	6.2
<b>TOTAL</b>	<b>26</b>	<b>85</b>	<b>27</b>	<b>73</b>	<b>211</b>	<b>100</b>

Table 14 provides a summary of key profile data of the physicians and their practices in both regions. In the Minsk region almost one in five GPs (18%) have completed an official postgraduate training programme, while in the Vitebsk region only 6% have done so. However, in the Vitebsk region more physicians (55%) have completed a retraining programme than in the Minsk region (48%).

One of the characteristics of the new GP system is that primary medical services for children as well as adults are provided by one and the same physician. In the Minsk region 71% of physicians have answered they serve patients of all age groups (although 7 did not answer the question). In the Vitebsk region 70% answered they see both children and adult patients (here, a total of 29 did not answer).

**Table 14: Summary of characteristics of physicians in the Minsk and Vitebsk Region**

Features	Minsk Region (N=112)			Vitebsk Region (N=100)		
	Abs.	%	Valid N	Abs.	%	Valid N
Male physicians	28	25	112	25	25	100
Physicians postgraduate training completed	20	18	110	6	6	99
Physicians retraining programme completed	53	48	110	53	55	99
Physicians serving adults and children	67	71	95	50	70	71
Physicians under age of 50 years	48	43	112	57	58	98
State employed (salaried)	107	99	111	93	96	97
Physicians average age (yrs)						
• GPs		<b>Urban</b>	<b>Rural*</b>	<b>Urban</b>	<b>Rural*</b>	
• Therapists		44.4	50.7	50.6	46.8	
		46.5	45.7	46.9	39.8	
Average years working as						
• GPs		5.6		6.0		
• Therapists		17.2		15.8		
*Including small towns and rural areas						

The average age of all respondents is 48 years in the Minsk region and 45 in the Vitebsk region. On average GPs are about 5 years older than therapists. In the Minsk Region 43% of the respondents were under the age of 50 years, while in the Vitebsk Region this proportion was 58%. Differences are even smaller if the number of years of experience in the current profession is taken into account. GPs in the Minsk region have on average 5.6 years of experience as a GP and therapists have 17.2 years experience as a therapist; in the Vitebsk region GPs have 6.0 years of experience and therapists 15.8 years.

In both regions practically all physicians were state employees.

## 4.2. Accessibility of care

### 4.2.1. Organizational access

#### Workload

Table 15 is an overview of various aspects of workload. On average, practices in the Minsk region are larger than practices in the Vitebsk region. Although the national norm for the size of the practice (which is the number of population/patients for which a physician is responsible) is different for GPs and therapists, we found only slight differences. The average list sizes for GPs in both regions were far above the national norm for this discipline (which is 1200 patients per GP). In the Minsk region the average for therapists was also considerably above the national norm for therapists but in Vitebsk it was around the national norm. This most likely points to shortages, in particular in the Minsk region. Indeed, as shown in the bottom line of the table, large proportions of respondents report staff shortages existing for more than half a year. In the Minsk region 85% of therapists and half of GPs in the Minsk region affirm such shortages. In the Vitebsk region almost two thirds of therapists and half of GPs reported shortages. Most frequently mentioned are shortages of family doctors (79 times in total), followed by a shortage of nurses (mentioned 41 times), a shortage of midwives (mentioned 23 times) and a shortage of support staff (mentioned 17 times).

**Table 15: GPs' and therapists' workload and use of time**

Aspects of workload	Minsk Region (N=112)		Vitebsk Region (N=100)		Total (N=212)	
	Abs.	Valid N	Abs.	Valid N	Abs.	Valid N
List size (# patients)						
• GPs	2153	72	2003	58	2086	130
• Therapists	2388	39	1837	40	2109	79
# patient consultations per day						
• GPs	30	73	29	59	27	132
• Therapists	33	39	30	40	28	78
# home visits per week						
• GPs	26	73	27	59	27	132
• Therapists	28	38	29	40	28	78
# working hours per week						
• GPs	42.9	68	43.9	55	43.4	123
• Therapists	43.1	38	38.8	37	41.0	75

Aspects of workload	Minsk Region (N=112)		Vitebsk Region (N=100)		Total (N=212)	
	Abs.	Valid N	Abs.	Valid N	Abs.	Valid N
# hours reading per month						
• GPs	20.4	73	21.6	59	21.0	132
• Therapists	21.7	39	19.5	41	20.6	80
# hours training per month						
• GPs	12.9	46	5.8	38	9.7	84
• Therapists	8.1	30	11	28	9.5	58
# reporting staff shortages						
• GPs	35	73	29	59	64	132
• Therapists	33	39	25	40	58	79

GPs reported that their working week normally is 42.9 to 43.9 hours. Therapists reported a mean working week of 38.8 to 43.1 hours. The average number of hours spent per month on reading professional journals or medical information, including the internet, is approximately 20 hours in every group. GPs in the Minsk region spent more than twice as much time on training or follow-up courses than GPs in the Vitebsk region, but in both regions one in three physicians did not answer that question.

**Table 16: Urban and rural physicians' workload and use of time**

Aspects of workload	Minsk Region (N=112)		Vitebsk Region (N=100)		Total (N=212)	
	Abs.	Valid N	Abs.	Valid N	Abs.	Valid N
List size (# patients)						
• urban physicians	2512	26	1767	26	2139	52
• rural physicians	2137	84	1996	72	2072	156
# patient consultations per day						
• urban physicians	35	26	26	27	31	53
• rural physicians	29	85	31	72	30	157
# home visits per week						
• urban physicians	32	25	35	27	33	52
• rural physicians	25	88	25	72	25	157
# working hours per week						
• urban physicians	45.4	25	40.3	27	42.8	52
• rural physicians	42.2	80	42.5	65	42.3	145
# hours reading per month						
• urban physicians	15.4	26	17.7	27	16.6	53
• rural physicians	22.4	85	21.9	73	22.2	158
# hours training per month						
• urban physicians	12.5	19	9.2	22	10.7	41
• rural physicians	10.4	56	7.4	44	9.1	100
# reporting staff shortages						
• urban physicians	21	26	23	27	44	53
• rural physicians	46	85	31	72	77	157

Table 16 shows the same aspects of workload as the previous table, but now broken down to urban and rural practices. The situation in both regions differs in this respect.

In the Minsk region urban physicians have on average larger list sizes, more patient consultations per day, more home visits and more working hours per week than rural physicians, while in the Vitebsk region the opposite is the case, except for the number of home visits per week. In both regions rural physicians spend more time on reading professional journals or medical information and less time on training than urban physicians. In both regions staff shortages are reported especially by urban physicians (81% and 85% respectively).

#### Patients' access and availability of services

In both regions, if desired, patients can generally see the doctor the same day (see Table 17) and most physicians reported opening hours in the evening at least once per week. Opening during a weekend day (normally a Saturday) is routine in both regions. If practices are closed it is usual that a telephone number is provided to patients in case they get sick (says 93% in Vitebsk and 88% in Minsk region). This may be related to the availability of ambulance services outside office hours, which may be better in the Vitebsk region (where a larger proportion of respondent is from urban practices) than in the Minsk region (where the supply of secondary health facilities is lower and more physicians are working in rural practices). The bottom line of the table shows that 60% of physicians in the Vitebsk region are working within 5 kilometres from a general hospital (actually, more than half of them, 32%, were working in the central polyclinic next door). In the Minsk region, 46% of physicians are working within 5 kilometres from a general hospital, with 32% even in the same building as the hospital.

**Table 17: Indicators of access to the practice**

Aspects of patients' access	Minsk Region (N=112)		Vitebsk Region (N=100)		Total (N=212)	
	%	Valid N	%	Valid N	%	Valid N
Same day visits are possible	99	112	100	100	99.5	212
Evening hours at least once per week	77	111	79	100	77.7	211
Weekend day hours at least once per month	98	111	98	100	98.1	211
Phone number available for patients when practice is closed	88	110	94	99	90.9	209
Clinics or sessions in use for special patient groups						
• for diabetes patients	56	97	75	94	64.9	191
• for hypertension patients	88	97	99	94	93.2	191
• for family planning	53	96	48	94	54.7	193
• for pregnant women	70	96	59	93	64.6	189
• for the elderly	67	97	70	94	68.6	191
• for other groups	16	97	31	93	23.2	190
No clinics or sessions for special patient groups	12	111	5	99	8.6	210
Practice situated at 5 or more kms distance from nearest general hospital	54	112	40	100	47.2	212

#### 4.2.2. Responsiveness

Most GPs and therapists reported offering special clinics or sessions for chronic patients or other categories. In the Minsk region only 12% and in the Vitebsk region no more than 5% reported not offering such clinics or sessions (see Table 17). Special clinics or sessions for patients with hypertension are often mentioned in both places. Sessions for patients with diabetes are common in the Vitebsk region, but less so in the Minsk region. Family planning clinics were more often held in the Minsk region, as well as clinics for pregnant women. Special sessions for the elderly were reported by almost three quarters of the physicians in the Vitebsk region and by two thirds of those in the Minsk region. Clinics for other groups are sparsely mentioned.

#### 4.3. Continuity of care

##### 4.3.1. Informational continuity

Routinely keeping record of medical information of patients is a major condition for quality and continuity of care, and is part of daily practice in both regions (see Table 18). Retrieval of information is something different, but equally important. The identification of patient groups on the basis of a shared diagnosis, health risk or just age, may enable efficient approaches of active monitoring and prevention. The practice information systems in both regions seem to be tailored to generate categorical lists.

**Table 18: Availability and use of clinical information**

Performance	Minsk Region (N=112)		Vitebsk Region (N=100)		Total (N=212)	
	%	Valid N	%	Valid N	%	Valid N
Keeping patients' medical records routinely for <i>all</i> contacts	89	112	91	100	90	212
Easy to generate a list of patients by diagnosis or health risk	84	112	84	99	84	210
Using referral letters for all or most referred patients	94	111	97	99	95	210
Using the computer for:						
• booking appointments	0	111	25	97	12	208
• writing bills / financial administration	1	111	2	97	1	208
• medicine prescriptions	0	111	17	97	8	208
• keeping patients med. records	7	111	20	97	13	208
• writing referral letters	3	111	16	97	9	208
• searching information	4	111	9	97	6	208
• not using a computer	91	111	56	97	75	208

One of the core elements of the cooperation between primary and secondary care is the information that accompanies patients when they are referred to medical specialists or are hospitalised and vice versa. Most respondents in both regions indicated using referral



letters for most patients who are referred. Despite the fact that the physicians are positive about their clinical information, it must be concluded that circumstances are outdated. Only 9% of the respondents in the Minsk region are using a computer and just over half of those in the Vitebsk region. In most practices keeping clinical records and retrieving information is still handwork. None of the computer applications mentioned in the table was used by more than eight physicians in the Minsk region. In contrast, one quarter of the physicians in the Vitebsk region used the computer for booking appointments. It is remarkable that only one physician in the Minsk region and only two in the Vitebsk region were using the computer for financial administration.

#### 4.4. Coordination of care

##### 4.4.1. Cohesion within primary care

The most frequent mode of primary care practice is in shared premises with medical specialists. This situation is more usual in Vitebsk (47%) than in the Minsk region (37%). Single handed practice is the next frequent practice form, which is reported by 38% of respondents in Minsk and one quarter of those in Vitebsk region (see Table 19). Practice with two physicians is reported by 19% and 16%, and group practices with three or more physicians by 7% and 11% in the Minsk and Vitebsk regions, respectively.

**Table 19: Physicians working in the polyclinic or ambulatory**

Working in the same building	Minsk Region (N=112)		Vitebsk Region (N=100)		Total (N=212)	
	%	Valid N	%	Valid N	%	Valid N
One physician	38	42	26	25	32	67
Two physicians working in the same building	19	21	16	16	18	37
Three or more physicians working in the same building	7	8	11	11	9	19
Both primary care physicians and medical specialists working in the same building	37	41	47	46	41	87
<b>TOTAL</b>	<b>100</b>	<b>112</b>	<b>100</b>	<b>98</b>	<b>100</b>	<b>210</b>

In contrast to the Vitebsk region, where almost all physicians reported working with a practice nurse in the same building, in the Minsk region this was only the case with three quarters of the physicians (see Table 20). In both regions, however, almost all doctors work with a community nurse in the same building and a majority also with a midwife, a dentist, a feldsher and a laboratory technician. A pharmacist is mentioned by less than half of the physicians. Just well over one quarter of the physicians mentioned other disciplines, for instance: gynaecologists in the Minsk region and neurologists or ophthalmologists in the Vitebsk region.

**Table 20: Other disciplines working in the polyclinic or ambulatory**

Other disciplines	Minsk Region (N=112)		Vitebsk Region (N=100)		Total (N=212)	
	%	Valid N	%	Valid N	%	Valid N
Practice nurse	77	111	94	100	85	211
Community nurse	99	111	95	100	97	211
Midwife / birth assistant	85	111	85	100	85	211
Dentist	66	111	74	98	69	209
Pharmacist	42	110	39	98	40	208
Feldsher	78	110	78	98	78	208
Laboratory technician	94	111	92	98	93	209
Other	28	107	26	91	27	198

Regular meetings among GPs or among therapists only and with a community nurse were most regularly reported in both regions (see Table 21). Meetings with practice nurses and with midwives or birth assistants were mentioned by most respondents (between two thirds and three quarters of the physicians). In the Vitebsk region a small majority of the physicians, as opposed to a large minority in the Minsk region, indicated having such meetings with pharmacists.

**Table 21: Face-to-face meeting with other primary care workers**

Meeting face-to-face at least 1x per month with:	Minsk Region (N=112)		Vitebsk Region (N=100)		Total (N=212)	
	%	Valid N	%	Valid N	%	Valid N
(Other) GP / therapist	92	110	96	97	94	207
Practice nurse	64	85	74	69	68	154
Community nurse	90	106	92	79	91	185
Midwife / birth assistant	71	79	78	73	74	170
Pharmacist	47	76	63	67	55	143

#### 4.4.2. Contact with other care levels of care and with the community

Contact with medical specialists is generally frequent. Almost all physicians in both regions had regular consultations with neurologists and surgeons, and, to a lesser extent, with gynaecologists (see Table 22). Such contacts with paediatricians, however, were reported to be less frequent. Only a small majority in both regions indicated having frequent or occasional contacts with paediatricians.

**Table 22: Consultation with and asking advice from medical specialists**

'Frequently' or 'sometimes' asking advice from:	Minsk Region (N=112)		Vitebsk Region (N=100)		Total (N=212)	
	%	Valid N	%	Valid N	%	Valid N
Paediatricians	58	98	63	86	60.3	184
Internists	72	99	76	89	73.9	188
Gynaecologists	83	107	86	93	84.5	200
Surgeons	90	110	98	97	93.7	207
Neurologists	92	110	92	97	91.8	207
Dermatologists	74	102	81	93	77.4	195

The number of patients referred to medical specialists in a period of four weeks prior to filling out the questionnaire showed a large variation, with the highest average referral rate in both regions to specialists of internal diseases (see Table 23). The lowest rates in both regions were referrals to dermatologists and to secondary level paediatricians. The referral rates to gynaecologists, surgeons, neurologists and ENT specialists (ear, nose and throat) were slightly higher in the Minsk region than in the Vitebsk region. The total number of referrals reported for a period of 4 weeks in the Minsk region was 27.3 and in the Vitebsk region 25.6. This would mean that in both regions an estimated 4.0% of all patient contacts (in the office and in the patients' homes) end up with a referral to a medical specialist (Self referrals are not taken into account in this calculation). Breaking down the referrals by urban and rural practices shows different patterns (see Table 24). Physicians in urban practices refer patients twice as much in comparison with colleagues in rural practices (6.5% versus 3.2%). Thus, GPs and therapists working in rural ambulatories more often treat patients themselves rather than refer them to a medical specialist than those working in urban polyclinics.

**Table 23: Number of patients referred by primary care physicians to medical specialists during the previous 4 weeks, by region**

Patients referred to:	Minsk Region (N=112)		Vitebsk Region (N=100)		Total (N=212)	
	Mean (range)	Valid N	Mean (range)	Valid N	Mean (range)	Valid N
Paediatricians	1.4 (0-10)	93	1.7 (0-14)	79	1.5 (0-14)	172
Internists	5.8 (0-80)	102	5.8 (0-40)	92	5.8 (0-80)	194
Gynaecologists	4.6 (0-94)	99	3.2 (0-20)	88	3.9 (0-94)	187
Surgeons	5.3 (0-80)	107	4.3 (0-41)	96	4.8 (0-80)	203
Neurologists	5.7 (0-50)	107	4.5 (0-24)	93	5.2 (0-50)	200
Dermatologists	1.4 (0-18)	98	1.4 (0-8)	88	1.4 (0-18)	186
ENT specialist	4.0 (0-40)	106	3.4 (0-44)	91	3.7 (0-44)	197
Ophthalmologist	4.1 (0-60)	104	4.0 (0-35)	87	4.0 (0-60)	191
Total referrals per 4 weeks	GPs: 18.2 Ther.: 45.3 All: 27.3		GPs: 21.2 Ther.: 33.5 All: 25.6		GPs: 19.5 Ther.: 39.5 All: 26.7	
Referrals as % of all office contacts and home visits	GPs: 2.89 % Ther.: 6.16 % All: 3.99 %		GPs: 3.21 % Ther.: 5.32 % All: 4.01 %		GPs: 3.03 % Ther.: 5.75 % All: 4.00 %	

**Table 24: Number of patients referred by primary care physicians to medical specialists during the previous 4 weeks, by urbanisation**

Patients referred to:	Urban (N=53)		Rural (N=158)		Total (N=211)	
	Mean (range)	Valid N	Mean (range)	Valid N	Mean (range)	Valid N
Paediatricians	0.1 (0-2)	39	2.0 (0-14)	133	1.5 (0-14)	172
Internists	8.6 (1-38)	48	4.8 (0-80)	145	5.8 (0-80)	193
Gynaecologists	8.6 (0-94)	47	2.3 (0-20)	139	3.9 (0-94)	186
Surgeons	6.7 (0-80)	51	4.2 (0-41)	151	4.8 (0-80)	202
Neurologists	8.1 (0-50)	49	4.2 (0-30)	150	5.2 (0-50)	199
Dermatologists	2.0 (0-18)	45	1.2 (0-15)	140	1.4 (0-18)	185
ENT specialist	5.5 (0-21)	49	3.1 (0-44)	147	3.7 (0-44)	196
Ophthalmologist	6.8 (0-60)	47	3.1 (0-45)	143	4.0 (0-60)	190
Total referrals per 4 weeks	GPs: 32.1 Ther.: 52.6 All: 45.2		GPs: 17.6 Ther.: 30.1 All: 21.0		GPs: 19.5 Ther.: 39.5 All: 26.7	
Referrals as % of all office contacts and home visits	GPs: 4.18 % Ther.: 7.86 % All: 6.53 %		GPs: 2.86 % Ther.: 4.23 % All: 3.23 %		GPs: 3.03 % Ther.: 5.75 % All: 4.00 %	

In both regions the connections with the community were fairly strong, with regular meetings with local authorities and community or social workers in about 80% of all cases (see Table 25). However, having community representatives governing the practice or centre was unusual (this was reported by only 12% of physicians in the Minsk region and 24% in the Vitebsk region). Around one-quarter of the respondents in both regions did not know whether or not there were community representatives.

**Table 25: Links with the community**

Nature of links	Minsk Region (N=112)		Vitebsk Region (N=100)		Total (N=212)	
	%	Valid N	%	Valid N	%	Valid N
Regular meetings with local authorities	76	109	82	96	79	205
Regular meetings with community / social workers	80	109	85	96	82	205
Community representative(s) governing your centre / practice	12	96	24	88	17	184

#### **4.5. Comprehensiveness of care**

##### **4.5.1. Practice conditions**

Physicians were asked whether information materials, such as leaflets or posters, had been displayed or made available in the waiting room of their polyclinic or ambulatory. Results are in Table 26. The availability of patient information materials was good in both regions, but better in Vitebsk than in Minsk. Practically all GPs in the Vitebsk region indicated the availability of materials concerning CVD, healthy diet, smoking cessation, obesity, diabetes and sexually transmitted diseases. In the Minsk region only materials on CVD were as often available. A somewhat smaller majority of physicians in the Minsk region reported the availability of materials on healthy diet, smoking cessation, obesity, diabetes and sexually transmitted diseases, vaccinations and contraception. Social services information was clearly more available in Vitebsk region (71%) than in the Minsk region (51%).

**Table 26: Availability of information materials for patients in the waiting room**

Subject of information materials	Minsk Region (N=112)		Vitebsk Region (N=100)		Total (N=212)	
	%	Valid N	%	Valid N	%	Valid N
Cardiovascular disease risk	96	111	99	100	97	211
Healthy diet	89	105	95	92	91	197
Smoking cessation	88	109	97	96	92	205
Obesity	80	100	93	90	86	190
Diabetes	86	103	97	93	91	196
Sexually transmitted diseases	83	99	93	89	88	188
Vaccinations	82	99	87	77	84	176
Contraception	83	99	84	83	84	182
Self treatment of cold / coughing	67	89	83	78	75	167
Social services	51	88	71	73	60	161

#### 4.5.2. Medical equipment

Physicians were asked to indicate which items of medical equipment from a list of 30 they had at their disposal. Tables 27 and 28 and the diagram in figure 4.1 summarise the state of medical equipment.

The average number of items of equipment per physician from a list of 30 items was 24 in both regions. In both regions 16% of the responding physicians had no more than 20 items at their disposal; in Minsk there were two with only nine items, while in Vitebsk the worst equipped physician had only five items. In both regions there were few differences between GPs and therapists (23.5 versus 24.1 in the Minsk region, 24.4 versus 23.5 in the Vitebsk region), so GPs were not better equipped than therapists. Making a distinction between physicians working in urban and in rural settings (see Table 28) only results in a minor difference in available practice equipment. Physicians working in urban polyclinics are slightly better equipped than those in rural ambulatories.

**Table 27: Number of items of practice equipment available to physicians, by region**

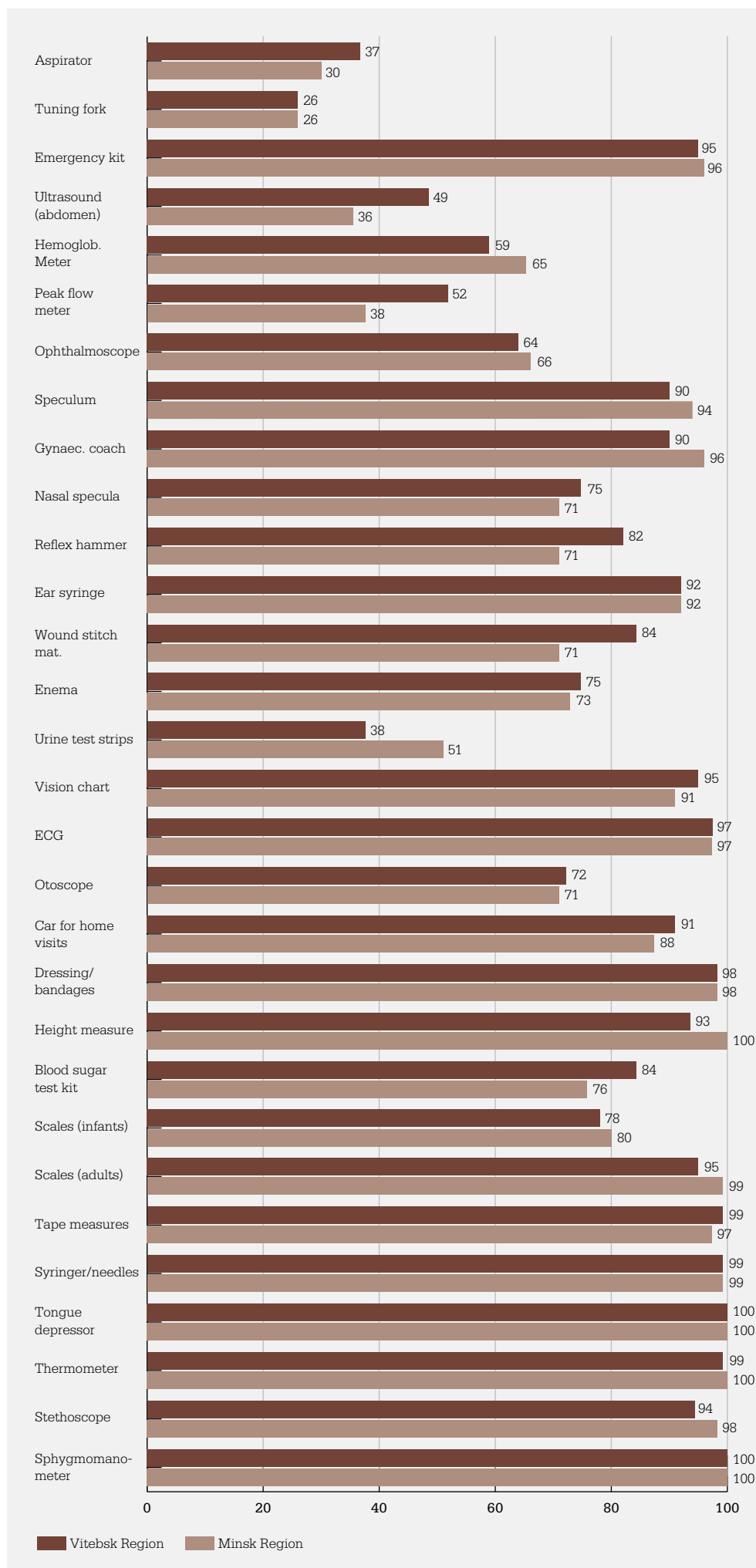
Number of items of equipment	Minsk Region (N=112)		Vitebsk Region (N=100)		Total (N=212)	
	Abs.	%	Abs.	%	Abs.	%
15 or less	6	5	6	6	12	5
16 – 20	12	11	10	10	22	10
21 – 25	52	46	43	43	95	45
26 – 30	42	38	41	41	83	39
<b>TOTAL</b>	<b>112</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>212</b>	<b>100</b>
Average number of items per physician (from list of 30)	23.7		24.0		23.9	

**Table 28: Number of items of practice equipment available to physicians, by urbanisation**

Number of items of equipment	Urban (N=53)		Rural (N=158)		Total (N=211)	
	Abs.	%	Abs.	%	Abs.	%
15 or less	5	9	7	4	12	6
16 – 20	2	4	20	13	22	10
21 – 25	18	34	76	48	94	45
26 – 30	28	53	55	35	83	39
<b>TOTAL</b>	<b>53</b>	<b>100</b>	<b>158</b>	<b>100</b>	<b>211</b>	<b>100</b>
Average number of items per physician (from list of 30)	24.4		23.7		23.9	

In Figure 4 the distribution of all items of equipment has been represented for the Minsk region and the Vitebsk region. This figure confirms the similarity regarding equipment in both regions. In the Vitebsk region, 16 items were available to (almost) all GPs (>90%), and in the Minsk region, 15 items. In addition to that, in the Vitebsk region six items were widely available (to at least three quarters of the physicians), but in the Minsk region only three were widely available. In both regions, there is room for improvement. For instance: one fifth to one quarter of physicians had no materials to stitch wounds, which limits the possibilities for minor surgery. Almost 50% in the Vitebsk region and more than 60% in the Minsk region had no peak flow meter available, which limits diagnostic possibilities with asthma patients. Furthermore, it seems that patients in both regions usually go outside the practice for diagnostic tests of urine and blood (haemoglobin). This equipment has not been widely available in the practices, although almost all physicians (91% in the Minsk region, 88% in the Vitebsk region) indicated that they had laboratory facilities available in their own polyclinic or ambulatory (see Table 29).

**Figure 4: Available practice equipment (% of physicians)**





Laboratory facilities (Table 29) were available in almost every practice, more often than X-ray diagnostic facilities. But almost all physicians had sufficient access to facilities, if not inside then outside the practice. This was particularly true for X-rays, where more than half of the physicians indicated having access outside the polyclinic or ambulatory.

**Table 29: Physicians' access to X-ray and laboratory facilities, by region**

Type of facility and mode of access	Minsk Region (N=112)		Vitebsk Region (N=100)		Total (N=212)	
	%	Valid N	%	Valid N	%	Valid N
Availability of <i>laboratory</i>						
• Full in practice	91	111	88	100	90	211
• Full outside practice	9	111	11	100	10	211
• Not / insufficient available	0	111	1	100	1	211
Availability of <i>X-ray</i>						
• Full in practice	35	111	52	100	43	211
• Full outside practice	61	111	44	100	53	211
• Not / insufficient available	4	111	4	100	4	211

Very few respondents report having insufficient access to laboratory or X-ray diagnostic facilities. However, since physicians in urban settings usually work in larger polyclinics with more of these facilities, it is obvious that those working in rural practices more often report to have access outside the practice than those in urban polyclinics (see Table 30)

**Table 30: Physicians' access to X-ray and laboratory facilities, by urbanisation**

Type of facility and mode of access	Urban (N=53)		Rural (N=158)		Total (N=211)	
	%	Valid N	%	Valid N	%	Valid N
Availability of <i>laboratory</i>						
• Full in practice	96	52	87	158	89	210
• Full outside practice	4	52	12	158	10	210
• Not / insufficient available	0	52	1	158	1	210
Availability of <i>X-ray</i>						
• Full in practice	81	52	30	158	43	210
• Full outside practice	15	52	66	158	53	210
• Not / insufficient available	4	52	4	158	4	210

#### 4.5.3. Service provision

##### Task profiles

Concerning the clinical task profiles three groups of professional activities will be distinguished:

- the role of the physician in the first contact with patients' health problems;
- the physician's provision of medical technical procedures; and
- the treatment and follow up of diseases by the physician.

Each of these tasks have been measured by means of a list of items, which together indicate to what extent the physician is involved in the provision of that task. (For more details we refer to the description of the methodology of this study in Chapter 1).

### The role as the first contact for patients' health problems

The first contact role was measured with 16 items related to a variety of problems of men, women and children. Physicians could indicate whether their patients would address her/him with these problems either '(almost) always' or 'usually' or 'occasionally' or 'seldom/never' or 'do not know'. Table 31 provides results. Percentages refer to physicians who estimated that they would be always or usually the doctor of first contact. (The percentage in brackets refers to the category 'occasionally').

**Table 31: Physicians' role as the first contact with patients' health problems, by region**

Physician reporting to be the first contact in case of:	Minsk Region (N=112)			Vitebsk Region (N=100)			Total (N=212)		
	% GPs *)	% ther. *)	Valid N	% GPs *)	% ther. *)	Valid N	% GPs *)	% ther. *)	Valid N
Child with rash	79 (8)	19 (16)	72 / 37	77 (5)	19 (8)	57 / 36	78 (7)	19 (12)	129 / 73
Child with severe cough	81 (7)	19 (19)	72 / 37	75 (9)	22 (14)	57 / 36	78 (8)	21 (16)	129 / 73
Child aged 7 with enuresis	68 (18)	14 (14)	72 / 36	67 (18)	9 (11)	57 / 35	67 (18)	11 (13)	129 / 71
Child aged 8 with hearing problem	61 (20)	14 (11)	70 / 37	60 (14)	8 (14)	57 / 36	61 (17)	11 (12)	127 / 73
Woman aged 18 asking for oral contraception	17 (31)	3 (3)	70 / 37	9 (46)	5 (19)	57 / 37	13 (38)	4 (11)	127 / 74
Woman aged 20 for confirmation of pregnancy	41 (16)	3 (8)	69 / 37	18 (27)	11 (11)	55 / 37	31 (21)	7 (10)	124 / 74
Woman aged 35 with irregular menstruation	35 (32)	5 (14)	66 / 37	31 (36)	16 (35)	55 / 37	33 (34)	11 (24)	121 / 74
Woman aged 50 with lump in the breast	72 (23)	39 (49)	71 / 39	79 (16)	68 (30)	58 / 40	75 (19)	53 (39)	129 / 79
Woman aged 60 with poly-uria	72 (27)	53 (40)	71 / 38	83 (7)	73 (20)	59 / 40	77 (18)	63 (30)	130 / 78
Anxious man aged 45	58 (27)	26 (63)	71 / 38	68 (22)	53 (35)	59 / 40	62 (25)	40 (49)	130 / 78
Man aged 28 with a first convulsion	71 (17)	27 (49)	70 / 37	76 (14)	39 (44)	58 / 39	73 (16)	33 (46)	128 / 76
Physically abused child	23 (26)	3 (16)	70 / 37	30 (9)	5 (14)	54 / 37	26 (19)	4 (15)	124 / 74
Couple with relationship problems	10 (23)	- (3)	70 / 37	9 (19)	8 (16)	54 / 38	10 (21)	4 (9)	124 / 75
Man with suicidal inclination	17 (21)	3 (19)	70 / 37	16 (24)	13 (39)	55 / 39	17 (22)	8 (29)	125 / 76
Woman aged 35 with psycho-social probl. related to work	39 (28)	13 (42)	71 / 38	45 (28)	30 (40)	58 / 40	42 (28)	22 (41)	129 / 78

Physician reporting to be the first contact in case of:	Minsk Region (N=112)			Vitebsk Region (N=100)			Total (N=212)		
	% GPs *)	% ther. *)	Valid N	% GPs *)	% ther. *)	Valid N	% GPs *)	% ther. *)	Valid N
Man aged 32 with sexual problems	15 (33)	- (11)	69 / 37	16 (33)	8 (26)	55 / 38	15 (33)	4 (19)	124 / 75
Man aged 52 with alcohol addiction problems	38 (39)	11 (47)	69 / 38	44 (28)	18 (47)	57 / 38	41 (34)	15 (47)	126 / 76
<b>TOTAL SCORE 'First contact'**) </b>	<b>2.57</b>	<b>1.61</b>		<b>2.46</b>	<b>1.91</b>		<b>2.52</b>	<b>1.74</b>	

\*) Note: percentages are the sum of the answers '(almost) always' and 'usually'; percentages in brackets refer to the answers '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.

For certain problems listed in Table 31, GPs and therapists are clearly the doctor of first contact if it occurs to their patients, while for others, patients elect to contact other specialists directly. The overall scores on the bottom line of the table show that GPs in Minsk as well as in Vitebsk region have a much more comprehensive role in the first contact with these health problems than therapists. The aggregate score for GPs is 2.52 and for therapists 1.74. In the Minsk region this gap between GPs and therapists is wider than in Vitebsk region. Still weaker areas can be identified in the 'first contact profile' of GPs. In particular, problems related to sexual or reproductive health or relational or psycho-social problems seem only sparsely presented to GPs. If the results presented in Table 31 are compared with available data from a (partly) similar survey held in 2005, it appears that GPs in Belarus have kept up their role as first contact with health problems (in 2005 the total score was 2.6), whereas the role of therapists in first contact care has diminished (2005: total score 2.1) (25).

**Table 32: Physicians' role in the first contact with patients' health problems, by urbanisation**

Physician reporting to be the first contact in case of:	Urban (N=53)			Rural (N=158)			Total (N=211)		
	% GPs *)	% ther. *)	Valid N	% GPs *)	% ther. *)	Valid N	% GPs *)	% ther. *)	Valid N
Child with rash	33 (11)	- (10)	18 / 31	86 (6)	33 (14)	111 / 42	78 (7)	19 (12)	129 / 73
Child with severe cough	22 (22)	- (10)	18 / 31	87 (5)	36 (21)	111 / 42	78 (8)	21 (16)	129 / 73
Child aged 7 with enuresis	39 (11)	3 (-)	18 / 30	72 (19)	17 (22)	111 / 41	67 (18)	11 (13)	129 / 71
Child aged 8 with hearing problem	24 (18)	3 (-)	17 / 31	66 (17)	17 (21)	110 / 42	61 (17)	11 (12)	127 / 73
Woman aged 18 asking for oral contraception	- (44)	3 (19)	18 / 32	16 (37)	5 (5)	109 / 42	13 (38)	4 (11)	127 / 74
Woman aged 20 for confirmation of pregnancy	5 (27)	3 (16)	19 / 32	35 (20)	10 (5)	105 / 42	31 (21)	7 (10)	124 / 74
Woman aged 35 with irregular menstruation	18 (41)	7 (32)	17 / 31	36 (33)	14 (19)	104 / 43	33 (34)	11 (24)	121 / 74

Physician reporting to be the first contact in case of:	Urban (N=53)			Rural (N=158)			Total (N=211)		
	% GPs *)	% ther. *)	Valid N	% GPs *)	% ther. *)	Valid N	% GPs *)	% ther. *)	Valid N
Woman aged 50 with lump in the breast	53 (37)	62 (32)	19 / 34	79 (16)	47 (44)	110 / 45	75 (19)	53 (39)	129 / 79
Woman aged 60 with poly-uria	90 (11)	68 (29)	19 / 34	75 (19)	59 (30)	111 / 44	77 (18)	63 (30)	130 / 78
Anxious man aged 45	74 (21)	41 (59)	19 / 34	60 (25)	39 (41)	111 / 44	62 (25)	40 (49)	130 / 78
Man aged 28 with a first convulsion	79 (21)	32 (53)	19 / 34	73 (15)	33 (41)	109 / 42	73 (16)	33 (46)	128 / 76
Physically abused child	22 (6)	- (7)	18 / 31	26 (21)	7 (21)	106 / 43	26 (19)	4 (15)	124 / 74
Couple with relationship problems	6 (22)	3 (13)	18 / 32	10 (21)	5 (7)	106 / 43	10 (21)	4 (9)	124 / 75
Man with suicidal inclination	17 (33)	6 (24)	18 / 33	17 (21)	9 (33)	107 / 43	17 (22)	8 (29)	125 / 76
Woman aged 35 with psycho-social probl. related to work	47 (32)	21 (41)	19 / 34	41 (27)	23 (41)	110 / 44	42 (28)	22 (41)	129 / 78
Man aged 32 with sexual problems	11 (53)	6 (18)	19 / 33	16 (30)	2 (19)	105 / 42	15 (33)	4 (19)	124 / 75
Man aged 52 with alcohol addiction problems	33 (39)	15 (49)	18 / 33	42 (33)	14 (47)	108 / 43	41 (34)	15 (47)	126 / 76
<b>TOTAL SCORE 'First contact'**) </b>	<b>2.07</b>	<b>1.54</b>		<b>2.59</b>	<b>1.88</b>		<b>2.52</b>	<b>1.74</b>	

\*) Note: percentages are sum of the answers '(almost) always' and 'usually'; percentages in brackets refer to the answers '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.

In Table 32 results are presented for physicians in urban and in rural settings. In addition to the differences between GPs and therapists the table shows a consistent difference between physicians working in rural settings and those working in urban areas. GPs working in rural areas reported a more comprehensive role in the first contact with health problems than GPs working in urban centres. This difference also applied to therapists.

### **Involvement of primary care physicians in the treatment of diseases**

In Table 33 results are presented on the involvement of GPs and therapists in the treatment of a list of 18 diseases. Scores are higher than in the two previous tables, which points to a higher involvement in treatment of the listed diseases than in the first contact. The bottom line of the total column again shows that GPs are more involved in the treatment of these conditions than therapists. However, the difference is smaller than with the first contact role shown in the previous two tables. Both GPs and therapists were relatively strongly involved in the treatment of most of these diseases. In one third of the 18 conditions more than 80% of the GPs in both regions answered always or usually being involved. Therapists in Vitebsk region had more comprehensive treatment profile than therapists in Minsk region. There are only two conditions where involvement of therapists and GPs was very low: peritonsillar abscess and salpingitis. Comparison of

the results with those from the above-mentioned survey conducted in 2005 shows that GPs as well as therapists have maintained their strong involvement in the treatment and follow-up of diseases (25, 26).

**Table 33: Physicians' involvement in treatment and follow up of diseases, by region**

Physicians' involvement in treatment of:	Minsk Region (N=112)			Vitebsk Region (N=100)			Total (N=212)		
	% GPs *)	% ther. *)	Valid N	% GPs *)	% ther. *)	Valid N	% GPs *)	% ther. *)	Valid N
Hyperthyroidism	29 (37)	17 (29)	65 / 35	47 (35)	25 (33)	55 / 40	38 (36)	21 (31)	120 / 75
Chronic bronchitis	100	97 (3)	71 / 39	100	88 (5)	58 / 41	100	93 (4)	129 / 80
Hordeolum (stye)	76 (16)	30 (38)	70 / 37	71 (22)	37 (32)	58 / 38	73 (19)	33 (35)	128 / 75
Peptic ulcer	92 (7)	90 (8)	71 / 38	100	92 (8)	59 / 39	95 (4)	91 (8)	130 / 77
Herniated disclesion	48 (39)	32 (42)	69 / 38	64 (28)	48 (38)	58 / 40	55 (34)	40 (40)	127 / 78
Acute cerebro-vascular accident	78 (20)	41 (49)	71 / 39	73 (22)	68 (33)	59 / 40	75 (21)	54 (41)	130 / 79
Congestive heart failure	97 (3)	85 (10)	70 / 39	98 (2)	93 (7)	58 / 41	98 (2)	89 (9)	128 / 80
Pneumonia	83 (14)	95 (3)	70 / 39	86 (10)	93 (2)	58 / 41	84 (13)	94 (3)	128 / 80
Peritonsilar abcess	14 (21)	3 (33)	70 / 36	22 (31)	27 (27)	58 / 37	18 (26)	15 (30)	128 / 73
Ulcerative colitis	46 (21)	54 (23)	68 / 39	59 (24)	63 (17)	59 / 41	52 (22)	59 (20)	127 / 80
Salpingitis	21 (24)	3 (25)	66 / 36	24 (30)	16 (32)	54 / 38	23 (27)	10 (28)	120 / 74
Concussion of brain	57 (24)	18 (47)	70 / 38	47 (45)	26 (53)	58 / 38	52 (34)	22 (50)	128 / 76
Parkinson's disease	59 (34)	35 (38)	70 / 37	70 (24)	46 (51)	59 / 39	64 (30)	41 (45)	129 / 76
Uncomplicated diabetes (type II)	79 (20)	61 (21)	70 / 38	85 (14)	78 (20)	59 / 40	81 (17)	69 (21)	129 / 78
Rheumatoid arthritis	96 (3)	90 (5)	71 / 38	97 (3)	85 (15)	59 / 40	96 (3)	87 (10)	130 / 78
Depression	67 (27)	26 (41)	66 / 39	52 (40)	28 (60)	58 / 40	60 (33)	27 (51)	124 / 79
Myocardial infarction	71 (10)	63 (34)	72 / 38	77 (11)	82 (13)	57 / 38	74 (10)	72 (24)	129 / 76
Palliative care	92 (7)	74 (18)	71 / 39	97 (4)	85 (12)	57 / 41	94 (6)	80 (15)	128 / 80
<b>TOTAL SCORE 'Treatment tasks'**)</b>	<b>3.05</b>	<b>2.55</b>		<b>3.16</b>	<b>2.97</b>		<b>3.10</b>	<b>2.79</b>	

\*) Note: percentages are the sum of the answers 'almost' always' and 'usually'; percentages in brackets refer to the answers 'occasionally' being involved in this treatment.

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

Table 34 presents the results on the treatment tasks for urban and rural settings separately. The gap between urban and rural provision of treatment services is weak and, in contrast to findings with the first contact tasks, the service profile of urban GPs and therapists is somewhat more comprehensive than their rural colleagues. Urban GPs are slightly more involved in the treatment of these diseases among their patients than rural GPs; and for therapists something similar applies.

**Table 34: Physicians' involvement in treatment and follow up of diseases, by urbanisation**

Physicians' involvement in treatment of:	Urban (N=53)			Rural (N=158)			Total (N=211)		
	% GPs *)	% ther. *)	Valid N	% GPs *)	% ther. *)	Valid N	% GPs *)	% ther. *)	Valid N
Hyperthyroidism	42 (42)	18 (36)	19 / 33	37 (35)	24 (26)	101 / 42	38 (36)	21 (31)	120 / 75
Chronic bronchitis	100	91 (6)	19 / 34	100	94 (2)	109 / 46	100	93 (4)	128 / 80
Hordeolum (stye)	42 (32)	27 (38)	19 / 34	79 (17)	39 (32)	109 / 41	73 (19)	33 (35)	128 / 75
Peptic ulcer	100	85 (15)	19 / 33	95 (5)	96 (2)	110 / 44	95 (4)	91 (8)	129 / 77
Herniated disclesion	63 (26)	42 (46)	19 / 33	54 (35)	38 (36)	108 / 45	55 (34)	40 (40)	127 / 78
Acute cerebro-vascular accident	74 (21)	59 (38)	19 / 34	76 (21)	51 (42)	110 / 45	75 (21)	54 (41)	129 / 79
Congestive heart failure	100	85 (15)	19 / 34	97 (3)	91 (4)	108 / 46	98 (2)	89 (9)	127 / 80
Pneumonia	100	97 (3)	19 / 34	82 (15)	91 (2)	108 / 46	84 (13)	94 (3)	127 / 80
Peritonsilar abcess	21 (32)	13 (38)	19 / 32	17 (25)	17 (24)	109 / 41	18 (26)	15 (30)	128 / 73
Ulcerative colitis	79 (11)	53 (27)	19 / 34	47 (24)	63 (15)	107 / 46	52 (22)	59 (20)	128 / 80
Salpingitis	33 (44)	12 (36)	18 / 33	21 (24)	7 (22)	102 / 41	23 (27)	10 (28)	120 / 74
Concussion of brain	58 (37)	18 (62)	19 / 34	51 (33)	26 (41)	108 / 42	52 (34)	22 (50)	127 / 76
Parkinson's disease	74 (26)	41 (47)	19 / 34	62 (30)	41 (43)	110 / 42	64 (30)	41 (45)	129 / 76
Uncomplicated diabetes (type II)	95 (5)	67 (24)	19 / 33	79 (19)	71 (18)	109 / 45	81 (17)	69 (21)	128 / 78

Physicians' involvement in treatment of:	Urban (N=53)			Rural (N=158)			Total (N=211)		
	% GPs *)	% ther. *)	Valid N	% GPs *)	% ther. *)	Valid N	% GPs *)	% ther. *)	Valid N
Rheumatoid arthritis	100	91 (9)	19 / 34	96 (4)	84 (11)	110 / 44	96 (3)	87 (10)	129 / 78
Depression	68 (26)	29 (41)	19 / 34	58 (34)	24 (58)	105 / 45	60 (33)	27 (51)	124 / 79
Myocardial infarction	84 (11)	76 (18)	19 / 33	72 (10)	70 (30)	109 / 43	73 (10)	73 (24)	128 / 76
Palliative care	100	82 (12)	19 / 34	93 (7)	78 (17)	108 / 46	94 (6)	80 (15)	127 / 80
<b>TOTAL SCORE 'Treatment tasks'**) )</b>	<b>3.26</b>	<b>2.85</b>		<b>3.06</b>	<b>2.74</b>		<b>3.10</b>	<b>2.79</b>	

\*) Note: percentages are the sum of the answers '(almost) always' and 'usually'; percentages in brackets refer to the answers 'occasionally' being involved in this treatment.  
\*\*) 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 primary care

The role of primary care physicians in providing medical technical procedures, results of which are shown in Table 35, is clearly very limited. Some tasks seem to be beyond the domain of GPs, and currently probably belong to the domains of gynaecologists, ophthalmologists and otolaryngologists. Activities in which GPs were relatively well involved were wound suturing, strapping ankles, and vaccinations, and to a lesser extent, minor surgical procedures, such as resection of ingrown toenail, funduscopy, intravenous infusion and immunization. The lack of involvement of GPs in these procedure tasks is reflected in the fact that in only three procedures more than 50% of the GPs answered they (or someone from their practice) were involved. The involvement of therapists in the provision of medical technical procedures was even lower. With a few exceptions, therapists were hardly involved in the provision of any of the services listed in Table 35, the only exception being vaccination. Results on procedure tasks have been broken down by urban and rural setting in Table 36. In rural areas GPs are slightly more involved in the procedures as listed in the table than in urban areas. Activities in which rural GPs are more involved are in particular: suturing wounds, funduscopy, strapping ankles and setting up infusions. Except for flu and tetanus immunization and allergy vaccination, urban therapists were not involved at all in any of the listed procedures.

**Table 35: Involvement of physicians in the provision of medical-technical procedures, by region**

Procedure usually provided by physician or practice staff	Minsk Region (N=112)			Vitebsk Region (N=100)			Total (N=212)		
	% GPs	% ther.	Valid N	% GPs	% ther.	Valid N	% GPs	% ther.	Valid N
Wedge resection of ingrown toenail	22	–	68 / 39	34	8	59 / 40	28	4	127 / 79
Removal of sebaceous cyst from hairy scalp	6	–	69 / 39	9	3	59 / 38	7	1	128 / 77
Wound suturing	54	3	67 / 39	63	15	59 / 39	58	9	126 / 78
Excision of warts	3	–	68 / 39	11	–	56 / 37	7	–	124 / 76
IUD insertion	8	–	67 / 38	–	–	58 / 38	4	–	125 / 76
Removal of rusty spot from cornea	9	–	66 / 38	5	–	59 / 38	7	–	125 / 76
Fundoscopy	31	3	65 / 39	33	–	57 / 39	32	1	122 / 78
Joint injection	18	–	68 / 39	15	–	59 / 39	17	–	127 / 78
Maxillary (sinus) puncture	2	–	68 / 38	2	–	58 / 39	2	–	126 / 77
Myringotomy of eardrum (paracentesis)	2	–	68 / 38	7	–	57 / 39	4	–	125 / 77
Applying plaster cast	9	3	68 / 38	14	3	58 / 40	11	3	126 / 78
Strapping an ankle	53	15	68 / 39	48	8	58 / 40	51	11	126 / 79
Cryotherapy (warts)	3	–	66 / 37	2	–	53 / 38	3	–	119 / 75
Setting up intravenous infusion	36	11	69 / 37	24	8	59 / 40	31	9	128 / 77
Immunizations for flu or tetanus	39	15	70 / 39	22	18	59 / 40	31	17	129 / 79
Allergy vaccinations	54	39	70 / 39	48	25	59 / 40	51	32	129 / 79
<b>TOTAL SCORE 'Medical procedures / prevention' * (range 1-3)</b>	<b>1.57</b>	<b>1.28</b>		<b>1.55</b>	<b>1.24</b>		<b>1.56</b>	<b>1.26</b>	

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



**Table 36: Involvement of physicians in the provision of medical-technical procedures, by urbanisation**

Procedure usually provided by physician or practice staff	Urban (N=53)			Rural (N=158)			Total (N=211)		
	% GPs	% ther.	Valid N	% GPs	% ther.	Valid N	% GPs	% ther.	Valid N
Wedge resection of ingrown toenail	11	–	19 / 33	31	7	108 / 46	28	4	127 / 79
Removal of sebaceous cyst from hairy scalp	–	–	19 / 32	8	2	109 / 45	7	1	128 / 77
Wound suturing	11	–	19 / 31	66	15	107 / 46	58	9	126 / 78
Excision of warts	11	–	19 / 32	6	–	105 / 44	7	–	124 / 76
IUD insertion	–	–	19 / 31	5	–	106 / 45	4	–	125 / 76
Removal of rusty spot from cornea	6	–	18 / 31	8	–	107 / 45	7	–	125 / 76
Fundoscopy	11	–	19 / 32	36	2	103 / 46	32	1	122 / 78
Joint injection	5	–	19 / 32	19	–	108 / 46	17	–	127 / 78
Maxillary (sinus) puncture	–	–	19 / 32	2	–	107 / 45	2	–	126 / 77
Myringotomy of eardrum (paracentesis)	5	–	19 / 32	4	–	106 / 45	4	–	125 / 77
Applying plaster cast	5	–	19 / 33	12	4	107 / 45	11	3	126 / 78
Strapping an ankle	26	–	19 / 33	55	20	107 / 46	51	11	126 / 79
Cryotherapy (warts)	–	–	15 / 31	3	–	104 / 44	3	–	119 / 75
Setting up intravenous infusion	16	–	19 / 32	33	16	109 / 45	31	9	128 / 77
Immunizations for flu or tetanus	37	15	19 / 33	30	17	110 / 46	31	17	129 / 79
Allergy vaccinations	47	27	19 / 33	52	35	110 / 46	51	32	129 / 79
<b>TOTAL SCORE 'Medical procedures / prevention' * (range 1-3)</b>	<b>1.47</b>	<b>1.18</b>		<b>1.58</b>	<b>1.30</b>		<b>1.56</b>	<b>1.26</b>	

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

**Table 37: Involvement of physicians in activities for specific groups**

Physician involved in:	Minsk Region (N=112)			Vitebsk Region (N=100)			Total (N=212)		
	% GPs	% ther.	Valid N	% GPs	% ther.	Valid N	% GPs	% ther.	Valid N
Screening for STDs	67	32	70 / 38	53	38	57 / 40	61	35	127 / 78
Screening for HIV / AIDS	75	72	69 / 39	67	76	58 / 41	72	74	127 / 80
Influenza vaccination programme for high-risk groups	97	92	70 / 39	98	95	59 / 41	98	94	129 / 80
Rehabilitative care	99	85	68 / 39	98	95	58 / 41	98	90	126 / 80
School health programmes	84	39	69 / 39	86	42	57 / 38	85	40	126 / 77
Cervical cancer screening programmes	62	13	69 / 39	67	38	58 / 40	65	25	127 / 79
Breast cancer screening programmes	90	55	68 / 38	83	82	59 / 39	87	69	127 / 77
<b>TOTAL coverage for 'Specific groups' (range 0-100%)</b>	<b>82.0%</b>	<b>55.4%</b>		<b>78.9%</b>	<b>66.6%</b>		<b>80.9%</b>	<b>61.0%</b>	

GPs were generally involved in all activities as listed in Table 37, especially in influenza vaccination and rehabilitative care and, somewhat less, in breast cancer screening programmes and school health programmes. In the Minsk region the involvement of GPs was slightly better than in the Vitebsk region, in particular concerning screening for STD, HIV/AIDS and breast cancer. Involvement of therapists in the listed activities remained less than those of GPs, especially concerning STD screening, involvement in school health and cervical screening programmes.

## 4.6. TB and reproductive health services

### 4.6.1. TB services

Almost all physicians in both regions knew about new cases of TB being identified in their practice population (see Table 38). They also knew the number of households with recently revealed TB cases that were supervised by them or their staff, and equally knew how many of their patients received follow up TB treatment (prescribed by a TB specialist/phtisiologist). A breakdown of results by urbanisation does not show much difference between physicians working in urban and those working in rural settings (Table 39).

**Table 38: Physicians' knowledge about TB patients in their patient population, by region**

Physician:	Minsk Region (N=112)			Vitebsk Region (N=100)			Total (N=212)		
	% GPs	% ther.	Valid N	% GPs	% ther.	Valid N	% GPs	% ther.	Valid N
Knowing how many patients with TB were identified in 2007	95.8	89.7	71 / 39	98.3	87.5	59 / 40	96.9	88.6	130 / 79
Knowing how many households with recently revealed TB cases were under their supervision	95.9	82.1	73 / 39	94.9	89.7	59 / 39	95.5	85.9	132 / 78
Knowing how many patients received follow-up TB treatment prescribed by a phtisiologist	100	92.3	73 / 39	98.3	95.0	58 / 70	99.2	93.7	131 / 79

**Table 39: Physicians' knowledge about TB patients in their patient population, by urbanisation**

Physician:	Urban (N=53)			Rural (N=158)			Total (N=211)		
	% GPs	% ther.	Valid N	% GPs	% ther.	Valid N	% GPs	% ther.	Valid N
Knowing how many patients with TB were identified in 2007	94.7	97.1	19 / 34	97.3	82.2	110 / 45	96.9	88.6	130 / 79
Knowing how many households with recently revealed TB cases were under their supervision	94.7	87.9	19 / 33	95.5	84.4	112 / 45	95.4	85.9	131 / 78
Knowing how many patients received follow-up TB treatment prescribed by a phtisiologist	100	97.1	18 / 34	99.1	91.1	112 / 45	99.2	93.7	130 / 79

The number of new cases of TB identified in 2007 was just above one per physician in the Minsk region and slightly less than one per physician in the Vitebsk region (Table 40). The difference in the number of households under supervision is somewhat larger between regions – on average there are twice as many households per physician in the Minsk region, compared to the Vitebsk region. In rural practices the number of newly identified TB cases is higher than in urban practices (Table 41). Other indicators of involvement of PC physicians in TB care are higher for rural GPs and therapists than for those working in urban settings. These indicators are: number of households with recently revealed TB under own (staff) supervision and number of patients receiving follow up TB treatment prescribed by a phtisiologist

**Table 40: TB care reported by primary care physicians, by region**

Identified TB patients/ households:	Minsk Region (N=112)			Vitebsk Region (N=100)			Total (N=212)		
	% GPs	% ther.	Valid N	% GPs	% ther.	Valid N	% GPs	% ther.	Valid N
# new TB patients identified in 2007			68 / 35			58 / 35			126 / 70
• 0	37	37		41	37		39	37	
• 1-2	47	46		52	57		49	51	
• 3-5	12	14		7	6		10	10	
• >5	4	3		–	–		2	1	
• Mean	1.32	1.34		0.90	1.00		1.13	1.17	
# households with recently revealed TB under own (staff) supervision			70 / 32			56 / 35			132 / 78
• 0	19	22		34	40		25	31	
• 1-2	36	31		39	40		37	36	
• 3-5	29	31		23	17		26	24	
• >5	17	16		4	3		11	9	
• Mean (range)	2.77	2.97		1.71	1.34		2.30	2.12	
# patients receiving follow up TB treatment prescribed by a phtisiologist			73 / 36			57 / 38			131 / 79
• 0	–	–		–	–		–	–	
• 1-2	–	4		13	8		6	6	
• 3-5	35	27		47	42		40	35	
• 6-10	42	46		34	42		38	44	
• 11-15	20	23		6	4		14	14	
• >15	3	–		–	4		2	2	
• Mean (range)	3.87	3.65		2.40	3.31		3.22	3.48	

**Table 41: TB care reported by primary care physicians, by urbanisation**

Identified TB patients/ households:	Urban (N=53)			Rural (N=158)			Total (N=211)		
	% GPs	% ther.	Valid N	% GPs	% ther.	Valid N	% GPs	% ther.	Valid N
# new TB patients identified in 2007			18 / 33			107 / 37			129 / 79
• 0	61	42		35	32		38	37	
• 1-2	33	52		52	51		50	51	
• 3-5	6	6		10	14		10	10	
• >5	–	–		3	3		2	1	
• Mean	0.61	0.91		1.22	1.41		1.14	1.17	
# households with recently revealed TB under own (staff) supervision			18 / 29			107 / 38			131 / 78
• 0	61	45		19	21		25	31	
• 1-2	22	38		40	34		38	36	
• 3-5	17	7		28	37		26	24	
• >5	–	10		13	8		11	9	
• Mean (range)	0.38	1.55		2.57	2.55		2.32	2.12	
# patients receiving follow up TB treatment prescribed by a phtisiologist			18 / 33			111 / 41			130 / 79
• 0									
• 1-2	27	5		2	7		6	6	
• 3-5	47	38		39	32		40	35	
• 6-10	20	48		41	42		38	44	
• 11-15	7	10		15	16		14	14	
• >15	–	–		2	3		2	2	
• Mean (range)	1.87	3.00		3.45	3.81		3.22	3.48	

**Table 42: Involvement of physician or staff in treatment follow up by number of identified TB cases**

	Performing daily supervision	
	% physicians	N
# new TB patients identified in 2007		
• 0	72.0	148
• 1-2	77.9	
• 3-5	76.5	
• >5	50.0	

The involvement of PC physicians in TB follow-up of newly detected cases is around three-quarters, when the number of newly detected cases is less than 5. Only with more than five newly detected TB cases is the involvement of PC physicians lower (about half of the physicians are then involved) (Table 42).

The majority of GPs and approximately half of the therapists were involved in activities of TB follow up after patients had received a prescription from a phtisiologist (see Table 43). Writing prescriptions free of charge, however, is rarely done by GPs and only occasionally by therapists.

Handing over the drugs to the patient is done more often by GPs than by therapists in the Minsk region – but not in the Vitebsk region. Performing daily supervision of the intake of the drugs is done more often by GPs or their staff than by therapists in both regions

**Table 43: Primary care physicians' or staff's involvement with TB care, by region**

Involvement of physicians or practice staff in:	Minsk Region (N=112)			Vitebsk Region (N=100)			Total (N=212)		
	% phys.		Valid N	% phys.		Valid N	% phys.		Valid N
	yes	no		yes	no		yes	no	
Follow up activities									
• GPs	90.4	9.6	73	86.0	14.0	57	88.5	11.5	130
• Therapists	51.3	48.7	39	55.0	45.0	40	53.2	46.8	79
Periodic handing over TB drugs to TB patients									
• GPs	75.4	24.6	65	61.2	38.8	49	69.3	30.7	114
• Therapists	65.0	35.0	20	66.7	33.3	21	56.9	34.1	41
Performing direct supervision of intake of TB drugs during follow up treatment									
• GPs	79.7	20.3	64	83.7	16.3	49	81.4	18.6	113
• Therapists	55.0	45.4	20	61.9	38.1	21	58.5	41.5	41

**Table 44: Primary care physicians' or staff's involvement in TB care, by urbanisation**

Involvement of physicians or practice staff in:	Urban (N=53)			Rural (N=1558)			Total (N=211)		
	% phys.		Valid N	% phys.		Valid N	% phys.		Valid N
	yes	no		yes	no		yes	no	
Follow up activities									
• GPs	55.6	44.4	18	93.7	6.3	111	88.4	11.6	129
• Therapists	29.4	70.6	34	71.1	28.9	45	53.2	46.8	79
Periodic handing over TB drugs to TB patients									
• GPs	70.0	30.0	10	69.9	30.1	103	69.9	30.1	113
• Therapists	40.0	60.0	10	74.2	25.8	31	65.9	34.1	41
Performing direct supervision of intake of TB drugs during follow up treatment									
• GPs	100	–	10	80.4	19.6	102	82.1	17.9	112
• Therapists	30.0	70.0	10	67.7	32.3	31	58.5	41.5	41

The majority of GPs from the Minsk region (or their nurse) and a minority of therapists had been instructed or trained in aspects of TB care (Table 45). Contrary to this, therapists from the Vitebsk region were almost as often trained as GPs. No large differences were found between urban and rural physicians. A larger proportion of rural GPs were trained to provide information to the general population than urban GPs (Table 46). Likewise, more rural therapists reported being trained on the various aspects mentioned than urban therapists.

**Table 45: Primary care physicians trained specifically for TB care, by region**

Subject of training:	Minsk Region (N=112)			Vitebsk Region (N=100)			Total (N=212)		
	% GPs	% ther.	Valid N	% GPs	% ther.	Valid N	% GPs	% ther.	Valid N
How to give information to the general population on TB and the prevention of TB	80.6	38.5	72 / 39	68.4	56.8	57 / 37	75.2	47.4	129 / 76
The procedure to follow in case of suspicion of TB	84.9	39.5	73 / 38	82.1	73.0	56 / 37	83.7	56.0	129 / 75
How to counsel TB patients	79.2	26.3	72 / 38	77.2	63.2	57 / 38	78.3	44.7	129 / 76
How to apply the directly observed treatment of TB patients	83.3	23.7	72 / 38	82.8	54.1	58 / 37	83.1	38.7	130 / 75

**Table 46: Primary care physicians trained specifically for TB care, by urbanisation**

Subject of training:	Urban (N=53)			Rural (N=158)			Total (N=211)		
	% GPs	% ther.	Valid N	% GPs	% ther.	Valid N	% GPs	% ther.	Valid N
How to give information to the general population on TB and the prevention of TB	63.2	41.9	19 / 31	77.1	51.1	109 / 45	75.0	47.4	128 / 76
The procedure to follow in case of suspicion of TB	83.3	50.0	18 / 30	83.6	60.0	110 / 45	83.6	56.0	128 / 75
How to counsel TB patients	83.3	35.5	18 / 31	77.5	51.1	111 / 45	78.3	44.7	129 / 76
How to apply the directly observed treatment of TB patients	83.3	22.6	18 / 31	83.0	50.0	112 / 44	83.1	38.7	130 / 75

A large majority (87%) of respondents reported that the latest training they had participated in had taken place in 2006 or later (Table 47). The 2006 training programme was in line with the new WHO Stop TB strategy.

**Table 47: Year of latest training of physicians in TB care**

	% physicians	Valid N
Before 2003	3.8	5
2003 – 2005	9.2	12
2006 or later	87.0	113
total	100	130

Around two thirds of physicians (or nurses) in both regions reported providing information on the prevention of TB. More than three-quarters of physicians (or nurses) replied they took sputum for detection of TB. Fifty to 70% indicated monitoring and follow-up with groups at risk. Involvement in DOT was lower, except for the GPs in Vitebsk where 64% indicated to do this. In Minsk region 38% of GPs were involved in DOT and 24% of therapists. In Vitebsk only 9% of the therapists confirmed involvement in DOT. The involvement of physicians (or their nurses) in DOT was higher among GPs and therapists in rural practices than among those in urban practices (Table 48).

**Table 48: Reported involvement of physicians and other staff with TB related activities, by region**

Services:	Minsk Region (N=112)			Vitebsk Region (N=100)			Total (N=212)		
	% GPs	% ther.	Valid N	% GPs	% ther.	Valid N	% GPs	% ther.	Valid N
<i>Information and prevention of TB to the population provided by:</i>			71 / 38			58 / 41			129 / 79
• physician or nurse	71.8	68.4		65.5	75.6		69.0	72.2	
• feldsher	19.7	15.8		17.2	3.7		18.6	11.4	
• special nurse	8.5	10.5		15.5	14.6		11.6	12.7	
• other person	–	5.3		1.7	2.4		0.8	3.8	
<i>The identification / early diagnosis of TB cases (taking sputum) provided by:</i>			72 / 38			58 / 40			131 / 78
• physician or nurse	76.4	78.9		55.2	70.0		55.0	67.9	
• feldsher	15.3	5.3		17.2	10.0		28.2	11.5	
• special nurse	6.9	5.3		25.9	20.0		15.3	16.7	
• other person	1.4	10.5		1.7	–		1.5	3.8	
<i>Monitoring and follow up of groups at risk provided by:</i>			73 / 38			58 / 41			129 / 79
• physician or nurse	54.8	65.8		65.5	75.6		69.0	72.2	
• feldsher	37.0	13.2		17.2	3.7		18.6	11.4	
• special nurse	6.8	13.2		15.5	14.6		11.6	12.7	
• other person	1.4	7.9		1.7	2.4		0.8	3.8	
<i>Directly observed treatment of patients with TB provided by:</i>			71 / 38			58 / 37			129 / 77
• physician or nurse	38.0	23.7		63.8	8.5		49.6	31.2	
• feldsher	52.1	13.2		13.8	7.7		34.9	10.4	
• special nurse	9.9	42.1		20.7	41.0		14.7	41.6	
• other person	–	21.1		1.7	12.8		.08	16.9	



**Table 49: Reported involvement of physicians and other staff with TB related activities, by urbanisation**

Services:	Urban (N=53)			Rural (N=158)			Total (N=211)		
	% GPs	% ther.	Valid N	% GPs	% ther.	Valid N	% GPs	% ther.	Valid N
<i>Information and prevention of TB to the population provided by:</i>			19 / 33			110 / 46			129 / 79
• physician or nurse	68.4	78.8		69.1	67.4		69.0	72.2	
• feldsher	5.3	6.1		20.9	15.2		18.6	11.4	
• special nurse	26.3	9.1		9.1	15.2		11.6	12.7	
• other person	–	6.1		0.9	2.2		0.8	3.8	
<i>The identification / early diagnosis of TB cases (taking sputum) provided by:</i>			19 / 34			112 / 45			131 / 79
• physician or nurse	73.7	82.4		77.7	80.0		77.1	81.0	
• feldsher	5.3	5.9		13.4	4.4		12.2	5.1	
• special nurse	21.1	5.9		8.0	8.9		9.9	7.6	
• other person	–	5.9		0.9	6.7		0.8	6.3	
<i>Monitoring and follow up of groups at risk provided by:</i>			19 / 34			111 / 44			130 / 78
• physician or nurse	68.4	76.5		52.3	61.4		54.6	67.9	
• feldsher	5.3	5.9		23.4	15.9		28.5	11.5	
• special nurse	21.2	14.7		14.4	18.2		15.4	16.7	
• other person	5.3	2.9		0.9	4.5		1.5	3.8	
<i>Directly observed treatment of patients with TB provided by:</i>			19 / 33			110 / 44			129 / 77
• physician or nurse	36.8	12.1		51.8	45.5		49.6	31.2	
• feldsher	10.5	6.1		39.1	13.6		34.9	10.4	
• special nurse	47.4	57.6		9.1	29.5		14.7	41.6	
• other person	5.3	24.2		–	11.4		.08	16.9	

Three-quarters of GPs and almost two-thirds of therapists had received new information materials on TB care during the previous 12 months. Overall, GPs received information materials more often than therapists. Physicians in Vitebsk were better supplied than physicians in the Minsk region (Table 50). Through analysis by urbanisation, it seems that slightly more GPs from rural areas reported having received such information compared to GPs working in urban areas (Table 51).

**Table 50: Physicians who received new information materials on TB in the previous 12 months, by region**

Physicians:	Minsk Region (N=112)			Vitebsk Region (N=100)			Total (N=212)		
	% GPs	% ther.	Valid N	% GPs	% ther.	Valid N	% GPs	% ther.	Valid N
Received information materials	69.4	53.8	72 / 39	83.1	70.7	59 / 41	75.6	62.5	131 / 80

**Table 51: Physicians who received new information materials in TB in the previous 12 months, by urbanisation**

Physicians:	Urban (N=53)			Rural (N=158)			Total (N=211)		
	% GPs	% ther.	Valid N	% GPs	% ther.	Valid N	% GPs	% ther.	Valid N
Received information materials	68.4	61.8	19 / 34	76.6	63.0	111 / 46	75.4	62.5	130 / 80

#### 4.6.2. Reproductive health and child care services

**Table 52: Family planning and child health services by PC physicians, by region**

Physician providing the following services to all or most:	Minsk Region (N=112)			Vitebsk Region (N=100)			Total (N=212)		
	% GPs	% ther.	Valid N	% GPs	% ther.	Valid N	% GPs	% ther.	Valid N
Family planning and contraception	61	28	69 / 39	51	36	57 / 39	56	32	126 / 78
Routine antenatal care	77	44	69 / 39	77	63	56 / 40	77	53	125 / 79
Normal immunizations to children under 4 years	77	26	69 / 38	72	32	54 / 38	75	29	123 / 76
Routine paediatric surveillance (until 4 years)	77	24	70 / 38	71	29	56 / 38	75	26	126 / 76

GPs are much stronger involved in family planning, routine antenatal care, child immunizations and paediatric surveillance than therapists (see Table 52). There is only one exception where GPs and therapists were almost equally involved: this was for routine antenatal care in the Vitebsk region, which was provided by 63% of therapists.

**Table 53: Family planning and child health services by PC physicians, by urbanisation**

Physician providing the following services to all or most:	Urban (N=53)			Rural (N=158)			Total (N=211)		
	% GPs	% ther.	Valid N	% GPs	% ther.	Valid N	% GPs	% ther.	Valid N
Family planning and contraception	42	30	19 / 33	59	33	106 / 45	56	32	125 / 78
Routine antenatal care	50	39	18 / 33	81	63	106 / 46	77	53	124 / 79
Normal immunizations to children under 4 years	24	16	17 / 31	83	38	106 / 45	75	29	123 / 76
Routine paediatric surveillance (until 4 years)	22	7	18 / 31	83	40	108 / 45	75	26	126 / 76

Table 54 shows the proportion of physicians (or their practice nurses) being involved in providing information and prevention related to reproductive health. Again, therapists were to a much lesser extent involved compared to GPs. However, overall, the involvement of physicians is lower than with services presented in Tables 52 and 53. GPs and therapists (or their nurses) working in rural practices are more involved in giving information on topics related to reproductive health than GPs and therapists working in an urban environment.

**Table 54: Involvement of physicians (or their nurse) in providing reproductive health information, by region**

Physician or nurse providing:	Minsk Region (N=112)			Vitebsk Region (N=100)			Total (N=212)		
	% GPs	% ther.	Valid N	% GPs	% ther.	Valid N	% GPs	% ther.	Valid N
Sexual education to school children	56	15	71 / 39	56	18	59 / 40	56	17	130 / 79
Prevention of unwanted pregnancies among adolescents (15-24)	37	10	71 / 39	48	13	59 / 40	42	11	130 / 79
Giving information on sexually transmitted infections among adolescents	58	15	71 / 39	48	23	58 / 40	54	19	129 / 79
Giving information or counselling on contraception among men	39	3	69 / 39	36	13	58 / 39	38	8	127 / 78

**Table 55: Involvement of physicians (or their nurse) in providing reproductive health information, by urbanisation**

Physician or nurse providing:	Urban (N=53)			Rural (N=158)			Total (N=211)		
	% GPs	% ther.	Valid N	% GPs	% ther.	Valid N	% GPs	% ther.	Valid N
Sexual education to school children	26	--	19 / 33	61	28	111 / 46	56	17	130 / 79
Prevention of unwanted pregnancies among adolescents (15-24)	32	3	19 / 33	43	17	111 / 46	42	11	130 / 79
Giving information on sexually transmitted infections among adolescents	32	12	19 / 33	57	24	110 / 46	54	19	129 / 79
Giving information or counselling on contraception among men	16	6	19 / 33	42	9	108 / 45	38	8	127 / 78

The percentage of physicians trained specifically to provide information on sexual education, unwanted pregnancies, sexually transmitted infections and contraception to children and adolescents is relatively low (see Table 56). Of those physicians who had

received training specifically for these activities, on average 60% received that training before 2007 (not in table).

**Table 56: Physicians trained for reproductive health care**

Physician trained for:	Minsk Region (N=112)			Vitebsk Region (N=100)			Total (N=212)		
	% GPs	% ther.	Valid N	% GPs	% ther.	Valid N	% GPs	% ther.	Valid N
How to give sexual education to school children	34	5	70 / 38	34	10	56 / 40	34	8	126 / 78
How to prevent unwanted pregnancies among adolescents	36	11	70 / 38	38	10	56 / 40	37	10	126 / 78
How to give information on sexually transmitted infections	39	8	70 / 38	41	10	56 / 40	40	9	126 / 78
How to give information on contraception	44	5	69 / 37	55	15	56 / 40	49	10	125 / 77

# 5 PATIENTS ABOUT PRIMARY CARE IN THE REGIONS OF MINSK AND VITEBSK

## RESULTS OF THE SURVEY

In each of the practices of the physicians who participated in the physician's survey, a number of patients have been asked to answer a questionnaire dealing with the patients' perspective. Therefore, the results described are based on the experiences and opinions of patients. The procedure was as follows: 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 the information gained from the patient survey was applied to the same practices as the information from the survey among the GPs and the therapists in the Minsk and the Vitebsk regions. 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 also explained in Chapter 1.

### 5.1. Respondents' characteristics

As Table 57 shows, the patient survey had included 1704 respondents; 815 respondents in the Minsk region and 889 respondents in the Vitebsk region. As usual, among visitors of health services, female patients were a majority. In both regions two-thirds of the patients filling in a questionnaire were female. Both regions contrasted in the urban and rural characteristics. In the Minsk region only 20% of the respondents were from urban practices. In the Vitebsk region the urban proportion was 30%.

**Table 57: Gender and age distribution of patients in the Minsk and Vitebsk regions**

Characteristics		Minsk Region (N=815)			Vitebsk Region (N=889)		
		Urban	Rural *)	Total	Urban	Rural *)	Total
		N (%)	N (%)	N (%)	N (%)	N (%)	N (%)
Gender	Male	59 (36)	211 (32)	270 (33)	71 (27)	204 (33)	275 (31)
	Female	105 (64)	440 (68)	545 (67)	196 (73)	418 (67)	614 (69)
<b>Total</b>		164 (20)	651 (80)	<b>815 (100)</b>	267 (30)	622 (70)	<b>889 (100)</b>

\*) Including small towns and rural areas

Table 58 shows the age distribution of respondents in both regions was very similar, with the respondents in the Minsk region being slightly younger. Twenty-six percent of respondents in the Minsk region were not older than 30 years. In the Vitebsk region only

20% belonged to this age group. With the oldest category the situation was the other way around, with 41% over 50 years old in the Vitebsk region and 36% in the Minsk region.

In both regions about half of the patients who filled in the questionnaire were employees. Very few respondents, 5% or less, answered that their occupation was looking after a family. In the Minsk region there were somewhat more school children and somewhat fewer retired people than in the Vitebsk region.

For the living situation of respondents in the Minsk region the majority replied they were living in extended family structures, such as with parents or in a family with children (56%). In the Vitebsk region more people lived alone or with a partner only (49%).

**Table 58: Age, occupation and living situation of patients in Minsk and Vitebsk region**

Patients' backgrounds	Minsk Region (N=815)		Vitebsk Region (N=889)	
	Abs.	%	Abs.	%
<b>Age</b>				
• Up to 20 yrs	50	6	24	3
• 21 – 30	160	20	144	16
• 31 – 40	138	17	185	21
• 41 – 50	172	21	193	22
• 51 – 60	129	16	164	19
• Over 60	163	20	176	22
<b>Total</b>	<b>812</b>	<b>100</b>	<b>886</b>	<b>100</b>
<b>Occupation</b>				
• in school	41	5	18	2
• unemployed / looking for a job	20	3	46	5
• unable to work (disability)	31	4	25	3
• looking after family	37	5	23	3
• employee	410	51	488	55
• self-employed	16	2	25	3
• retired	161	20	193	22
• other	96	12	68	8
<b>Total</b>	<b>812</b>	<b>100</b>	<b>886</b>	<b>100</b>
<b>Living situation</b>				
• alone	128	16	169	19
• with parents	77	10	46	5
• with husband / wife	180	22	264	30
• with family (incl. children)	377	46	345	39
• other	51	6	65	7
<b>Total</b>	<b>813</b>	<b>100</b>	<b>889</b>	<b>100</b>

## 5.2. Accessibility of care

### 5.2.1. Financial access

**Table 59: Patients' reporting co-payments for primary care services**

Type of service	Minsk Region (N=815)		Vitebsk Region (N=889)	
	Abs.	%	Abs.	%
Visit to your GP or therapist	27	3	28	3
Medicines or injections prescribed by your GP or therapist.	664	82	606	70
A visit to a specialist after referral by your GP or therapist	111	14	52	6
Home visit by your GP or therapist.	39	5	28	3
Regular check up of baby or young child	23	3	15	2
<b>Total</b>	<b>813</b>	<b>100</b>	<b>889</b>	<b>100</b>

Most of the primary care services which are listed in Table 59 appeared to be available free of charge. Exceptions were injections or medicines prescribed by primary care physicians. The majority of respondents in both regions indicated they had to pay for these medicines and injections.

Although the percentage of patients deciding not to visit their primary care doctor due to the co-payment is relatively low, there is still a financial barrier for 7% (Vitebsk) or 8% (Minsk) of the respondents.

**Table 60: Patients' reporting obstacles to the use of services related to co-payment and availability of medicines**

Decision taken in past year	Minsk Region (N=815)		Vitebsk Region (N=889)	
	Abs.	%	Abs.	%
Not to visit or delay a visit because I could not pay for the medicines	65	8	65	7

### 5.2.2. Geographical access and responsiveness

This section is dealing with service aspects of the primary care centre or polyclinic. The following aspects will be considered: attainability and accessibility, opening hours and convenience and patient friendliness.

As Table 61 and Figure 5 show most patients could reach their preferred primary care facilities and a hospital within 20 minutes. GPs, therapists and pharmacists were most nearby. Even in the more rural environment of the Minsk region, three-quarters of the patients did not need more than 20 minutes to get to a doctor. In the Vitebsk region 64% of the respondents did not need more than 20 minutes. Travel times of more than 40 minutes were rare (14% and 9% respectively in the Minsk region and the Vitebsk

region). The distribution of times needed to reach pharmacies was roughly the same in both places. Almost two thirds of patients could be there within 20 minutes, while about one-quarter replied needing 20 to 40 minutes. Dentists were somewhat more distant, especially in Minsk region, where half of the respondents answered needing more than 20 minutes. Eighteen percent in the Vitebsk region reported that it took them more than 40 minutes to the dentist. Overall, in Minsk region extremes were more frequent. Thirty-four percent had the dentist within 20 minutes and a similar number of respondents had travel times of more than 40 minutes. Twenty three percent of the patients in the Minsk region and 33% of those in the Vitebsk region remained under the 20 minute limit for a visit to a hospital. Thirty-one to 45 percent indicated that it would take them more than 40 minutes. Around 40% of the patients in both areas answered they could not reach a TB treatment facility within 40 minutes. For 6% in the Minsk region and 15% in the Vitebsk region the TB treatment facility was within 20 minutes of their home.

**Table 61: Patients' travel time to primary care providers**

Provider and distance	Minsk Region (N=815)		Vitebsk Region (N=889)	
	N	%	N	%
<b>GP or therapist</b>				
• up to 20 minutes	483	60	566	64
• 20-40 minutes	249	31	267	30
• 40-60 minutes	46	6	40	5
• more than 1 hour	27	3	13	2
<b>Total</b>	<b>805</b>	<b>100</b>	<b>886</b>	<b>100</b>
<b>Pharmacist</b>				
• up to 20 minutes	442	55	548	63
• 20-40 minutes	215	27	241	28
• 40-60 minutes	92	12	57	7
• more than 1 hour	54	7	25	3
<b>Total</b>	<b>803</b>	<b>100</b>	<b>871</b>	<b>100</b>
<b>Dentist</b>				
• up to 20 minutes	268	34	380	45
• 20-40 minutes	240	31	307	36
• 40-60 minutes	173	22	104	12
• more than 1 hour	100	13	61	7
<b>Total</b>	<b>781</b>	<b>100</b>	<b>852</b>	<b>100</b>
<b>Hospital</b>				
• up to 20 minutes	186	23	286	33
• 20-40 minutes	256	32	321	37
• 40-60 minutes	212	27	186	21
• more than 1 hour	144	18	83	10
<b>Total</b>	<b>798</b>	<b>100</b>	<b>876</b>	<b>100</b>
<b>TB treatment facility</b>				
• up to 20 minutes	50	6	128	15
• 20-40 minutes	109	14	188	22
• 40-60 minutes	147	18	135	16
• more than 1 hour	224	28	202	23
• don't know	277	34	215	25
<b>Total</b>	<b>807</b>	<b>100</b>	<b>868</b>	<b>100</b>



**Figure 5: Patients with travel time of up to 20 minutes to health care facilities (%)**

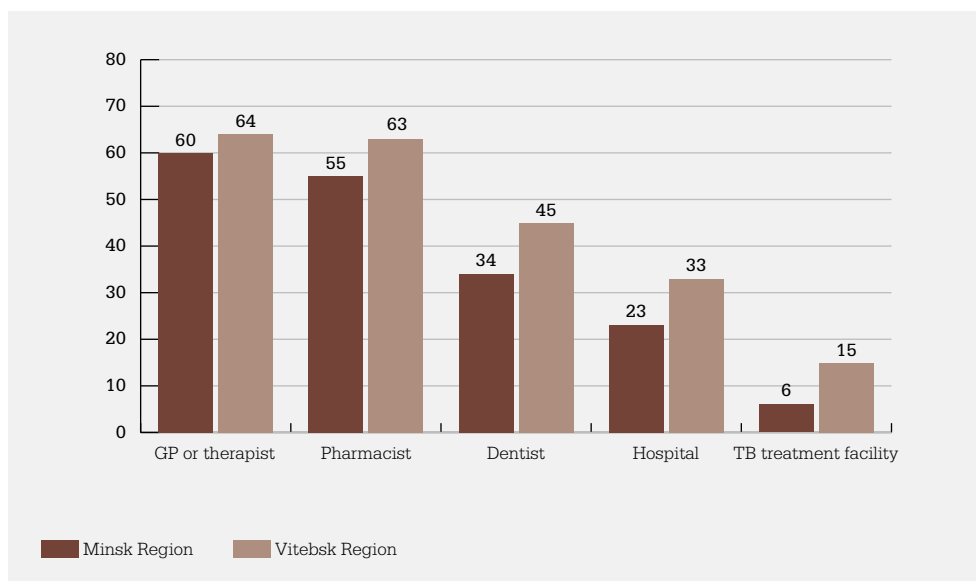


Table 62 provides the results of a list of 15 items which, together, indicate the patients' experiences and opinions concerning service aspects of their polyclinic or ambulatory, such as accessibility and convenience of the premises, treatment by practice staff and opening hours and availability of service 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'.

The majority of patients, over 70%, indicated that they could easily reach the health centre or polyclinic by public transport. This relates to the short travel time, reported in Table 61. About physical access of the premises for the handicapped or those using a wheelchair, the answers were less positive. In the Minsk region there may be much ground for improvement in this respect, since less than 40% of the respondents answered the polyclinic or ambulatory was easily accessible for these groups. Compared to the Vitebsk region, where 57% stated that access by wheelchair was good, the situation was clearly better – but could still be improved.

**Table 62: The quality of ambulatories/ polyclinics experienced by patients, by region**

Patients agreeing with following statements:	Minsk Region (N=815)		Vitebsk Region (N=889)		Total (N=1704)	
	Abs.	%	Abs.	%	Abs.	%
I can easily reach the polyclinic or ambulatory by public transport	574	71	698	79	1272	75
The polyclinic or ambulatory is well accessible for disabled and persons with a wheelchair	309	38	496	57	805	48
The waiting room for patients is convenient	395	49	567	65	962	57
My polyclinic or ambulatory has a website	25	3	108	12	133	8
In my polyclinic or ambulatory there is a complaint mail box that I can use to submit a complaint if I am not satisfied	524	65	749	85	1273	75
When the practice is open and I want to visit a GP or therapist urgently it is possible to have the visit the same day	606	75	779	88	1385	82
During opening hours it is easy to get a doctor on the telephone for advice	469	58	661	75	1130	67
When I visit the practice there is always at least one doctor available	628	77	800	91	1428	84
When the polyclinic or ambulatory is closed there is a telephone number to call when I get sick	456	56	692	79	1148	68
In my practice it is possible to visit a GP or therapist on Saturdays or Sundays	474	59	712	80	1186	70
In my polyclinic or ambulatory it is possible to visit a GP or therapist after 18h00 (at least once per week)	326	40	578	66	904	54
I am satisfied with the current opening hours of the practice	636	78	792	90	1428	84
Staff at the reception desk are kind and helpful	605	74	744	85	1349	80
Making an appointment with my GP or therapist takes too much time	83	10	140	16	223	13
I need to wait too long in the waiting room to see the doctor	246	31	167	19	413	25

**Table 63: The quality of ambulatories/ polyclinics experienced by patients, by urbanisation**

Patients agreeing with following statements:	Urban (N=431)		Rural (N=1273)		Total (N=1704)	
	Abs.	%	Abs.	%	Abs.	%
I can easily reach the polyclinic or ambulatory by public transport	358	84	914	72	1272	75
The polyclinic or ambulatory is easily accessible for disabled and persons with a wheelchair	211	50	594	47	805	48
The waiting room for patients is convenient	199	47	763	60	962	57
My polyclinic or ambulatory has a website	47	11	86	7	133	8
In my polyclinic or ambulatory there is a complaint mail box that I can use to submit a complaint if I am not satisfied	303	71	970	76	1273	75
When the practice is open and I want to visit a GP or therapist urgently it is possible to have the visit the same day	332	78	1053	83	1385	82
During opening hours it is easy to get a doctor on the telephone for advice	196	46	934	74	1130	67
When I visit the practice there is always at least one doctor available	346	81	1082	85	1428	84
When the polyclinic or ambulatory is closed there is a telephone number to call when I get sick	245	58	903	71	1148	68
In my practice it is possible to visit a GP or therapist on Saturdays or Sundays	313	73	873	69	1186	70
In my polyclinic or ambulatory it is possible to visit a GP or therapist after 18h00 (at least once per week)	308	73	596	47	904	54
I am satisfied with current opening hours of the practice	348	81	1080	85	1428	84
Staff at the reception desk is kind and helpful	298	70	1051	83	1349	80
Making an appointment with my GP or therapist takes too much time	59	14	164	13	223	13
I need to wait too long in the waiting room to see the doctor	123	29	290	23	413	25

Patients in the Vitebsk region were moderately positive about the quality of the waiting room, but half of the patients in the Minsk region could not agree that the waiting room was convenient.

A website as a service of the centre to the patients was probably not relevant to most respondents. Asked about the existence of such a website, three-quarters of the patients in the Minsk region and two-thirds of the patients in the Vitebsk region replied they did not know (not in table). The answers of the remaining pointed to a rare use of websites

for communication and information to patients. In both regions the majority of patients was aware of the existence of a complaint mail box in their polyclinic or ambulatory.

In general, respondents in the Vitebsk region had more positive experiences with opening hours and getting to doctors, either personal or by telephone than respondents in the Minsk region. In the Vitebsk region a large, and in the Minsk region a moderate to small majority of patients had the experience that, during opening hours, a doctor was always available and that it was possible to visit a doctor the same day if necessary. About 80% of the respondents in the Vitebsk region, but only 56% in the Minsk region, answered there was a telephone number for patients to use when they would get sick outside opening hours.

Possibilities to visit a doctor in the evening or on weekend days were scarcer in the Minsk region compared to the Vitebsk region. Opening at least one evening per week was a service available to two-thirds of respondents in the Vitebsk region (66%), but reported by only 40% of the patients from the Minsk region. Possibilities to visit the doctor on a weekend day were answered positively by 59% of the respondents in the Minsk region and 80% in the Vitebsk region. Despite these limitations, satisfaction of the patients with current opening hours was widespread in both regions.

Treatment at the reception desk was widely appreciated. More than 70% agreed that staff at the reception desk was kind and helpful. Relatively small groups of respondents agreed that making an appointment with a doctor took too long. However, the time patients subsequently had to spend in the waiting room was too long according to just over 30% of the respondents in the Minsk region.

### **5.3. Continuity of care**

#### **5.3.1. Longitudinal and interpersonal continuity**

On average, patients visited their primary care doctor four to almost five times a year (see Table 64). The visiting pattern in both regions was largely identical. Not having seen the doctor during the past year was exceptional. Around 55% reported one to three visits and a quarter to one fifth of the patients answered that they had visited the doctor four to six times in the previous year. The category of frequent attendees, with more than 12 visits, was somewhat larger in the Minsk region than in the Vitebsk region.

The frequency of visits to the nurse was around three times in the past year. In the Minsk region 44% and in the Vitebsk region 25% of the patients answered they had not visited a nurse in the previous year. Like with the visits to physicians, the category reporting more than 12 visits was slightly larger in the Minsk region than in the Vitebsk region.

The next focus of this chapter is on the perceived function of the personal relationship between the primary care physician and the patient. Important aspects in this evaluation are communication between the doctor and the patient, how patients perceive the doctor's competence and the patients' trust and confidence in the doctor. Basic to this evaluation are the conditions for a relationship between doctor and patient, for instance in terms of personal continuity and time available to patients in a consultation. Before

giving details of the patients' evaluation, Table 65 will deal with the following three aspects of these conditions: how long patients have been registered with this doctor; do patients normally see the same doctor when they visit the centre; and what is the usual length of a consultation.

**Table 64: Patients' frequency of visits to their primary care doctor and nurse during the previous 12 months**

Visit frequency past 12 months	Minsk Region (N=815)		Vitebsk Region (N=889)		Total (N=1704)	
	Abs.	%	Abs.	%	Abs.	%
<b>Doctor</b>						
• no visits	26	3	10	1	36	2
• 1-3 visits	441	54	545	61	986	58
• 4-6 visits	165	20	213	24	378	22
• 7-9 visits	44	5	41	5	85	5
• 10-12 visits	69	9	47	5	116	7
• 13 or more visits	68	8	33	4	101	6
<b>Total doctor</b>	<b>813</b>	<b>100</b>	<b>889</b>	<b>100</b>	<b>1702</b>	<b>100</b>
Average annual visit frequency with physician	4.9		3.7		4.2	
<b>Nurse</b>						
• no visits	358	44	220	25	578	34
• 1-3 visits	249	31	407	46	656	39
• 4-6 visits	76	9	146	16	222	13
• 7-9 visits	20	3	23	3	43	3
• 10-12 visits	57	7	47	5	104	6
• 13 or more visits	55	7	46	5	101	6
<b>Total nurse</b>	<b>851</b>	<b>100</b>	<b>889</b>	<b>100</b>	<b>1704</b>	<b>100</b>
Average annual visit frequency with nurse	2.8		3.0		2.9	

The conditions for a continuous doctor-patient relationship were good. Practice populations seemed to be relatively stable. Patients had been registered with their current doctor for a relatively long time. Fifty-eight percent of the patients in the Minsk region and sixty-one percent of those in the Vitebsk region replied being more than three years with their current physician. Among respondents in the Vitebsk region 8% and among those in the Minsk region, 12% came to their current doctor no more than a year ago. Being registered with a physician indeed seems to mean that patients see this doctor every time they visit the primary care centre or polyclinic. However, 22 to 30 percent of the patients replied this was not always the case. Results concerning the length of the consultations point to sufficient time for patients. The average length was 18 minutes. Consultations of ten minutes or shorter were mentioned by only approximately 20% of the respondents. Consultations with a duration of more than 15 minutes were normal according to half of the patients in both regions. Most patients indicated that they could visit their GP or therapist the same day after making an appointment. Having to wait two days or more appeared to be extremely rare.

What patients think about their doctor is summarized in the lower part of Table 65. Patients in the Vitebsk region are on average more positive about their doctor than patients in the Minsk region. Most patients assumed their doctor would know about their past

problems and illnesses from their medical records. They were less sure, however, if the doctor would also know their personal work and living situation. Around one quarter in the Vitebsk region and about 40% in the Minsk region did not think so or did not know.

**Table 65: Patients' experiences with their doctor, by region**

Statements	Minsk Region (N=815)		Vitebsk Region (N=889)		Total (N=1704)	
	Abs.	%	Abs.	%	Abs.	%
Length of time being a patient with this GP or therapist						
• less than one year	97	12	70	8	167	10
• 1-3 years	124	15	204	23	328	19
• more than 3 years	470	58	542	61	1012	60
• I don't know	121	15	72	8	193	11
If I visit a GP or therapist I see the same doctor each visit	565	70	688	78	1253	74
Estimated duration of a consultation						
• up to 5 minutes	29	4	13	2	42	3
• 6-10 minutes	127	16	148	17	275	16
• 11-15 minutes	213	26	309	35	522	31
• more than 15 minutes	444	55	418	47	862	51
Average length of a consultation (in minutes)	2.8		3.0		2.9	
Estimated time between making an appointment and visiting the GP or therapist						
• the visit is the same day	559	69	738	83	1297	76
• I have to wait 1 day	44	5	49	6	93	6
• 2-3 days	14	2	12	1	26	2
• more than 3 days	6	1	1	0	7	0
• I never make appointments	134	17	69	8	203	12
• I don't know	57	7	18	2	75	4
My GP or therapist knows my personal situation (e.g. work or home situation)	483	59	645	73	1128	66
My GP or therapist knows the problems and illnesses that I had in the past (from my medical records)	584	72	760	86	1344	79
My GP or therapist takes sufficient time to talk to me	646	80	785	89	1431	85
My GP or therapist listens well to me	698	86	810	92	1508	89
My GP or therapist not just deals with medical problems but can also help with personal problems and worries	349	43	599	68	948	56
My GP or therapist gives clear explanation about my illnesses and prescribed medicines	628	77	787	89	1415	84
My GP or therapist would visit me at home if I would ask for it	686	85	821	93	1507	89
After a visit to my GP or therapist I feel able to cope better with my health problem / illness	521	64	740	84	1261	74
When I have a new health problem, I go to my GP or therapist before going to a medical specialist	614	75	785	89	1399	82
My polyclinic or ambulatory has sufficient medical equipment	201	25	353	40	554	33

**Table 66: Patients' experiences with their doctor, by urbanisation**

Statements	Urban (N=431)		Rural (N=1273)		Total (N=1704)	
	Abs.	%	Abs.	%	Abs.	%
Length of time being a patient with this GP or therapist						
• less than one year	46	11	121	10	167	10
• 1-3 years	99	23	229	18	328	19
• more than 3 years	215	50	797	63	1012	60
• I don't know	71	17	122	10	193	11
If I visit a GP or therapist I see the same doctor each visit	287	68	966	76	1253	74
Estimated duration of a consultation						
• up to 5 minutes	19	4	23	2	42	3
• 6-10 minutes	100	23	157	14	275	16
• 11-15 minutes	158	37	364	29	522	31
• more than 15 minutes	153	36	708	56	862	51
Average length of a consultation (in minutes)	15.8		19.0		18.2	
Estimated time between making an appointment and visiting the GP or therapist						
• the visit is the same day	293	68	1004	97	1297	76
• I have to wait 1 day	51	12	42	3	93	6
• 2-3 days	11	3	15	1	26	2
• more than 3 days	1	0	6	1	7	0
• I never make appointments	54	13	149	12	203	12
• I don't know	20	5	55	4	75	4
My GP or therapist knows my personal situation (e.g. work or home situation)	249	58	879	69	1128	66
My GP or therapist knows the problems and illnesses that I had in the past (from my medical records)	319	75	1025	81	1344	79
My GP or therapist takes sufficient time to talk to me	342	81	1089	86	1431	85
My GP or therapist listens well to me	363	86	1145	90	1508	89
My GP or therapist not just deals with medical problems but can also help with personal problems and worries	200	47	748	59	948	56
My GP or therapist gives clear explanation about my illnesses and prescribed medicines	345	81	1070	84	1415	84
My GP or therapist would visit me at home if I would ask for it	363	86	1144	90	1507	89
After a visit to my GP or therapist I feel able to cope better with my health problem / illness	299	70	962	76	1261	74
When I have a new health problem, I go to my GP or therapist before going to a medical specialist	324	76	1075	85	1399	82
My polyclinic or ambulatory has sufficient medical equipment	150	35	403	32	554	33

Communication skills were generally appreciated. Most respondents answered that their doctor took sufficient time to talk, listened well and gave clear explanation about illnesses and prescribed medicines. Fewer patients, especially in the Minsk region, agreed with the statement that physicians would be open to deal with other than medical problems. The majority of patients in both regions agreed with the statement that their doctor would visit them at home if asked and slightly fewer patients, but still a majority, answered they felt they could cope better with their health problems or illness after a visit to their GP or therapist. Three-quarters to almost 90% of patients indicated they would go to their GP or therapist with a new health problem, before seeking help from a medical specialist. Nevertheless there appeared to be questions whether the polyclinic or ambulatory had sufficient equipment available. In the Minsk region three out of four patients answered either that the equipment was not sufficient or they did not know. In the Vitebsk region patients were more positive about the level of medical equipment but still six out of ten did not know or found it was not enough.

According to the majority of patients, especially in the Vitebsk region, their GP or therapist talked with them about how to stay healthy (Table 67). They most often received advice on eating healthy, followed by advice on physical exercise. Advice about the use of alcohol or the reducing or stopping smoking was received less frequently, for example in the Minsk region by just over half of the patients. A minority of patients in the Minsk region indicated that their doctor talked to them about issues of safe sex (preventing of unwanted pregnancy or sexually transmitted infections).

**Table 67: Patients' assessment of involvement of physician in promoting healthy behaviour**

Topic	Minsk Region (N=815)		Vitebsk Region (N=889)		Total (N=1704)	
	Abs.	%	Abs.	%	Abs.	%
Eating healthy	644	79	821	93	1465	86
Physical exercise	538	67	732	86	1270	77
Use of alcohol	435	54	642	77	1077	66
Reduce or stop smoking	449	56	616	75	1065	66
Safe sex	348	44	467	59	815	51

#### 5.4. Coordination of care

##### 5.4.1. Cohesion within primary care / coordination with other care levels

Most patients had no freedom to initially choose their doctor, as can be read from Table 68. Around 80% of the respondents in both regions reported they were assigned to their current doctor. The answers were less clear about the freedom to change doctors. Many people, 30% in the Minsk region and 20% in the Vitebsk region did not know the answer to the question whether they could change. Almost half of the patients in the Minsk region and well over a third in the Vitebsk region answered that changing was not possible.



**Table 68: Patients' freedom to choose and change their primary care physician**

Option	Minsk Region (N=815)		Vitebsk Region (N=889)		Total (N=1704)	
	Abs.	%	Abs.	%	Abs.	%
Patients reporting to be assigned to this doctor	677	83	672	76	1349	79
Patients reporting they cannot change to another doctor	396	49	329	37	725	43

Patients generally did not have very positive views about the exchange of information between their own physician and other treating physicians (Table 69). In the Minsk region only 49% and in the Vitebsk region 60% of the respondents wrote that if they would visit someone other than their own GP or therapist, this doctor would have all the necessary information. And 55% in the Minsk region and 75% of responding patients in the Vitebsk region believed that with a referral their own GP or therapist would inform the specialist. After being treated by a medical specialist, 70% and 85% respectively, answered that his or her GP or therapist would know the result of this specialist treatment. There was a general agreement that the GP or therapist and nurse were working well together. A majority of patients (54% in the Minsk region and 75% in the Vitebsk region) answered that sometimes the nurse made independent consultations, thus making a visit to the GP or therapist unnecessary. In Table 70 results are presented by urban and rural location of the practice. It shows that the rural population is more positive about the aspects of information and communication between providers, as listed in the table, than those living in urban areas.

**Table 69: Patients' experiences with information and cooperation, by region**

Statements	Minsk Region (N=815)		Vitebsk Region (N=889)		Total (N=1704)	
	Abs.	%	Abs.	%	Abs.	%
If I visit someone other than my own GP or therapist, he/she has all the necessary information about me	394	49	530	60	924	55
When I am referred my GP or therapist informs the medical specialist about my illness	448	55	664	75	1112	66
If I have been treated by a medical specialist, my GP or therapist knows the results of it	565	70	744	85	1309	77
To see a specialist, I first need to visit my GP or therapist for a referral	552	68	640	73	1192	71
My GP or therapist and the practice nurse are working well together	615	76	807	91	1422	84
Sometimes a nurse does the consultation, making it unnecessary to see my GP or therapist	433	54	653	75	1086	64

**Table 70: Patients' experiences with information and cooperation, by urbanisation**

Statements	Urban (N=815)		Rural (N=1273)		Total (N=1704)	
	Abs.	%	Abs.	%	Abs.	%
If I visit someone other than my own GP or therapist, he/she has all the necessary information about me	189	45	735	58	924	55
When I am referred my GP or therapist informs the medical specialist about my illness	242	57	870	69	1112	66
If I have been treated by a medical specialist, my GP or therapist knows the results of it	291	69	1018	80	1309	77
To see a specialist, I first need to visit my GP or therapist for a referral	258	61	934	74	1192	71
My GP or therapist and the practice nurse are working well together	347	81	1075	85	1422	84
Sometimes a nurse does the consultation, making it unnecessary to see my GP or therapist	242	57	844	67	1086	64

Most patients in both regions reported that they had seen posters or leaflets in the waiting room of their polyclinic or ambulatory about tuberculosis and sexually transmitted infections and how to prevent getting infected (Table 71). Information on family planning was less often seen in waiting rooms. All three topics appeared to be more often seen or heard on television or radio in the Vitebsk region than in the Minsk region, but in both regions the majority of patients indicated they had received such information.

**Table 71: Patients' experiences with posters, leaflets or other forms of general information, by region**

Information	Minsk Region (N=815)		Vitebsk Region (N=889)		Total (N=1704)	
	N	%	N	%	N	%
Seen posters or leaflets in the waiting room about:						
• Tuberculosis and how to prevent infection with TB	652	80	777	87	1429	84
• Sexually transmitted infections and how to prevent them	653	80	773	87	1426	84
• Information on family planning and contraception	515	63	677	76	1192	70
Seen or heard information on radio or television during the last 6 months about:						
• Tuberculosis and how to prevent infection with TB	509	63	698	79	1207	71
• Sexually transmitted infections and how to prevent them	626	77	759	85	1385	81
• Information on family planning and contraception	490	60	665	75	1155	68

# 6 SUMMARY, CONCLUSIONS AND RECOMMENDED ACTIONS

## 6.1. Overview 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 72: Summary of findings (based on the results of the surveys among physicians and patients and on the national level questionnaire)**

Selected dimension	Selected information items	Selected proxies / findings	Background to findings	Source
<b>Stewardship</b>				
Policy development	Primary care as priority area	<ul style="list-style-type: none"> <li>• Specific legislation developed concerning Primary Care (PC): yes</li> <li>• Department at the MoH specifically dealing with PC: yes since 2007</li> </ul>	<p>Belarus has chosen an incremental change in their health care system. No immediate and fundamental reforms have been implemented; changes have been modest and implementation has taken place in pilot areas rather than nationwide.</p> <p>In the second half of the 1990s general practice was introduced in Belarus as a model for rural areas only. It has been partially implemented. GPs do not hold a gate keeping position. Funding has not changed so far in favour of primary care.</p>	National level quest.
	Regional variation	There is very little space for regional health policy	Yet, inequalities in service provision do exist – between urban and rural areas and between areas that differ in economic development	National level quest.
	Subjects of debate	<ul style="list-style-type: none"> <li>• Primary care model for urban areas</li> <li>• Organization of ambulance services</li> <li>• Role of PC in 'parallel services' like TB care and reproductive health</li> </ul>	<p>It seems the GP model for cities is no longer a taboo. However, according to the official policy GPs are only for rural practice.</p> <p>National TB guidelines are revised for standardization, including its use on PC level.</p>	National level quest.
Conditions for the care process	Laws and regulation		The government's vision of primary care has been published in various laws and documents.	National level quest.
Conditions for responsiveness	Involvement of professionals and patients in policy process		Organizations of professionals and patients are not formally involved in the policy process.	National level quest.

Selected dimension	Selected information items	Selected proxies / findings	Background to findings	Source
	Patient rights	% PC centres or practices with patient complaint procedure reported to be known by patients: 75%		
<b>Financing</b>				
Incentives for providers		Employment status of PC physicians: state-employed with salary	Private primary care practice is non-existent.	National level quest.
Financial access for patients		% patients reporting co-payments for drugs prescribed in PC: 74.5 %	Primary care is for the majority of patients free of charge, except for prescribed medicines or injections. Many patients reported co-payments for these services, which did not seem to be an obstacle to the utilization of health care services.	Patient survey
<b>Resource generation</b>				
Professional development	Workforce	<ul style="list-style-type: none"> <li>• % of all active physicians in Belarus working in PC: 12.4%</li> <li>• % of PC physicians who are GPs: 9.9%</li> <li>• Average age of GPs: 49 years</li> <li>• Average age of therapists: 45 years</li> </ul>	<p>Physician density is very high in Belarus. A modest proportion is working in primary care. The introduction of GPs in primary care is not well advanced; only 10% of PC physicians are GPs.</p> <p>A very small amount of GPs completed the postgraduate training; a large majority completed a retraining programme.</p> <p>GPs were relatively old with an average age of 49.</p>	National level quest.
	Shortages	<ul style="list-style-type: none"> <li>• % of GP positions currently vacant in Belarus: n.a.</li> <li>• % of therapist positions currently vacant in Belarus: n.a.</li> <li>• 64% of GPs and 58% of therapists reported shortages existing for more than 6 months</li> </ul>	At the national level severe shortages among district physicians were reported. Among GPs shortages exist in a number of regions. Survey results point to severe shortages of GPs and therapists, and moderate shortages of nurses in both regions. Shortages were reported more often by urban than by rural physicians	National level quest / Physician survey
	Quality improvement mechanisms	<ul style="list-style-type: none"> <li>• Number of hours GPs or therapists report to spend on professional reading/information per month: 21 hours</li> <li>• % of physicians reporting that they frequently use clinical guidelines: 86 %</li> </ul>	<p>The required minimum of CME is 80 hours per 5 years; it is usually spent on a course organized by BelMAPO</p> <p>Many clinical guidelines have been developed by medical specialists under the auspices of the MoH. No GPs are involved in drafting guidelines</p>	National level quest.

Selected dimension	Selected information items	Selected proxies / findings	Background to findings	Source
	Organization of professionals	<ul style="list-style-type: none"> <li>Number of medical universities in Belarus with GP (re) training facility: 2 (from total of 5)</li> </ul>	<p>GP retraining is offered by 2 institutes; in only one of them there is a postgraduate programme for general practice.</p> <p>There are no professors in GP in Belarus because GP/FM has not been acknowledged officially as academic discipline</p>	Physician survey
<b>Delivery of care</b>				
<b>Accessibility</b>				
Geographical access		<ul style="list-style-type: none"> <li>% of patients reporting up to 20 minutes travel to GP or therapist: 61.6 %</li> </ul>	Patients could easily reach their GP, therapist or pharmacist within 20 minutes travel time. They had more difficulty in reaching their dentist (particularly in Minsk region), hospital and TB treatment facility.	Patient survey
Organizational access	Practice population	<ul style="list-style-type: none"> <li>Reported number of patients per GP: 2086 patients</li> <li>Reported number of patients per therapist: 2109 patients</li> </ul>	<p>On average the GPs reported practice populations of almost 2100, which is +75% of the official norm.</p> <p>The size of the practice populations of district therapists and GPs were almost equal, although the norm for the last mentioned is much lower (1800 and 1200 respectively).</p> <p>Practices in the Minsk region were on average larger than practices in the Vitebsk region.</p>	Physician survey
	Workload	<p>Reported number of:</p> <ul style="list-style-type: none"> <li>Office consultations per day per GP: 30</li> <li>Office consultations per day per therapist: 31</li> <li>Home visits per week per GP: 27</li> <li>Home visits per week per therapist: 28</li> <li>Working hours per week per GP: 43</li> <li>Working hours per week per therapist: 41</li> </ul>	<p>The workload may strongly fluctuate. In time of a flue epidemic all those who are absent from work need to be seen by the PC physician to get a sickness certificate.</p> <p>Also check up campaigns, for instance with school children, may cause a temporary sharp increase of the workload.</p>	Physician survey

Selected dimension	Selected information items	Selected proxies / findings	Background to findings	Source
	Patients' access and availability of services	<ul style="list-style-type: none"> <li>• Reported visiting frequency of patients (utilization rate): 4.2 visits per year</li> <li>• Reported average length of a patient consultation per patient: 18.2 minutes</li> <li>• Physicians offering same day consultation 99%</li> <li>• Patients reporting to have same day consultation if requested 76%</li> <li>• Physicians offering evening opening at least once per week 78%</li> </ul>	<p>The visit frequency reported by patients (4.3) is much lower than the officially reported 12.7 visits per year per patient. Patient probably do not report visits for check up, prevention, sickness certificates and other administrative reasons.</p> <p>The average length of consultation is comparatively long.</p> <p>Although patients experienced limited access outside office hours, especially in Minsk region, they reported to be satisfied with current opening hours. Only very few found it took too long to make an appointment or to wait in the waiting room.</p> <p>Physicians reported a high availability for patients during normal and out-of-office hours.</p> <p>Almost all practices offered clinics or sessions for special patient groups, such as those with hypertension, diabetes, or pregnant women.</p>	<p>National level quest.</p> <p>Patient survey</p> <p>Physician survey</p>
<b>Coordination</b>				
Cohesion within primary care	Practice management		Coordination of care, particularly within primary care, was not optimal. Almost one-third of the physicians worked single-handed without much interdisciplinary collaboration.	Physician survey
	Collaboration	<ul style="list-style-type: none"> <li>• % physicians working with other PC physician(s) in same premises: 27 %</li> <li>• % of physicians reporting to have regular face-to-face meetings with: <ul style="list-style-type: none"> <li>» Practice nurse: 68 %</li> <li>» Midwife: 74 %</li> <li>» Pharmacist: 55 %</li> </ul> </li> </ul>	<p>Sharing premises with nurses and laboratory technicians was normal. Most physicians also worked with a midwife, dentist, and feldsher in the same building.</p> <p>Physicians primarily had regular meetings with other PC physicians, and community nurses. Meetings with other disciplines occurred less frequently.</p> <p>Task-substitution seemed to occur between physicians and nurses. More than half of the patients reported that sometimes nurses made independent consultations, making a visit to the doctor unnecessary.</p>	<p>Physician survey</p> <p>Patient survey</p>

Selected dimension	Selected information items	Selected proxies / findings	Background to findings	Source
Coordination with other care levels	Referral system	<ul style="list-style-type: none"> <li>• Number of referrals to medical specialists in 4 weeks time: <ul style="list-style-type: none"> <li>» GPs: 19.5</li> <li>» Ther: 39.5</li> <li>» Rural: 19.5</li> <li>» Urban: 39.5</li> </ul> </li> <li>• Referral rate (% of all office and home care contacts) <ul style="list-style-type: none"> <li>» GPs: 3.03 %</li> <li>» Ther: 5.75 %</li> <li>» Rural: 3.23 %</li> <li>» Urban: 6.53 %</li> </ul> </li> <li>• Number of hospital admissions ordered by PC physicians per 100 patient contacts: n.a.</li> <li>• Number of pharmaceutical prescriptions by PC physicians per 100 patient contacts: n.a.</li> </ul>	<p>Although GPs and district therapists had no formal gatekeeping position, most patients indicated they would first visit their doctor with a new health problem before seeking specialist care.</p> <p>Referral rates of GPs were much lower than those of therapists</p> <p>Physicians in rural areas had much lower referral rates than those working in urban settings</p> <p>In both regions the highest proportion of referrals was to specialists of internal medicine; the lowest to dermatologists and to secondary level paediatricians.</p> <p>Coordination was mentioned to be a problem with TB services and Reproductive health services. The role of the primary level in the provision of these service has received special attention by policy makers and WHO</p>	<p>National level quest.</p> <p>Physician survey</p> <p>Patient survey</p>
	Collaboration with secondary level		PC physicians and medical specialists collaborated well in both regions. PC physicians had regular contact with neurologists, surgeons, and gynaecologists, and to a lesser extent with dermatologists, internists, and paediatricians.	Physician survey
<b>Continuity</b>				
Informational continuity		<ul style="list-style-type: none"> <li>• % GPs reporting that they keep medical records of all patient contacts on a routine basis: 90 %</li> </ul>	<p>Medical records were reported to be kept well. It was relatively easy to identify risk groups in the files.</p> <p>Referral letters were generally used when patients were referred.</p> <p>Nevertheless, it seemed there were plenty of opportunities to improve efficiency and usability of information. In both regions computers were rarely used. In the Vitebsk region computers were used by a minority of physicians, but for a wider range of applications than in Minsk region.</p> <p>Patients reported that the exchange of information between their own and other physicians could be improved, for instance with referrals.</p>	<p>Physician Survey</p> <p>Patient survey</p>

Selected dimension	Selected information items	Selected proxies / findings	Background to findings	Source
Longitudinal continuity		<ul style="list-style-type: none"> <li>• % of patients reporting having been with their GP for at least 1 year: 78.6 %</li> <li>• % of patients reporting they had not chosen their doctor but were assigned: 79.2 %</li> </ul>	<p>Most patients were assigned to their doctor, but they reported to be with this doctor for a long time. However, they were either unsure or negative about the difficulty in changing their physicians.</p>	Patient survey
Interpersonal continuity			<p>Patients usually saw their own GP or therapist each visit, and had relatively long consultations.</p> <p>In the Vitebsk region patients were more positive about their doctor than patients in the Minsk region.</p> <p>Patients were sure that their doctor knew them, at least as far as medical history and current problems are concerned.</p> <p>They were also satisfied with communication skills of doctors and their willingness to visit them at home.</p> <p>For non-medical problems they thought their doctor was not the right person.</p> <p>Another critical point was that patients found that the medical equipment in the practice was not sufficient.</p> <p>The general judgement however was positive: patients reported coping better with their health problem after visiting their doctor.</p>	Patient survey
<b>Comprehensiveness</b>				
Practice conditions	Convenience		<p>Access to premises for the handicapped and for those using a wheelchair could be improved in both regions.</p> <p>Patients were satisfied with how they were treated at the reception desk, and were moderately positive about the quality of the waiting room.</p> <p>The 2006 State Programme of Revival and Development of Rural Areas has resulted in general improvement of rural ambulatories</p>	<p>National level quest.</p> <p>Patient survey</p>



Selected dimension	Selected information items	Selected proxies / findings	Background to findings	Source
	Information materials		<p>Practices generally provided sufficient information leaflets for patients in the waiting room, especially in Vitebsk region.</p> <p>Information on social services and on self treatment / coughing could be improved.</p>	Physician survey
Services delivery	Population groups served	<ul style="list-style-type: none"> <li>Consolidated score for the GP as doctor of first contact (based on 18 items; range of score 1-4): 2.52</li> <li>Same for therapist: 1.74</li> </ul>	GPs had a strong position as doctor of first contact for most problems occurring among their patients, except for sexual or reproductive problems or relational or psychosocial problems. Therapists were only occasionally the doctor of first contact. This role was better developed in the Vitebsk region, than in the Minsk region. Compared to 2005, therapists have significantly reduced their first contact position.	Physician survey
	Involvement of primary care physicians in the treatment of diseases	<ul style="list-style-type: none"> <li>Consolidated score for the provision of treatment of diseases by GPs (based on 19 items; range of score 1- 4): 3.10</li> <li>Same for therapists: 2.79</li> </ul>	GPs were strongly involved in the treatment and follow-up of common diseases among their patients. Their involvement was minimal for hyperthyroidism, peritonsillar abscess, and salpingitis. The first contact role of therapists was somewhat weaker.	Physician survey
	Provision of preventive and medical technical procedures	<ul style="list-style-type: none"> <li>Consolidated score for the provision of medical procedures and prevention by GPs (based on 16 items; range of score 1-4): 1.56</li> <li>Same for therapists: 1.26</li> <li>Coverage of public health activities (based on 7 items = 100%) by GPs on a routine basis: 81 %</li> <li>Same for therapists: 61%</li> <li>Involvement in cervical cancer screening programme GPs: 65% / Therapists 25%</li> </ul>	<p>GPs as well as therapists were sparsely involved in prevention and medical technical procedures (such as wound suturing and allergy vaccinations).</p> <p>GPs were more involved in public health activities such rehabilitative care, breast cancer screening, and school health programmes, than therapists.</p> <p>Most patients reported that their PC physician would pay attention to eating habits and getting physical exercise.</p> <p>Less attention is paid, however to safe sex, alcohol use and smoking.</p> <p>In most waiting rooms patients are offered information on TB and STIs. Most information on family planning, TB prevention and STI prevention is received via the media.</p>	<p>Physician survey</p> <p>Patient survey</p>

Selected dimension	Selected information items	Selected proxies / findings	Background to findings	Source
	Provision of mother / reproductive and child health care	<ul style="list-style-type: none"> <li>• % GPs providing routine antenatal care: 77 %</li> <li>• % therapists providing routine antenatal care: 29 %</li> </ul>	<p>GPs clearly have a more comprehensive role in Mother/RH and Child health. Nevertheless most physicians reported not being trained for these tasks.</p> <p>Sexual education or counselling seems to be a neglected area by physicians and nurses.</p>	Physician survey
	Provision of tuberculosis care	<ul style="list-style-type: none"> <li>• Physicians involved in TB follow up care GPs: 88% / Therapists 53%</li> <li>• Number of new TB patients identified in PC practice in 2007: 1.15 reported per physician</li> <li>• Number of households with recently revealed TB case under own primary care supervision: 2.2 per physician</li> <li>• Physicians trained specifically for counselling TB patients: GPs: 78% / Therapists: 45%</li> </ul>	<p>PC physicians generally reported to actively monitor TB cases and to be strongly involved in TB follow-up care.</p> <p>On average each physician had identified one new case of TB in 2007.</p> <p>Compared to therapists, GPs or their staff more often personally handed over the anti-TB drugs to the patients, and performed the directly observation of treatment (DOT).</p> <p>Most physicians were trained for providing TB care; most of them received training in 2006.</p>	Physician survey
Community orientation		<ul style="list-style-type: none"> <li>• % of physicians reporting regular meetings with local authorities: 79 %</li> </ul>	In both regions PC physicians had a fairly strong connection with the community, in terms of regular meetings with local authorities, and community/social workers. However, patients rarely participated in PC practice policy making.	Physician survey

## 6.2. Recommended policy actions

- The results of the application of the PCET in Belarus have convincingly shown that GPs make a difference in Belarus primary care. Despite being responsible for patient populations far above the national norm, they are strong in the first contact with health problems, provide a broader range of clinical and preventive services and they have much fewer referrals to medical specialists than therapists. However, at present only 10% of physicians in primary care are GPs. It is now time to continue and speed up the realization of already existing policy intentions to implement the general practice based model of primary care in all rural facilities;
- Results also show that this model is feasible in the urban environment. The policy vision on primary care, which is now limited to rural areas, should become more comprehensive and include the whole of primary care in the country;

- The service profile of GPs points to possibilities of a gatekeeping role for GPs that are trained for it. Exploring these possibilities and, subsequently, considering a redefinition of the tasks and responsibilities of GPs is recommended;
- The recommended roll out of general practice based primary care requires a mix of measures, including investments in financial and human resources; expansion of GP education and training; improvement of medical information; a critical examination of the responsibilities and tasks of GPs and nurses; and more efficiency in health care management at all levels;
- The rollout of general practice is destined to stagnate if the necessary large numbers of new GPs cannot be recruited and retained. Developing a plan to tackle this problem, including a mix of balanced payment schemes and non-financial incentives to upgrade working and living conditions for medical professionals in rural areas is recommended. It could be worth investigating what would make physicians decide on working in rural practice. A point of special attention is the relatively high age of GPs. Replacement of pensioning GPs in the near future will add to the existing recruitment demand;
- Effective financial incentive schemes should be devised that take into account aspects of individual performance. Such schemes are more effective than undifferentiated general increases in salaries. The responsiveness of the system and the possibility for patients to freely choose their GP will benefit from the introduction of an incentive system based on for example payment per capitation mixed with fee-for-service elements or a small number of pay for performance indicators that are easy to generate. This will strengthen the GPs' commitment to his or her patients and it could help to gradually introduce family medicine in the cities;
- Tipping the balance towards primary care implies a shift in funding with more resources for PC and a consequent reduction of resources for the secondary and hospital sector. A shift in funding should be transparent and be implemented in parallel to the revision of the task profiles of primary care workers, for example when GPs take over certain TB or reproductive health services that are now provided by specialists;
- At present, health policy making is the exclusive domain of the Government and the Ministry of Health. For a broad acceptance of reform measures the involvement of stakeholders, including NGOs and representatives of patients, into the process of policy development and implementation can be helpful;
- Although patients are satisfied with the current health services outside office hours, which heavily rely on the ambulance services, a new organization of emergency care is recommended. Ambulance services should no longer overlap with primary care but be supplementary and only serve emergencies. This would require the step-wise implementation of a new out-of-hours scheme for non-emergent cases, including telephone triage; the availability of primary care emergency centres for patients to visit with their own transport; additional medical taxi services and the ambulance services responding to real emergencies;

- A rapid establishment of GP education and training at all medical universities and the creation of professorships in general practice / family medicine would serve two important aims: to create the necessary extra capacity for the education of GPs and to improve the status of this medical profession;
- The efficiency of primary care processes can be improved by using more computers in PC practice. Physicians and nurses should receive training in how to use them for keeping medical records, prescription of medicines, and referral letters to secondary care and searching medical information on the internet. This can contribute to improving continuity of patient information and the targeting of risk groups for more effective screening or chronic care provision, as well as to support with the high burden of administrative reporting tasks;
- Currently-used indicators for the performance in primary care are recommended to be revised. Outcomes on these indicators are only indirectly related to efforts or impacts made by primary care workers;
- The service quality in primary care could be improved, for instance by more intensively using the waiting area for health education, improving access for patients with reduced mobility (including those with wheelchairs) and by offering a practice website. Better access to services may reduce the number of home visits;
- Efficiency in primary care, which is a benefit for workers as well as patients, should be improved by promoting modern methods of practice management. For example, more patient contacts could be planned via appointments or patients could be offered the possibility of telephone consultations;
- Giving priority to a change in the involvement of primary care physicians in sickness certification and absence certification from schools is recommended, because this will reduce the workload of these physicians in the short run. The responsibility for control over short term absenteeism at work could be delegated to employers. Control of absenteeism in schools should be a responsibility of parents and not physicians. Making home visits just for certifying absence from school or work should be abolished;
- The involvement of PC physicians in providing medical technical procedures should be further improved. The medical curriculum should pay sufficient attention to the skills needed to provide these services;
- Patients could play a more active and balanced role in primary care. Patients' responsibilities in prevention and self care can be promoted by means of information and health education – a prime task for health workers in primary care. Training in how to communicate effectively with patients should be part of any curriculum of staff working in primary care.

### **On TB services**

- Implementation of the Stop TB Strategy has implications for the organization and coordination of primary care services and for the professional capacity of health care

workers. Effective TB services, able to control TB and prevent multidrug resistant TB, call for stronger primary care, including health care workers trained for a patient centred approach that ensures detection and completed treatment of TB cases;

- National policies on TB, e.g. related to the provision of anti-TB drugs without direct observation and TB screening for large low risk population groups should be revised and made consistent with WHO recommendations;
- Especially in urban areas, TB care should be better integrated into primary care. This may reduce travel time for patients, promote treatment adherence and prevent treatment defaulting and development of drug resistance;
- The job description of primary care staff should include TB detection and case management after discharge from the hospital. In remote areas, community workers should be trained and utilized for aspects of TB patient care;
- Systematically monitoring the effectiveness of TB care at primary care level is recommended. Appropriate indicators should be used for this purpose (e.g. the rate of detected new smear positive cases and the rate of successful treatment).

#### **On reproductive health services**

- Reproductive health services are currently provided in a fragmented way by many providers in different settings. Reducing the number of providers involved in reproductive health is recommended, along with clearly defining their tasks and relations (for instance in protocols and pathways) and creating conditions for teamwork within and between levels of care to allow a more integrated provision of reproductive health;
- The large number of obligatory checkups and interventions that pregnant and other women must undergo does not correspond with internationally recognized practices and guidelines. Reconsidering prevailing orders and procedures to ensure that these are evidence-based and in the interest of clients is recommended;
- More efforts should be made on education and information of the population on issues of reproductive health. This should be based on the latest evidence and insights on health education. Public health institutions and midwives could play a role in this. Target groups should be involved in developing materials;
- Current guidelines on family planning and the knowledge and skills of GPs in family planning are not well tuned to needs of patients in primary care. Reviewing both these guidelines and the GP curriculum on family planning is advisable.

# ANNEX I GLOSSARY OF TERMS ON PRIMARY CARE

**Accessibility:** the patients' ability to receive care where and when it is needed, given possible physical, financial or psychological barriers (11).

**Comprehensiveness:** the extent to which services provided comprise curative, rehabilitative and supportive care, as well as health promotion and disease prevention (17, 27).

**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) (11).

**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 interlinkages among staff members and agencies over a longer period of treatment (11).

**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 (9).

**Family medicine teams:** family medicine teams can vary from country to country and in size: 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, feldshers (medical attendants), dentists, physiotherapists, social workers, psychiatrists, speech therapists, dieticians, pharmacists, administrative staff and managers, etc. (28). In 2003, WHO used the description that a primary care team is a group of "fellow professionals with complementary contributions to make in patient care. This would be part of a broader social trend away from deference and hierarchy and towards mutual respect and shared responsibility and cooperation (29). 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 primary care and family medicine. Originally, it was meant to describe the concept and model around the most significant single player in primary care: the general practitioner or primary care physician, while family medicine originally encompassed more the notion of a team approach. Whenever the notion of solo practitioner (general practice) versus team-based approach (family medicine) is relevant, the distinction should be made. According to Atun, 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” (30)

**Primary health care:** 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 of the health system (31).

**Primary care:** 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 and coordination is the role by which primary care acts to coordinate other specialists that the patient may need (30). Primary care is a subset of primary health care.

**Performance:** (or composite goal performance) is defined as a relative concept: the extent to which the health system involves relating goal attainment to what could be achieved in the given context of the country (1).

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

**Responsiveness:** is the 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: (a) respect for persons (including dignity, confidentiality [of information] and autonomy of individuals and families to decide about their own health); and (b) client orientation (including prompt attention, access to social support networks during care, providing 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) (1,9).

# **ANNEX 2 REPRODUCTIVE HEALTH SERVICES AT PRIMARY HEALTH CARE LEVEL IN BELARUS**

*This annex was prepared under the responsibility of a national working group lead by Dr. L. Gurinovich (Ministry of Health of Belarus) and Dr. L. Mrochek (BelMAPO, Minsk)*

## **1. Introduction**

“Universal access to reproductive health until 2015” is a target of the Millennium Development Goal Number 5 “Improvement of maternal health” approved by the international community in 2007. Primary care is essential for the population’s access to reproductive health services. Belarus is among the countries that have fully recognized that quality health services at the primary care level are a pre-condition for the improvement of reproductive health of the population.

In the Biennial Collaborative Agreement with the WHO Regional Office for Europe (2008-2009) the Ministry of Health of Belarus has prioritised the evaluation of access and quality of reproductive health services at the primary care level. In addition to the attention paid to reproductive health services in the Primary Care Evaluation Tool (PCET), a group of experts with support from WHO Europe (Dr. Gunta Lazdane) has undertaken a situation analysis on how reproductive health services in Belarus are organized. This annex summarizes the main findings of this situation analysis.

## **2. Approach**

Elements of the WHO tool “Strategic approach to strengthening sexual and reproductive health policies and programs” ([http://www.who.int/reproductive-health/strategic\\_approach/index.htm](http://www.who.int/reproductive-health/strategic_approach/index.htm)) were the basis of the activities undertaken in Belarus – in addition to the PCET. These elements included:

- Stakeholders meeting on the role of reproductive health services in primary care;
- Establishment of a national working group;
- Preparation of a background situation analysis based on available documents and WHO recommended templates;
- Formulation of strategic questions to be clarified during field visits;
- Field visits to Minsk and Vitebsk oblast;



- Agreement on the results by main stakeholders and formulation of recommendations.

### **3. The situation of reproductive health services in Belarus: a stock-take**

#### **Regulatory basis**

The International Conference on Population and Development held in Cairo in 1994 emphasized that improvement of reproductive and sexual health is a basic human right. The program of action adopted at the Cairo conference has influenced the national Belarusian policy on community health protection and the promotion of reproductive health services. The protection and realization of human rights concerning reproductive health has been regulated in a number of laws, presidential decrees and regulations by the Council of Ministers and interdepartmental regulations, of which the following can be mentioned:

- Law of the Republic of Belarus «About health care»;
- Law of the Republic of Belarus «About the rights of children»;
- National program of demographic security of the Republic of Belarus for 2007-2010;
- President's program «The children of Belarus» for 2006-2010;
- State program «The prophylaxis of HIV-infection» for 2006-2010;
- Republican program «The Youth of Belarus» for 2006-2010.

Reproductive health services at primary care level are provided by gynecologists in district clinics, gynecological and prenatal clinics and in district maternity hospitals. The work in these health care institutions is based on the following regulations:

- Order from 29.02.2008 No 150 «About measures for improvement of reproductive health services in Belarus»;
- Instruction concerning the effectiveness of reproductive health service in outpatients' clinics;
- Regulation from 06.09.2007 No 81 «About the organization of female consultation in state health care establishments»;
- Regulation from 22.12.2007 No 192 «About the work organization in state maternity hospitals»;
- Order from 29.02.2008 No 150 «About the improvement of norms and principles in obstetrics and gynecology»;
- Order from 07.02.2007 No 13 «About the approval of the instructions concerning an induced abortion».

There are orders that regulate the work of obstetrician-gynecologists, pediatricians, oncologists and other specialists and include chapters related to reproductive health services. Regulations of these orders also apply to medical staff of rural ambulatories (including GPs):

Orders of the Ministry of Health:

- «About the approval of clinical protocols» (No 66 from 05.02.2007);
- «About the organization of gynecological health services for teenagers» (No 7 from 09.01.2007);
- «About approval of the instruction concerning preventive medical examination of pregnant women and women with gynecological pathology» (No 636 from 30.07.2007);
- «About measures concerning the improvement of reproductive health» (from 22.07.2008);
- «About the clinical examination of patients with oncological diseases» (No 48 from 22.01.2006);
- «About the approval of documents concerning health care service for HIV-infected women and children» (from 05.09.2003);
- «About the organization of regular medical check-up of adults in Belarus» (No 870 from 13.11.2007);
- «About the approval of the model of outcomes taken by the administrative health care establishments in Belarus for 2008» (No 281 from 09.04.2008).

For the prevention of a 'negative demographic process' and the fulfillment of the national demographic security program of the Republic of Belarus for 2007-2010, approved by the President's order No 135, highest priority has been given to family planning, safe motherhood, improvement of women's health, sexual health, and prevention of abortion. In order to implement these issues accordingly, as well as to reduce the maternal death rate and complications during pregnancy and delivery, the following procedures and regulatory legal documents were developed by the Ministry of Health:

- Decree of the Ministry of Health of 21.06.2002 No 34 "On assertion of regulations on the procedure of consultations (conferences of specialist doctors) in public health organizations";
- Order of 13.10.2006 No 776 "On submission of addenda to the order of 08.08.2006 No 631 "On assertion of the regulations on republican specialized medical centers and the list of republican specialized medical centers";
- Order of 31.01.2007 No 59 "On the procedure of the hospitalization of women with extra-genital pathology during pregnancy and puerperal period to somatic and surgical hospitals";

- Order of 05.02.2007 No 66 “On assertion of clinical protocols”;
- Order of 30.07.2007 No 636 “On assertion of instructions on the procedure of clinical examination of pregnant and gynecological patients”;
- Order of 13.11.2007 No 870 “On the organization of dispensary examination of the adult population of the Republic of Belarus”;
- Order of 09.04.2008 No 281 “On assertion of the model of final results of public health services work in administrative territories of the Republic of Belarus for the year 2008”.

Concerning family planning the following regulations are relevant:

- Order of the Ministry of Health from 23.12.2004 No 288, in revision of the order of 29.02.2008 No 150 “On measures for improvement of obstetrical-gynecological services in the Republic of Belarus”;
- Instruction on organizing the work of schools for preparing a family for child birth;
- Instruction on organizing medical aid for married couples with deviation of reproductive functions;
- Instruction on organizing the work of guidance centers “Marriage and family”;
- Order of the Ministry of Health from 23.01.2008 No 42 “On assertion of the national comprehensive program regarding planning of pregnancy and prevention of miscarriage”;
- Decree of the Ministry of Health from 14.09.2006 No 70 “On assertion and order of free medical examination for married people to define their state of health and to reveal genetic disorders”;
- Decree of the Ministry of Health of 28.03.2007 “On assertion of instruction on conducting medical-genetic consultations and check ups of citizens in state health-care organizations”;
- Article 35 of the law of June 18, 1993 “On health protection” in revision of the law of January 11, 2002 and regulations of the Ministry of Health asserted by decree of the Council of Ministers of 23.08.200 No 1331 (in revision of decree of the Council of Ministers of 01.08.2005 No 843).

Induced abortions are performed in accordance with the law of the Republic of Belarus and further regulations of the Ministry of Health, indicating that abortions on demand are possible before week 12 of the pregnancy and from week 12 to 22 based on medical or social indications:

- Decree of the Ministry of Health of 07.02.2007 No 15 “On assertion of the instruction on the order of conducting the termination of pregnancy and on declaring expiring of the decree of the Ministry of Health of 01.08.2002 No 60”;

- Decree of the Ministry of Health of 08.05.2008 No 89 “On entering supplements into decree of Ministry of Health of 07.02.2007 No 15”.

Diagnostics and treatment of malignant diseases are carried out in accordance with the following regulating orders of the Ministry of Health:

- Order of 02.06.1994 No 125 “On improvement of oncological services and aid to the population of the Republic of Belarus”;
- Order of 13.07.1994 No 163 “On submission of changes in the order of the Ministry of Health of 02.06.1994 No 125 “On improvement of oncological services and aid to the population of the Republic of Belarus”;
- Order of 12.02.2004 No 76A “On assertion of protocols of diagnostics and treatment of malignant neoplasms in the health system of the Ministry of Health”;
- Order of 27.08.2004 No 205 “On measures for improving the work of oncological services of the Republic of Belarus”;
- Order of 28.01.2006 No 48 “On clinical examination of patients with oncological diseases”;
- Order of 07.03.2007 No 164 “On creation of the central commission of experts for early revealing of oncological diseases”.

Sexological care to the population is provided in line with the decree of the Ministry of Health from 14.01.2008, No 8 “On the order of organizing sexological care”.

### Some indicators on reproductive health

In 2008, 53.2% of the population in Belarus were women. The proportion of women belonging to the age group of fertile women (according to the Belarus classifications) was 51.2% – of which 78.5% lived in urban areas and 21.5% in rural areas. Table 1 shows the decrease of the number of abortions in Belarus in the past decade.

**Table 1: Abortions in Belarus 1996 – 2007**

Year	All abortions (abs.number)	Abortions per 1000 women of fertile age	Abortions per 100 live births
1996	174.100	66,9	180,6
2000	121.900	46,1	128,7
2004	72.700	26,8	80,7
2005	64.600	24,3	72,0
2006	58.351	20,6	50,1
2007	38.611	14,2	37,4

Source: Ministry of Health of Belarus, 2008

Similar to the decrease of abortions, also reproductive health indicators related to teenagers show positive changes between 2000 and 2007:

- Pregnancies among adolescents (14-18; abortions + confinement)
  - » In 2000: 54 per 1000 adolescents
  - » In 2007: 32.7 per 1000 adolescents
  
- Abortions among adolescents
  - » In 2000: 26.5 per 1000 adolescents
  - » In 2007: 13.1 per 1000 adolescents
  
- Number of births
  - » In 2000: 27.5 per 1000 adolescents
  - » In 2007: 19.6 per 1000 adolescents

In all regions of Belarus the number of women who use hormonal and intrauterine contraception has increased and is now exceeding 55 % of women of reproductive age. IUD is used by 25 % of Belarusian women, 30% of women use hormonal contraception. Since these percentages are still below those of many countries in Europe, further work is to be done in order to improve information and develop services in the field of reproductive and sexual health.

In Belarus, 99.9 % of births are attended by qualified obstetricians. This is one of the main reasons that during the last nine years maternal mortality rate decreased by 3.5 times and in 2007 was 6.8 per 100 000 live births compared to 20 per 100 000 live births in 1999.

The structure of causes of maternal death cases remains stable over the last years. Most of the cases are due to extra-genital pathology caused by systemic disease that existed earlier or was developed during pregnancy (diseases of cardiovascular system, diabetes mellitus, renal diseases and oncologic pathology). Other causes of death are due to obstetrical hemorrhage and gestosis.

In 2007, the index of infant death-rate decreased to 6.2 per 1000 live births (including those born 500 gram and more) compared to 9.3 in the year 2000, and is now one of the lowest in CIS countries.

### **Reproductive health services workforce and tasks**

The workforce of obstetricians-gynecologists consists of in total of ca. 2700 doctors (or 5.2 per 10.000 women). They provide medical services with regard to prevention and management of gynecological disorders, family planning and medical and sanitary demands of the population related to reproductive health.

The majority of reproductive health services according to the state policy is carried out in antenatal clinics where special consultations are organized for family planning, services for reproductive and sexual security of teenagers and young people and services for giving information about modern contraceptive methods. The activities of these services

resulted in a decrease in the number of abortions among women of all age groups (as shown in Table 1) and a decrease in adolescent pregnancy cases.

At present, despite various pilot projects and the priority development of GP-based primary care services, the availability and quality of reproductive health services at the level of primary care is still poor. The pilot primary care ambulatory established in 1996 in Krupitsa (Minsk region) has resulted in a number of methodical documents and publications on the tasks of GPs, also for reproductive health services. For instance, order No 242 (issued 2 September 1998), titled “About the organization of primary medical and sanitary practice and principles of general practice” describes tasks for the following health professions and services:

- Outpatient general practice;
- General practitioner;
- Medical assistant in general practice;
- Midwife in general practice;
- Medical nurse in general practice;
- Model of the outcome measures for general practitioner.

The following medical professionals are involved in delivering reproductive health services at primary care level:

- Midwives, doctor's assistants, pediatricians (in rural ambulatories);
- Midwives, doctor's assistants, GPs (in outpatient clinics with a radius of geographical accessibility of services of up to 35 km);
- Regional obstetrician-gynecologists.

The regional obstetrician-gynecologist should provide special obstetric care to women and manage obstetrical and gynecological disorders. The responsibilities of the obstetrician-gynecologist also include: prevention and screening of gynecological pathology (including breast and cervical cancer), information on healthy life-style, protection of reproductive health, contraception.

At the same time, the work of the regional obstetrician-gynecologist should be based on the principle of people-centered care. It is therefore that the role of the first group (midwife, doctor's assistant, general practitioner) in reproductive health services becomes evident and important since they are closer to the population. The responsibilities of GPs in relation to reproductive health services are regulated by «The regulations about the general practitioner» (supplement No 2 to the order of the Ministry of Health No 242 from the 2d of September 1998).

Tasks of the general practitioner consist in:

- determine the level of health (including reproductive health), detect groups at risk and organize health promotion programs;
- carry out medical examinations;
- provide information and education on healthy life style, prevention of diseases;
- develop and carry out programs on prevention of unwanted pregnancies and family planning;
- provide comprehensive management of various diseases (including gynecological pathology) according to standards developed by the health authorities;
- initiate referral of patients for consultation and treatment if necessary;
- plan, organize and supervise the work of the health staff working in the ambulatory.

An appendix to the above-mentioned order regulates responsibilities of medical assistants (feldshers) and midwives.

Tasks of medical assistants (feldshers) consist in:

- Assist the GPs, work under his/her direction and, in his/her absence, provide primary care;
- Provide primary medical care to the registered patients before the appointment to the physician;
- Organize preventive care events that are aimed to reduce the disease rate of the registered population;
- Educate people on the main principles of healthy life style;
- Organize programs for prevention of unwanted pregnancy, provide information on family planning and oncological pathology.

Tasks of midwives consist in:

- Provide emergency obstetric-gynecologic care;
- Provide antenatal care and promote the early provision of antenatal care;
- Refer pregnant women to an obstetrician-gynecologist or GP for consultation;
- Perform annual screenings of women with oncological pathology, for example:
  - » visual examination of the uterine cervix;
  - » taking of pap-smear;
  - » taking of vaginal smears for bacteriological examination;
  - » breast palpation;

- » promotion of healthy life style; family planning, prevention of unwanted pregnancies.

Midwives of general practice should work under the supervision of the GP and assists him/her in the provision of medical tasks.

Pediatricians at the primary care level should provide necessary medical care to children and adolescents in the district, including the promotion of healthy life style, information on sexual health, contraception and reproductive health protection. However, some pediatricians lack knowledge and skills related to these tasks, which is – to some extent – due to the unavailability of appropriate and modern literature.

### **Education for reproductive health services**

Pre-service training of obstetrician-gynecologists, GPs/family doctors, district therapists and pediatricians in counseling and providing reproductive health services is provided by BelMAPO, the Belarusian Academy of Postgraduate Education at the Belarusian State Medical University. This education can take two forms: either courses which give a first specialization (offered by the BelMAPO departments of general practice, obstetrics and gynecology, and pediatrics) or a full two-year residency program.

Midwives are trained at medical colleges. In the reproductive health services training much attention is paid to components such as family planning, safe motherhood, safe abortion, sexually transmitted infections (STIs), detection of cervical carcinoma and breast cancer. However, the now existing training programs insufficiently prepare health care professionals in areas such as sexual health and sexual education of teenagers. No interviews or surveys are organized with women, men, teenagers or elderly people to learn about their satisfaction with provided reproductive health services. Questionnaires administered in health care establishments usually include only questions about waiting times, queues for an examination at hospitals and clinics and other general questions. Probably, one of the reasons for poor performance of reproductive health services related to sexual health is based on the lack of handouts for patients – as well as teaching materials for health professionals.

For those physicians who are providing reproductive health services, a two week post-graduate training is offered by BelMAPO to ensure qualitative consultations. The teaching materials include publications on family planning, STIs, safe abortion, detection of breast cancer and cervical cancer, information from scientific articles and the bulletin “Reproductive health: problems and opportunities” published by UNFPA in Belarus. Unfortunately, there are not yet text books or professional training materials on the topics mentioned above that could be used to educate health professionals. The “Practical guide for GPs/on family practice” published in 2003 includes some reproductive health questions (e.g. contraception). However, information materials on sexual education, STIs, safe motherhood and gender based violence at primary health care level are missing.

### **Development of reproductive health services and prevention**

A progressive decrease of maternal and infant mortality rate was achieved over the last couple of years by measures taken mainly to optimize medical care. This includes the



primary care level, available and free care for mothers and children including specialized and highly qualified care, the improvement of the quality of medical care to women and children, the improvement of early diagnostics of inherited and congenital diseases using modern technologies of neonatal care; the development and introduction of clinical protocols, the increase of preventive care elements in the services, the reorganization of the work of obstetrical institutions based on different levels of perinatal care, the strengthening and improving of governance, health information, research, legal and financial support, the reconstruction and re-equipment of maternity homes, maternity departments and children's hospitals, and finally the sustainable funding of the health system. In accordance with article 42 of the law of the Republic of Belarus "On health protection" a pregnant woman is guaranteed medical care in public health institutions, hospital care during and after childbirth, and for the medical care of the newborn. Consequently, all women have access to antenatal and post-natal medical care.

The provision of preventive measures for the protection of reproductive health at the level of primary care requires further integration of services. This includes tasks such as: the prevention of unplanned pregnancies; the further decrease in the number of abortions and post-abortion complications; the carrying out of preventive measures targeting various age groups in promoting healthy life style and behavior; the consultation on questions related to reproductive health; family planning; preparation of a woman and her family for pregnancy and childbirth; prenatal care of foetus including prevention and treatment of prenatal infections; prevention of vertical transmission of HIV; introduction of screening programs for prevention and early detection of malignant diseases in reproductive health.

The protection of reproductive health of the youth is high on the agenda in Belarus as well. This means for example to create new approaches to education of children and adolescents, education in healthy life-styles, early diagnostics of diseases in reproductive health of children and adolescents, especially congenital malformations. General practitioners and other medical professionals at primary care level are consulting on these issues – related to safe motherhood, responsible sexual behavior and adolescent pregnancy.

Despite the successful work carried out for protection of reproductive health and decreasing the number of abortions, it is important to note that the number of abortions is still higher compared to other European countries, and that there are a considerable number of minors among those that turn up for such operations.

For early diagnostics of pre-cancer of uterine cervix examinations are conducted and smears from ecto- and endocervix are taken for cytological analysis. In this area the main role at the level of rural medical ambulatories and general practitioners' clinics is given to midwives and medical assistants (feldshers). Examinations of women are conducted once a year in accordance with the order on clinical examinations of women. In some cases, outreaching forms of screening of the female population is used via mobile medical teams at the place of work.

Early diagnostics of breast gland diseases is carried out by visual examination and palpation which are conducted for all women during each visit at all levels – including the primary care level. Such examinations are included into the task list of midwives at

FAPs and GP practices, and into the task list of general practitioners and obstetrician-gynecologists. Organized screening of breast cancer is not yet introduced in Belarus.

If a respective pathology is diagnosed by a GP, district physician or a midwife the woman is referred to a medical specialist in the district polyclinic, for example to an obstetrician-gynecologist, an andrologist, an oncologist or a dermato-venereologist, etc. Women also have the opportunity to consult specialists directly, without referral from a primary care physician. Consultations of andrologists are available at health care facilities at regional level, in particular in polyclinics and hospitals of Minsk city. In 2004, based on work from the research institute of maternity and childhood Protection, a national centre for “mother and child” was established to further develop research into reproductive health in Belarus. The centre also includes a laboratory for reproductive health.

So far, non-government organizations do not play any role in the promotion of reproductive health at primary care level.

All reproductive health services are accessible for both men and women of all ages, including teenagers, women of fertile age, pregnant women, disabled and drug addicts. For the latter there is one specific facility where they can test for HIV and STIs anonymously. Migrants have the opportunity to receive information, diagnostics and treatment concerning reproductive health services, but they have to pay for it both in state public health organizations (except rural areas where all medical services are for free) and in private health care institutions that are mostly situated in Minsk.

### **Feed back information from service provision**

In the absence of surveys on the satisfaction of the population with reproductive health services provided, no data are available on how these services are perceived by users. There are rarely complaints from patients and if, they mostly concern medical services during childbirth or during the stay at a gynecological department. Complaints on reproductive health services constitute less than 0.1% of all complaints for all health services received.

Statistics are gathered once a year regarding the overall performance of health service provision. Each health care organization is obliged to fill in statistical forms according to strict procedures. The gathering is a bottom-up approach, data are delivered from sub-regional facilities to the regional level and up to the national level – and are finally received at the statistics department of the Ministry of Health where the data on regions and Minsk city are integrated into one report and sent to the Ministry of Statistics and Analysis of the Republic.

For data on reproductive health services at primary care level, the level of rural district hospitals, district and regional polyclinics and maternity centers etc. the following reports serve to collect the required information:

- form No 1 “Report on certain infectious, parasitic diseases and carriers”;
- form 1-HIV “Report on the infection of population by human immunodeficiency virus”;

- form No 7 “Report on malignant diseases”;
- form No 9 “Report on the detection of cases of STIs, fungus skin diseases and scabies”;
- form No 12 “Report on the number of diseases registered among the patients aged 15 and older, living in the area of health care institutions providing medical-prophylactic service”;
- form No 13 “Information on abortions (until week 22)”;
- form No 16 “Report on the number of diseases and causes of death of people who suffered from the catastrophe at the Chernobyl nuclear power-station and people equally affected, living in the area of health care organization, subject to clinical examination”;
- form No 30 “ Report of a medical-prophylactic organization”;
- form No 31 “Report on medical aid to children”;
- form No 32 “Report on medical aid to the pregnant women in and after childbirth”.

Reports contain information on:

- number of registered pregnant women;
- number of complications during pregnancy;
- number of births (in time and premature);
- complications during labor;
- extra-genital pathology among pregnant women and women recently given birth;
- number of Cesarean sections.

A separate statistical form is devoted to abortions and includes the following data:

- age structure of women performing abortions (including therapeutic abortions);
- number of complications (e.g. bleedings, inflammatory processes, hormonal dysfunction).

The statistical forms also contain information on the number of women that use intra-uterine contraceptives and the number of women using hormonal or traditional methods of family planning. Furthermore malignant growths, such as cervical cancer diagnosed for the first time, breast cancer and its different stages are reported as well.

#### 4. Main findings of the field visit

In addition to the stock-take of reproductive health services as outlined above, a group of Belarusian experts, comprising of GPs, pediatricians and obstetricians-gynecologists together with experts from WHO carried out a one week fact finding mission on the practical situation of reproductive health services provision in Minsk and Vitebsk oblast in October 2008. The intention was – in addition to the survey of the PCET – to cover all levels of care as well as places and institutions outside the health sector that have an impact on reproductive health services (for example the team visited FAPs, ambulatories, regional hospitals, educational institutions such as schools for graduates, police stations, hotels etc. during the field visit).

The main findings from the field visit are as follows:

- The focus of primary care services is mainly on the diagnosis and treatment of diseases and the respective referring of patients to specialists. Primary care has a very limited role so far in reproductive health promotion and prevention;
- Access to and quality of reproductive health services of primary care in rural areas is insufficient. The rural population needs to rely mainly on far away regional central hospitals and out-patient clinics. Primary care workers such as GPs, midwives and feldshers do not always feel competent to provide counselling to women and men for example with regard to the prevention of sexual and reproductive health problems. During pregnancy, women are visiting obstetricians and gynaecologists and have parallel home visits or ambulatory visits by midwives – services that are provided by different professionals and that are rarely coordinated. Further to this, paediatricians who are visiting newborns at home or are visited by mothers in their practices are not involved in providing any reproductive health services. Reasons for this have been reported as a lack of knowledge in this area, as well as that reproductive health services are not part of paediatrician's job descriptions;
- Many obstetricians and gynaecologists at primary care level involved in reproductive health services are working more than 100% of their staff time due to workforce shortages. The situation is even more critical when other colleagues are attending trainings, are on sick leave or on maternity leave. Midwives and medical nurses are involved in delivering services, however they are not allowed to take over physicians responsibilities even if there are shortages;
- Access to reproductive health information and services for adolescents, people without a registered place of living, men, PLWHIV and people living in remote areas is limited;
- The average length of one consultation in primary care is 10-12 minutes per client according to existing standards. From this 10-12 minutes, more than 50% of the time is needed to fill in forms and documentation. In addition, reporting is duplicated on several health care levels: for example for antenatal care the same data are reported by the GP as by the specialist from the out-patient department of a regional hospital. Consequently, there is a lack of unified forms of medical documentation, especially on the dispensary level and for the evaluation of the reproductive health status of a woman;

- Counselling skills of primary care workers in providing reproductive health services to adolescents, men and victims of sexual violence are limited and inadequate;
- Training in reproductive health for primary care providers is carried out by specialists only such as obstetricians and gynecologists instead of by GPs. This practice is still remaining from the time 5-10 years ago when there were no trained GPs that could carry out trainings according to the needs in the field;
- There is a clear lack of good information products for adolescents and adults on reproductive health at display in primary care facilities. Development and distribution of public health information (those used by mass media such as different leaflets, posters etc.) is not used or organized by national public health authorities or institutions. Existing materials are mostly developed by health care providers on their own initiative – and therefore with a varying degree of expertise and professionalism. These initiatives also seem not to be coordinated. A lot of information found by the expert group during the field visit is not evidence-based and sometimes information products found on the same topics and in the same health care facilities were contradictory;
- The number of recommended visits and examinations during pregnancy and in monitoring different reproductive health problems is not based on existing international evidence and practise;
- Several orders and regulations used in the provision of reproductive health services on primary care level are not based on evidence, nor are they people-centred – meaning putting the interest of the clients or patients first. In real life, this is leading to the fact that either orders are not followed or many consultations are conducted only formally. For example: Order No66 is demanding for four ultrasound examinations during pregnancy; Order No636 (2007) recommends a colposcopy once per year after a caesarean section. In the case of a “gestosis”, the woman, after delivery, needs to visit an obstetrician-gynaecologist, an internal disease specialist, an ophthalmologist and a nephrologists once per month for a year; Order No7 (2007) dealing with «indications for gynaecological consultation of girls” recommends that girls aged 11-12 and 14-15 years, and girls over 15 years have a consultation once per year (until 18 years with written approval from the legally responsible person); it also recommends that adolescent girls, after rape, visit an obstetrician and gynaecologist, paediatrician and psychologist once per month, and after a certain period every 3 months for a period of three years or more.

## 5. Conclusions and recommendations

As a summary, the situation analysis points to the following issues for Belarus:

- Availability and quality of sexual and reproductive health services including family planning among all age groups of both women and men requires further improvement;

- Continuity in the provision of reproductive health care services deserves to be further developed and improved;
- The number of unplanned and unwanted pregnancies is unacceptably high;
- Services in the field of reproductive health do not respond to the needs of young people;
- The available clinical guidelines are developed by gynecologists and do not always match with the needs of the health service providers at primary care level.

The expert team has formulated the following overall recommendations:

- To develop/revise the monitoring and evaluation system of the quality of reproductive health services provided at primary care level by developing process and outcome indicators that are discussed and approved by health care providers including primary care providers and GPs;
- To revise existing orders and recommendations for the implementation of population based screenings and reproductive health services to ensure that they are based on evidence as well as people-centred (meaning to put the interests of clients and patients first);
- To revise existing medical documentation (for example individual medical charts) and reporting forms;
- To enhance and intensify the education and information of the population on reproductive health issues, providing evidence-based, age-specific and gender sensitive information;
- To more include public health institutions into the development and distribution of reproductive health information; and to enhance their capacity in the monitoring and evaluation of the results including the feedback from the field, from and to professionals. It is further advisable to develop/revise the national system on how to develop and distribute reproductive health topics to the population, as well as to involve target groups into the development of information materials on reproductive health;
- To strengthen the role of each person and patient: Patients can be more active in primary care and reproductive health by promoting their responsible role in prevention and self care. Information and health education are major means to this end and a prime task for health workers in primary care. Training in how to communicate effectively with patients should be part of any curriculum of staff working in primary care;
- To define tasks for midwives in reproductive health and shift tasks from physicians to midwives – especially with regard to prevention and health promotion;

- To review the training curriculum of GPs in family planning by involving GPs working in this area;
- To collect feedback from those GPs that have been trained five years ago and review the curriculum of pre-service and in-service training for physicians and other health professionals accordingly;
- To include modern methods of training for all medical professionals working in primary care and GPs in particular on the following topics:
  - » sex education of adolescents,
  - » sexual health,
  - » sexual health of elderly people,
  - » domestic violence.

The expert team has formulated the following recommendations with special regard to the roles and tasks of general practitioners (district physicians and pediatricians):

- to create the opportunity for doctors and paramedical worker to perform their duties not in the presence of each other (but separately). This would allow for a more personal and confidential atmosphere between health worker and patients that is especially important when problems of reproductive health and the patient's private life are concerned – and indirectly would allow for more effective care, cure and advise and a higher satisfaction of the client and patient;
- to use more simple forms of medical documentation and reporting which would allow to save the doctor's time and give more attention to the patient (e.g.: no duplication of reporting when there is a centralized laboratory, only one health card or medical file per patient etc).

The expert team has formulated the following recommendations with special regard to the roles and tasks of paramedical personnel (midwives, medical assistants/ feldshers, nurses):

- to consider the opportunity of expanding the range of paramedical personnel's functional responsibilities in reproductive health – and this as a specialized health worker with own responsibilities, well-educated and independently seeing patients and clients (for example seeing patients that do not need a medical examination, advising healthy women on questions of contraception including hormonal contraception, writing certificates etc);
- to consider the opportunity of lowering the number of obligatory home visits or door-to-door visits. The high frequency now bears the danger that patients do not take responsibility for their own health but rely on the control and visits of health workers (cooperation but not control).

The expert team has formulated the following recommendations for reproductive health services of adolescents and youth:

- to organize special clinics and health courses for adolescents and youth outside medical facilities;
- to review the age of girls who have the right to consult a gynecologist independently (without their parents' presence) from 18 years now to 16 years (this is particularly relevant for the youth moving to another city for their studies);
- to ensure that the client or patient has the opportunity to choose for reproductive health consultations between either a man or a woman doctor;
- to use modern, tested and standardized information materials and hand-outs developed for particular age groups in order to inform and educate, but not to intimidate;
- to engage young specialists, medical students or pedagogical students for the work with adolescents (according to the principle "equal teaches the equal");
- to involve young people in thematic lectures on reproductive health and other activities of health centers.

**The working group on reproductive health expresses its gratitude to:**

*Shkrob Marina Alexandrovna, Sharanda Tatyana Nikolaevna, Orekhovskii Vladimir Mikhailovich, Bogush Liudmila Stepanovna, Bogdan Elena Leonidovna, Shabashova Inna Ivanovna and Nebedukhina Raisa Vladimirovna for their participation in the situation analysis and formulation of recommendations.*



# 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](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](http://www.euro.who.int/Governance/resolutions/2005/20050920_2), accessed 16 December 2008).
3. Smith, PC, Mossialos E, Papanicolas I. Performance measurement for health system improvement: experiences, challenges and prospects. Background document to the WHO European Ministerial Conference on Health Systems 'Health Systems, Health and Wealth'. Copenhagen: WHO Regional Office for Europe, 2008
4. Murray C, Frenk J. World Health Report 2000: a step towards evidence-based health policy. *Lancet*, 2001, 357:1698-1700.
5. 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](http://www.praxis.ee/data/atun_et_al_phc_2006.pdf), accessed 10 December 2008).
6. Kelley E, Hurst J. *Health care quality indicators project. Conceptual framework paper*. Paris, Organisation for Economic Co-operation and Development, 2006 (OECD Health Working papers no. 23) (<http://www.oecd.org/dataoecd/1/36/36262363.pdf>, accessed 8 September 2008).
7. 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](http://www.anu.edu.au/aphcri/Publications/conceptual_framework.pdf), accessed 10 December 2008).
8. 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.
9. 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).
10. Starfield, B. *Primary Care. Balancing health needs, services and technology*. New York, Oxford University Press, 1998.

11. 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](http://www.euro.who.int/HEN/Syntheses/mentalhealth/20030903_1), accessed 12 December 2008).
12. Starfield B et al. Continuity and coordination in primary care: their achievement and utility. *Medical Care*, 1976, 14:625-636.
13. 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).
14. 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](http://www.chsrf.ca/funding_opportunities/commissioned_research/projects/pdf/defusing_e.pdf), accessed 10 December 2008).
15. Boerma WGW. Coordination and integration in European primary care. In: Saltman RB, Rico A, Boerma WGW, eds. *Primary Care in the Drivers Seat? Organizational reform in European primary care*. Maidenhead, Open University Press, 2006 ([http://www.euro.who.int/Document/E87932\\_chapt1.pdf](http://www.euro.who.int/Document/E87932_chapt1.pdf), accessed 8 September 2008).
16. Starfield B. Primary care and health. A cross-national comparison. *Journal of the American Medical Association*, 1991, 266:2268-2271.
17. 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).
18. Kringos DS, Boerma WGW, Spaan E, Pellny M, Karakaya K. Evaluation of the organizational model of primary care in Turkey; a survey-based pilot project in two provinces of Turkey. Copenhagen: WHO Regional Office for Europe, 2009.
19. Kringos DS, Boerma WGW, Spaan E, Pellny M. Evaluation of the organizational model of primary care in the Russian Federation; a survey-based pilot project in two districts in the Moscow Region. Copenhagen: WHO Regional Office for Europe, 2009.
20. Richardson E, Boerma W, Malakhova I, Rusovich V, Fomenko A.: Belarus: Health system review. *Health Systems in Transition*, 2008; 10(6): 1–118.
21. Belarus. At Wikipedia; <http://en.wikipedia.org/wiki/belarus>.
22. WHO. Global tuberculosis control: epidemiology, strategy, financing: WHO report 2009. Geneva: WHO, 2007 (WHO/HTM/TB/2009.411).

23. WHO. Plan to Stop TB in 18 high-priority countries in the WHO European Region, 2007-2015. Copenhagen: WHO Regional Office for Europe, 2007.
24. WHO. Contributing to health system strengthening: guiding principles for national tuberculosis programmes. Geneva: WHO, 2008 (WHO/HTM/TB/2008.400)
25. Egorov K, Boerma W, Rusovich V, Schellevis F, Abrahamse H. How do Belarus citizens see primary care. Results from a national patients survey in 2005. Utrecht: NIVEL, 2005
26. Rusovich V, Boerma W, Schellevis F, Egorov K, Abrahamse H. Workload and tasks of community physicians in Belarus. Results from a national survey in 2005. Utrecht: NIVEL, 2005.
27. Boerma WGW, Fleming DM. *The role of general practice in primary health care*. Copenhagen, WHO Regional Office for Europe, 1998.
28. Meads G. *Primary care in the twenty-first century – an international perspective*. Oxford, Radcliffe Publishing, 2006.
29. A review of primary health care in Europe. Draft version. Copenhagen, WHO Regional Office for Europe, 2003.
30. Atun R. *What are the advantages and disadvantages of restructuring a health care system to be more focused on primary care services?* Copenhagen, WHO Regional Office for Europe, 2004 (Health Evidence Network report; <http://www.euro.who.int/document/e82997.pdf>, accessed 9 February 2007).
31. *Primary Health Care: Report of the International Conference on Primary Health Care, Alma-Ata, USSR, September 6-12 1978*. Geneva, World Health Organization, 1978.







# SUMMARY

Although the strengthening of primary care services is a priority of health reforms in many countries, both in central, eastern and in western Europe, backgrounds and reasons for reforms are not similar. In western Europe emphasis on primary care is expected to be an answer to questions of 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. Primary care is now being reorganized in many countries to bring 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. Reforms of (primary) care are not always based on evidence, and progress is often driven by political arguments or interests from specific professional groups rather than on the basis of sound evaluations. However, policy makers and managers nowadays increasingly demand evidence about progress of reforms and responsiveness of services.

This report evaluates primary care developments in Belarus based on a methodology that characterizes a good primary care 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: the financing, the service delivery, the human resources and other resources such as appropriate facilities, equipment and drugs, and finally that all necessary legal frameworks and regulations are in place and the system is steered by effective leadership. It thus offers a structured overview of the strengths and weaknesses of a country's organizational model of primary care services, including the voice of the professionals and patients concerned, to interested policy-makers and stakeholders.