



World Health
Organization

REGIONAL OFFICE FOR Europe

**EVALUATION OF THE STRUCTURE AND
PROVISION OF PRIMARY CARE IN**

TAJIKISTAN

A survey-based project

Primary care in the WHO European Region

Design, layout & production

Phoenix Design Aid A/S, Denmark. ISO 14001/ISO 9000 certified and approved CO₂ neutral company – www.phoenixdesignaid.com.



World Health
Organization

REGIONAL OFFICE FOR Europe

**EVALUATION OF THE STRUCTURE
AND PROVISION OF PRIMARY CARE IN
TAJIKISTAN**

A survey-based project

October 2014



ABSTRACT

The WHO Primary Care Evaluation Tool (PCET) aims to provide a structured approach to evaluation of service delivery, providing policy-makers and health care managers with evidence for improving reforms. It focuses on health systems functions, such as governance, financing and resource-generation, and the characteristics of a good primary care service delivery system, which include accessibility, comprehensiveness, coordination and continuity. The methodology assesses whether primary health care service delivery is supported by an adequate legal and normative framework, financing mechanisms, human resource strategies, supply of appropriate facilities, equipment and drugs, and effective leadership. This report provides an overview of findings from the use of PCET in Tajikistan, offering a structured overview of the strengths and weaknesses of the country's organization and provision of primary health care services – including the voices of the professionals and patients concerned – to interested policy-makers and stakeholders.

Keywords

PRIMARY HEALTH CARE
EVALUATION STUDIES
HEALTH SYSTEMS PLANS – ORGANIZATION AND ADMINISTRATION
HEALTH CARE REFORMS
TAJIKISTAN

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

Publications
World Health Organization
Regional Office for Europe
UN City, Marmorvej 51, 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>).

© World Health Organization 2014

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

Acronyms and abbreviations	5
Acknowledgements	6
Foreword	8
Executive summary	9
1 Evaluating PHC: background and application	16
1.1 The theoretical framework of the WHO Primary Care Evaluation Tool	16
1.2 PCET development and pilot testing	22
1.3 Implementation of the PCET in Tajikistan	24
2. Introduction to Tajikistan	29
2.1 The country	29
2.2 Population and health	31
2.3 The health care system	36
3. PHC in Tajikistan: health system context	38
3.1 Stewardship/governance	38
3.2 Resource generation	44
3.3 Financing and incentives	48
3.4 PHC service delivery	50
3.5 Current issues and plans for PHC	51
4. The position of FDS and DPS in PHC	53
4.1 Results of the survey	53
4.2 Respondent characteristics	53
4.3 Accessibility of care	54
4.4 Continuity of care	58
4.5 Coordination of care	60
4.6 Comprehensiveness of care	64
5. Nurses and their position in PHC	77
5.1 Results of the survey	77
5.2 Respondent and practice characteristics	77
5.3 Accessibility of care	78
5.4 Continuity of care	81
5.5 Coordination of care	82
5.6 Comprehensiveness of care	83
6. Patients' views and experiences in PHC	89
6.1 Results of the survey	89
6.2 Respondent characteristics	89
6.3 Accessibility of care	90
6.4 Continuity of care	94
6.5 Perceived coordination of care and choice of provider	98
7. Policy recommendations	99
References	101
Annex 1. Strategies, laws and orders	105
Annex 2. Profile of clinical tasks	108

ACRONYMS AND ABBREVIATIONS

AGREE	Appraisal of Guidelines for Research and Evaluation
CIS	Commonwealth of Independent States
CME	continuing medical education
CPG	clinical practice guidelines
DP	district physician/therapist
EU	European Union
FD	family doctor
GBAO	Gorno Badakhshan Autonomous Oblast
GDP	gross domestic product
GP	general practitioner
MDR-TB	multidrug-resistant TB
MoH	Ministry of Health and Social Protection (of Tajikistan)
NCD	noncommunicable disease
NGO	nongovernmental organization
NIVEL	Netherlands Institute for Health Services Research
PHC	primary health care
PPP	purchasing power parity
PCET	WHO Primary Care Evaluation Tool
RCMSI	Republican Centre for Medical Statistics and Information (of Tajikistan)
RRS	rayons of republican subordination
SDR	standardized death rate
STI	sexually transmitted infection
TB	tuberculosis
TSMU	Tajik State Medical University
USAID	United States Agency for International Development

ACKNOWLEDGEMENTS

The WHO Regional Office for Europe gratefully acknowledges the input of a significant number of experts and stakeholders to the development of the report.

Research team

NIVEL, The Netherlands Institute for Health Services Research

Wienke G.W. Boerma, Technical Project Leader and author

Sanne Snoeijs, author

Therese A. Wieggers, author

Martina Pellny, author

Republican Centre for Medical Statistics and Information

Sheraliev Ibodullo, Deputy Head

Nazarov Tagav, Specialist

Shehova Sulfia, Specialist

Reviewers and contributors

WHO Regional Office for Europe

Juan Tello, Health Services Delivery Programme Manager

Erica Barbazza, Consultant, Health Service Delivery Programme

Baktygul Akkazieva, Policy Adviser (since 2013), WHO Country Office in Tajikistan

Project coordination

WHO Regional Office for Europe

Christine Beerepoot, Primary Health Care Adviser (since 2012)

Valentina Baltag, Primary Health Care Adviser (before 2012)

WHO Country Office in Tajikistan team

Pavel Ursu, Representative

Benoit Mathivet, Policy Adviser (before 2013)

Lola Yuldasheva, Health Systems Officer (since 2013)

Husniya Dorgabekova, Health Systems Officer (before 2013)

Ministry of Health and Social Protection

Nusratullo Salimzoda, Minister

Sohibnazar Rahmonov, Deputy Minister (before 2014)

Lola Rajabova, Head of Health Reform and International Relations Department (before 2013)

Participants at the initial and validation workshops (not cited above)

Ministry of Health and Social Protection

Azamzhon Mirzoev, Deputy Minister

Dilorom Sadykova, Adviser

Salomuddin Isupov, Head of the Department of Pharmaceutical and Medical Education, Human Resources and Science

Saidali Hafizov, Head of Department of Economy and Budget Planning

Shaidullo Sharipov, Head of Service Delivery Department

Hakrizo Narzulloev, Head of the Department of Reforms, International Relations and Primary Health Care (since 2013)

Sherali Rahmatulloev, Head of the Department of Family Planning and Health Service Delivery to Mothers and Children

Oktam Bobokhojaev, Director of the Republican Centre of Tuberculosis Control

Safar Saifuddinov, Director of the Republican Centre of Medical Statistics and Information

Zakriya Rakhimov, Chief Cardiologist

Health Policy Analysis Unit (Ministry of Health)

Salohiddin Miraliev, Head

Nazira Khodjieva, Consultant

Shoira Kiyamova, Consultant

Olimjon Mannonov, Consultant

Zamira Bobokhojaeva, Consultant

Primary health care specialists and family medicine experts

Zukhra Mirzoeva, Head of Family Medicine Department, Tajik Postgraduate Medical Institute

Tahmina Jabborova, Director of the Republican Centre of Family Medicine

Zuhra Abdurahmanova, Director of the Republican Centre of Nursing

Yunus Ashurov, Chief Doctor, Shahrinaw Central Rayon Hospital

Kamoliddin Sharipov, Head of the Health Department, Gissar Rayon

Mukhtor Boboev, Head of the Family Medicine Department, Rudaki Rayon

Farida Khudoydodova, Head of the Family Medicine Department, Shohmansur Rayon

Akbarali Safarov, Head of City Health Centre #1, Dushanbe

Muqim Fathulloev, Head of City Health Centre #3, Dushanbe

Development partners

Ileana Miritescu, Health and Education Portfolio Manager, European Union Delegation to Tajikistan (before 2013)

Veronique Geoffroy, Health and Education Portfolio Manager, European Union Delegation to Tajikistan (after 2013)

Muazzama Djamalova, Health Programmes Coordinator, Swiss Office of Technical Cooperation and Development

Khasan Dzgoev, Manager, Project Sino

Rudoba Rakhmatova, Health Specialist, Aga Khan Health Programmes

Lailo Kurbonmamadova, Coordinator of Aga Khan Health Projects

Marian Sheridan, Country Director, Quality Health Care Project, United States Agency for International Development

Ayadil Saparbekov, Manager of Health and Nutrition Programmes, United Nations Children's Fund

Sobir Kurbonov, Health Specialist, United Nations Children's Fund

Nargis Rakhimova, Reproductive Health Officer, United Nations Population Fund

Tedla Mezemir, Country Manager, United Nations Population Fund/Global Fund to Fight Aids, Tuberculosis and Malaria

Saleban Omar, Country Manager, United Nations Population Fund/Global Fund to Fight Aids, Tuberculosis and Malaria

Sarvinoz Barfieva, Health Specialist, World Bank

Zulfiya Kosimova, Officer, Community-based Health Project Implementation Unit, World Bank

Manzura Mirsaidova, Manager of Health Programmes, German Society for International Co-operation

Evelina Toteva, Director of Health Programmes, German Society for International Cooperation

Tatyana Semenova, German Development Bank

The work was developed with financial assistance from the Netherlands Ministry of Health, Welfare and Sport in the framework of the Partnership Programme between the WHO Regional Office for Europe and the Netherlands, the European Union and WHO.

FOREWORD

Primary health care (PHC) embodies the values and principles that WHO pursues in its world-wide effort to help countries strengthen their health systems to make them more equitable, inclusive and fair. WHO renewed its commitment to global health improvement, especially for the most disadvantaged populations, in the world health report of 2008, which urges countries to strengthen PHC as the most efficient, fair and cost-effective way to organize a health system. The title of that report underscored the urgency of its message: *Primary health care – now more than ever*.

The WHO European Region has a particularly strong legacy (starting with the Declaration of Alma-Ata in 1978) in developing health strategies that are based on scientifically sound and socially acceptable interventions that promote solidarity, equity and active involvement of various sectors and civil society. Health in the 53 WHO European Region Member States has improved considerably, despite significant changes in the patterns and trends of disease occurrence, demographic profiles and exposure to major risks and hazards in a rapidly evolving socioeconomic environment. The Region has also seen trends towards more integrated models of care and greater diversity 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, and the new WHO European health policy framework – Health 2020 – is an example of such reflection. It reiterates that PHC stands out as one of the pre-eminent instruments for integrating public health into the wider health sector and is the means for supporting people-centred health systems.

This report evaluates PHC developments in Tajikistan, using a methodology that characterizes a good PHC system as one that is comprehensive, accessible and coordinated and which ensures continuity. Tajikistan introduced impressive reforms towards developing health services based on a PHC approach during the last decade. In the context of the national health strategy for 2010–2020, progress in this direction includes formulation of national policies (such as the basic benefit package), modernization of clinical practice, development of family medicine practice and prioritization of training for practitioners.

The findings of this report confirm that the right direction has been taken, but opportunities for improving family medicine by further developing clinical competencies, scaling-up standardization of practice, strengthening the coordination of care and developing and institutionalizing accountability arrangements at oblast and district levels remain.

We at the WHO Regional Office for Europe hope that this report will further inform PHC reform in Tajikistan, which will bring health care closer to people's needs and expectations.

Dr Hans Kluge

Director, Division of Health Systems and Public Health
WHO Regional Office for Europe

EXECUTIVE SUMMARY

The WHO Primary Care Evaluation Tool (PCET) aims to support policy-makers, ministry of health officials, front-line health managers, practitioners and other stakeholders in monitoring the progress of primary health care-related policies and reforms and providing evidence for strengthening primary health care (PHC).

Methods

The PCET recognizes that the performance of a health system is determined by the way its functions –governance/stewardship, resource generation, financing and service provision – are organized. It assesses the role of those four health system functions in PHC services and analyses key characteristics resulting from their interaction in terms of accessibility, continuity of care, coordination of care and comprehensiveness. Indicators (or proxies) are included for each function and characteristic.

The tool gathers information from different levels and demand and supply sides to evaluate the complexity of PHC systems. It consists of three questionnaires, addressing the status, structure and context of PHC at national level, PHC physicians' situation and views and patients' experiences. An additional questionnaire for PHC nurses was developed for Tajikistan. The questionnaires for PHC physicians, PHC nurses and patients are prestructured, with precoded answers. The national questionnaire contains prestructured and open-ended questions, with room for statistical data.

The survey approach relies on respondents' self-reported behaviour and experiences. Reported involvement of physicians and nurses in certain health services does not imply a measure of quality. The results are therefore estimations of the actual situation.

The tool was implemented in several stages in Tajikistan nationwide between 2010 and 2012. Data were processed and analysed in autumn 2012. The findings were validated with policy-makers, officials, stakeholders and national experts in April and November 2013, and this report was completed in September 2014.

Key findings

Health outcomes in Tajikistan

At present, Tajikistan faces a double burden of communicable and noncommunicable diseases. Similar to trends across the WHO European Region, leading causes of death are related to noncommunicable diseases, which account for more than half of mortality nationally. These health trends, following the post-independence civil war, have contributed to the impoverishment of the population and deterioration in health services, leading to the re-emergence of many previously eradicated diseases.

Maternal and child health outcomes are improving, but maternal mortality and infant and under-5 mortality rates remain above the averages for the Region.

An increasing burden of noncommunicable diseases is reported in Tajikistan, with cardiovascular disease, cancers and respiratory diseases being the leading causes of death. The estimated incidence of tuberculosis in 2011 was among the highest in the Region: Tajikistan is not only among the 18 high-priority countries for tuberculosis in the Region, but is also among the 27 high-burden multidrug-resistant tuberculosis countries globally. As immunization coverage has deteriorated, epidemic outbreaks of vaccine-preventable diseases, such as typhoid fever and diphtheria, have occurred.

Governance/stewardship

Policy for PHC and family medicine has been developing since 1998. The launch of a poverty-reduction strategy and a paper on the conception of health sector reform in 2002 provided further impetus for the development of PHC. Specific stimulation was achieved through the development of the national programme on family medicine for 2011–2015 and its related plan. A recent report from the programme states that 10 outpatient facilities and 73 family medicine units are currently operational in the country, with 546 family medicine specialists and 655 family health nurses working at primary care level(1). Despite several strategic policy documents and regulation favouring primary care, the pace of progress towards family medicine is nevertheless slow.

Financing

Despite a slight increase, the proportion of gross domestic product spent on publicly provided health care remains very low compared to other countries in the Region(2). Efforts have been made to redistribute funds from the health care budget towards primary care, but goals have not yet fully been achieved, probably as a result of underfunding of the health system and ineffective budget allocation. The largest part of total health expenditure is private: out-of-pocket payments accounted for almost two thirds of total expenditure in 2012, mainly for pharmaceutical drugs(3). Access to health services continues to be limited(2).

Human resources for health and medical education

Physician density in Tajikistan is relatively low. Official data report 15 973 active physicians in 2012, which equates to 205 physicians per 100 000 population. Only 11.5% are working in primary care, either as retrained family doctors(FDs) or district physicians/therapists (DPs). Numbers of FDs and nurses are increasing following the introduction of retraining programmes and a postgraduate programme in 2009, albeit at modest pace. The imbalance between rural and urban coverage and the high migration of skilled health staff

to neighbouring countries are also human resource issues of concern.

Patient rights and access to health services

Patient rights are set out in the Law on Public Health Protection, with several other laws having indirect implications for patient protection. The 2002 health reform programme addressed patient information and involvement in service planning and delivery. To date, no formal organization or association for defending patient rights or informing the public about health care issues exists. Patient complaint procedures are in place and health facilities are obliged to provide a complaints box for patients to submit comments, which are then addressed by committees or at higher administrative level, including the Ministry of Health.

Quality management

The State Surveillance Service for Medical Activities has been responsible for regulating the quality of medical care since 2008, when the Ministry of Health adopted a methodology for developing clinical practice guidelines that includes involvement of key stakeholders. The methodology is based on the internationally accepted Appraisal of Guidelines for Research and Evaluation (AGREE) instrument. The Centre for Evidence-based Medicine has been established at the Tajik State Medical University, but despite this, quality assurance is weakly developed and has not been integrated into the daily practice of health care workers.

Service provision: survey results for FDs, DPs, patients and nurses in PHC

Response to the survey

Responses were received from 255 FDs, 225 DPs, 299 PHC nurses and 5255 patients who visited a FD or DP.

Accessibility of care

Copayments present barriers to accessing care and were widely reported by patients,

mostly related to drugs prescribed by FDs or DPs but also to pay for a visit to a medical specialist (after referral) or even to the FD or DP. Copayments were cited as a reason to abstain from or delay a visit to a doctor by a quarter of patients.

Most patients live within 20 minutes' travel of their FD or DP; more than 40 minutes is exceptional. Most FDs, DPs and nurses work within 5 kilometres of a district hospital. Patients can generally see their FD, DP or nurse the same day. Only a minority of FDs, DPs and nurses offer weekly opening hours in the evening, but patients are generally satisfied with opening hours.

Access by wheelchair is not easily achievable in most practices visited by patients. Although FDs have fewer patients than DPs (1853 versus 1966), the number is still well above the national standard of 1200 in rural areas and 1500 in urban. Staff shortages were reported by almost half of FDs and DPs.

Patients have many contacts per year with PHC workers, visiting FDs/DPs nine times and being seen at home 10 times; the respective figures for seeing nurses are 11 and 16. Most patients believe they have no freedom of choice of doctor: they are assigned to their FD or DP.

Coordination of care

FDs and DPs usually work with several other physicians in the same premises; working solo in a primary care facility is rare for doctors. Many nurses work in so-called health houses without physician support. Health houses are structural units of rural health centres with a staff complement of one family nurse and one midwife per 750 population. They provide treatments prescribed by doctors and under medical guidance and supervision.

In contrast to DPs, FDs usually work with nurses and have undertaken specialist training in family medicine. Most FDs and DPs regularly meet with other medical and nursing staff,

but FDs do so more often. Most FDs (84.5%) and DPs (90.4%) regularly ask for advice from medical specialists. FDs and DPs' referral rates seem low, but variation within both groups is considerable. FDs have more frequent connections with community representatives.

Continuity of care

Patients' clinical records are well kept by doctors and nurses in primary care, but are paper-based as a rule, as computers are not available. FDs and DPs frequently provide referral letters to narrow specialists when patients are referred, but reporting back from specialists is weak. Patients are generally satisfied with their FD or DP but are critical about medical equipment and doctors' responsiveness to personal problems and worries.

Comprehensiveness of care

FDs clearly have access to better equipment than DPs and nurses. Marked differences in the equipment available to FDs and DPs are seen regionally. Availability of laboratory services and X-ray facilities is poor: one third of FDs and DPs have no or insufficient access to microbiological laboratory services and one quarter no or insufficient access to X-ray. Observed interregional differences are wide.

FDs and DPs have a limited scope of practice, with a narrow range of curative services offered. Their role in first contact with patients' health problems is modest, as is their involvement in the treatment of diseases, although FDs are involved to a greater extent than DPs. Provision of medical procedures and preventive services is outside the scope of practice of FDs and DPs, so their involvement is extremely low.

FDs and DPs are nevertheless very active in some domains, such as mother and child health care, reproductive health and some screening initiatives. Nurses are also active in mother and child health care and reproductive health. Most FDs and DPs are involved in tuberculosis health services through provid-

ing information, monitoring at-risk groups or providing treatment. Involvement in these tasks is more limited for nurses.

Quality assurance

Many more FDs than DPs have clinical guidelines available and use them frequently: few nurses have guidelines. Complaints boxes and procedures for dealing with complaints are much more common in FD practices. Only half of patients know about a complaints box in the practice of their FD or DP. FDs and DPs

spend many hours in professional reading, amounting to the equivalent of a full working week per month.

PCET selected indicators

Table ES1 provides an overview of findings by a set of indicators from the surveys among FDs, DPs, nurses and patients, summarizing results of the PCET project in Tajikistan.

Table ES1. Selected indicators from the PCET project in Tajikistan

Functions	Selected proxy indicators	Findings
Stewardship/governance	Department in Ministry of Health specifically dealing with PHC	No
	FDs, DPs and nurses reporting a box and procedure for patient complaints in the practice	FDs: 82% DPs: 53% Nurses: 68%
	Patients reporting that a complaints box and procedure are available in the practice of their FD/DP	50%
	FDs/DPs and nurses working in rural areas (surveys)	FD/DP: 62% Nurses: 78%
Financing	Patients reporting copayments for a visit to FD/DP	27%
	Patients reporting copayments for drugs prescribed by FD/DP	55%
	Patients reporting delays or abstention from visiting a doctor because costs could not be paid	25%
Resource generation	Proportion of active physicians working in PHC	11.5%
	Average practice population per FD, DP and nurse (surveys)	FDs: 1 853 DPs: 1 966 Nurses: 1 429
	PHC staff having completed a postgraduate specialist or retraining course in family medicine	Physicians: 30% Nurses: 32%
	Average age of PHC providers (in years)	FDs: 45 DPs: 48 Nurses: 40
	Reported time spent on professional reading (hours per month)	FDs: 35 DPs: 39 Nurses: 14
	Medical universities with a specialization in family medicine	2 (out of 3)
	Number of professors of family medicine	1
	Medical equipment available to FDs/DPs (from a list of 30 items)	FDs: 19 DPs: 14
	Medical equipment available to nurses (from a list of 20 items)	11
	Patients agreeing that practice equipment is sufficient	56%
FDs/DPs reporting no or insufficient access to laboratory facilities	FDs: 25% DPs: 48%	

Functions	Selected proxy indicators	Findings
	FDs/DPs reporting no or insufficient access to X-ray facilities	FDs: 20% DPs: 28%
	Not using a computer	FDs: 90% DPs: 82%
	Using the computer for keeping patients' records	FDs: 2% DPs: 4%
Service Delivery Access to services	Proportion of patients living within 20 minutes' travel of FD/DP practice	65%
	Average number of patient consultations per day	FDs: 10 DPs: 12 Nurses: 8
	Average number of home visits per week	FDs: 24 DPs: 22 Nurses: 33
	Average working hours per week	FDs: 36 DPs: 36 Nurses: 38
	Average length of patient consultations (in minutes; patients' survey)	FDs/DPs: 20
	Number of visits with FD/DP reported by visiting patients per year	8.9
	Number of home visits by FD/DP reported by visiting patients per year	10
	Number of visits with nurse reported by visiting patients per year	11.4
	Number of home visits by nurse reported by visiting patients per year	16.5
	Offering evening opening at least once per week	FDs: 31% DPs: 49% Nurses: 21%
	Patients satisfied with current opening hours	92%
	Patients reporting same-day consultations possible if requested	93%
	Patients disagreeing that the waiting room is convenient	9%
	Patients disagreeing that practice is accessible to people with disabilities or using wheelchairs	63%
FD/DP indicative referral rate to secondary-level specialists (as a proportion of all office and home care visits)	FDs: 5.5% DPs: 4.2%	
Service Delivery Coordination	FDs/DPs sharing premises with other FD/DP(s), PHC workers or medical specialists	FDs: 98% DPs: 90%
	FDs/DPs reporting regular meetings with PHC nurses	FDs: 90% DPs: 72%
	FDs/DPs reporting regular meetings with pharmacists	FDs: 22% DPs: 17%
	Nurses reporting regular meetings with FD/DP	60%
	FDs/DPs reporting always using referral letters	FDs: 79% DPs: 82%
	FDs/DPs reporting always receiving information from medical specialist after treatment has finished	FDs: 36% DPs: 30%
	Patients agreeing that their FD/DP always informs medical specialist in case of referral	81%
Service Delivery	FDs/DPs and nurses reporting that they keep full medical records routinely	FDs: 92% DPs: 90% Nurses: 81%
Continuity	Patients reporting that they have been with this FD/DP for at least one year	87%

Functions	Selected proxy indicators	Findings	
Service Delivery	FDs/DPs' and nurses' role in first-contact care (with 18 selected health problems) (range of scores 1–4)	FDs: 2.39 DPs: 2.37 Nurses: 2.63	
	FDs/DPs' involvement in treatment of diseases (selection of 19 diseases) (range of scores 1–4)	FDs: 2.53 DPs: 2.25	
	FDs/DPs' involvement in the provision of 16 medical–technical and preventive procedures (range of scores 1–4)	FDs: 1.47 DPs: 1.38	
	FDs/DPs' coverage of public health activities (based on eight items; maximum is 100%)	FDs: 70% DPs: 63%	
	FDs and DPs performing cervical cancer screening	FDs: 28% DPs: 24%	
	Comprehensiveness	FDs, DPs and nurses providing family planning/contraception services	FDs: 89% DPs: 86% Nurses: 87%
		FDs, DPs and nurses providing routine antenatal care	FDs: 91% DPs: 85% Nurses: 91%
		FDs, DPs and nurses performing tuberculosis screening/early diagnosis	FDs: 45% DPs: 41% Nurses: 49%
		FDs, DPs and nurses performing tuberculosis follow-up care	FDs: 91% DPs: 78% Nurses: 47%
		Service Delivery	Nationally available number of clinical guidelines developed with inputs from FDs
FDs/DPs having regular meetings with local authorities	FDs: 42% DPs: 88%		
Quality assurance	FDs/DPs reporting that they use clinical guidelines frequently		FDs: 66% DPs: 44%
	FDs/DPs reporting investigations of patient satisfaction		FDs: 48% DPs: 33%

Policy recommendations

Key policy recommendations are reported below.

Health policy aiming to strengthen primary care should be pursued vigorously.

- *The current lack of resources for primary care poses a serious obstacle to the ongoing development of the primary care programme. Further efforts should be made to allocate resources to achieve the targeted 40% of the health budget for PHC in Tursunzadeh, Spitamen and other pilot rayons.*

Coordinated action should be undertaken to expand the role of FDs in line with the family medicine model.

- *Survey results show that differences between the service profiles of FDs and DPs are small; retrained FDs are expected to assume more comprehensive roles.*

Shortage of staff in PHC, particularly FDs and nurses in rural areas, should be addressed, starting with a human resource plan.

- *Official reports and the survey results point to the serious problem of staff shortages. Quick solutions may not be possible, but a human resource plan can map the problem*

and enable decision-makers to distribute scarce resources fairly.

The problem of unmet health needs in the population should be investigated and action taken to improve access to services, especially in rural areas, and consequently promote responsiveness.

- *Focus should be placed on the effects of widespread copayments on the demand for health care. A limited curative service profile among FDs and DPs, limited diagnostic possibilities in PHC and low referral rates to secondary care are indicative of underdemand and unmet needs.*

The basic benefit package should be further revised and harmonized in relation to current copayment schemes to explore inequities, especially for identified population groups and geographic areas.

- *Attention should be paid to possible inequities arising as a consequence of decentralization. Growing regional autonomy may result in differences in health care service funding between districts and regions, which may have implications for (geographic) inequities.*

Nurses in primary care should be more involved in patient care and less in administration. This may alleviate the problem of physician shortages.

- *Nurses can have greater involvement in clinical work than is currently the case in areas such as the management and follow up of patients with noncommunicable diseases, providing information and promoting patient empowerment: these are important domains for nurses. Administration can be organized more efficiently and may largely be delegated to other staff.*

Sufficient equipment should be available in primary care. FDs and DPs should have full access to laboratory and X-ray facilities to enable them to function effectively as providers

of first-contact care, delivering efficient triage and undertaking gatekeeping roles.

- *Patients are critical about the availability and quality of practice equipment. Means of transportation and primary care premises and facilities also need to be considered, particularly accessibility for people who use wheelchairs and other mobility devices. Many physicians report having insufficient or no access to diagnostic laboratory and X-ray facilities.*

Computer use in PHC settings to, for instance, maintain patients' medical records, exchange information with other health care workers and facilitate distance learning should be further developed.

- *While financial resources to introduce computers on a wider scale are currently lacking, opportunities in relation to management and clinical information and teaching and education should be explored.*

Joint action is needed at medical universities and in continuing medical education to expand the competencies of FDs and primary care nurses.

- *Lack of competencies and skills among physicians and nurses are an obstacle to further expanding the scope of services at PHC level and consequently to the realization of reform aims. New approaches in education and teaching should be explored, including distance learning.*

References

1. Policy brief #3. Brief overview of health financing system reforms in the Republic of Tajikistan. Health Policy Analysis Unit, Ministry of Health of Tajikistan: Dushanbe; 2013.
2. Joint annual review of third year of the National Health Strategy of the Republic of Tajikistan for 2010–2012. Dushanbe: Ministry of Health and Social Security; 2013.

I. EVALUATING PRIMARY HEALTH CARE: BACKGROUND AND APPLICATION

1.1 The theoretical framework of the WHO Primary Care Evaluation Tool

1.1.1 Why evaluate primary health care?

Careful monitoring is necessary in any reform process, but is especially required for large-scale fundamental change such as implementing health care reform in eastern European countries in economic and political transition. Strengthening primary health care (PHC) services is a priority in many countries of the WHO European Region, but the approach varies greatly from west to east. In western Europe, PHC is expected to address issues such as rising health care costs and changing demands resulting from demographic and epidemiological trends. In the central and eastern part of the Region, however, countries once part of, or closely allied to, the former Soviet Union are struggling to improve significantly the performance and cost-effectiveness of their entire health systems. These countries are now developing PHC (which used to function poorly if it existed at all) to improve health system efficiency and bring responsive health services closer to populations. Health care reforms in many of these countries have been part of profound, comprehensive changes in essential societal functions and values (1).

Performance evaluations and measurements play an increasing role in health care reforms. Stakeholders need information to decide how best to steer health system towards better outcomes (2). In the past, reforms were not always based on evidence, and changes were often driven by political arguments or professional interests rather than sound assessments. That situation is changing. Health care stakeholders

are increasingly holding decision-makers to account for their choices, demanding evidence from them on issues such as the progress of reforms.

In addition, demographic and epidemiological changes require that health systems adapt to new population demands. Effective adaptation requires that systems evaluate health services' responsiveness from the patient perspective. Such evaluations can provide information on services' accessibility and convenience, health workers' treatment of patients, delivery of communications that may affect patients' behaviour and well-being, and health care management at PHC level and beyond.

Health system evaluations and performance assessments, however, should be contextualized appropriately before they are used to inform policy-making and regulation. Not only do governments use such material directly, but in exercising their stewardship role they should also generate an appropriate flow of information, make it available to other health system stakeholders and ensure that relevant analytical capacity is in place (3).

System evaluations and performance assessments should be based on a proper framework. Deriving indicators from an accepted framework helps ensure that indicators are relevant and cover key topics sufficiently. The following sections describe the framework used to develop the WHO Primary Care Evaluation Tool (PCET).

1.1.2 PHC evaluation 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 to a given population. A health action is any activity 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 course, including a focus on premature mortality and disability (3).

Health systems aim to achieve three fundamental objectives (1,4):

- improved health (including better health status and reduced health inequality);
- enhanced responsiveness to the expectations of the population, encompassing respect for the individual (including dignity, confidentiality and autonomy) and client orientation (including prompt attention, access to services, basic amenities and choice of provider); and
- guaranteed financial fairness (including fairness in household contributions to national health expenditure and protection from financial risks resulting from health care).

A health system's performance is reflected in how successfully it attains these goals, but as health conditions and systems vary among countries, country context must be addressed when comparing health system performance. Measurement of performance should therefore cover goal attainment and available resources and processes.

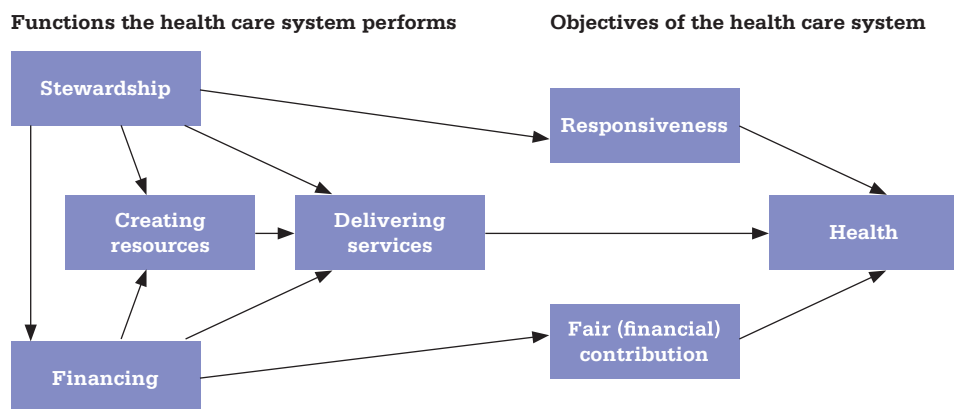
The WHO health system performance framework (Fig. 1) indicates that the performance of a system is determined by the way in which four key functions are organized (4):

- stewardship
- resource generation
- financing
- service provision.

Although the international literature presents other approaches to performance measurement (5–8), they employ similar insights or related concepts. The four functions can be applied to the whole health system of a country or to PHC only, with specific subcharacteristics for PHC service provision.

Fig. 1. WHO health system functions and objectives

Source: Murray & Frenk (4).



1.1.3 What does each health system function encompass?

1.1.3.1 Stewardship

Stewardship is an overriding function, overseeing all basic health system functions but more broadly than regulation. It affects health system outcomes directly and indirectly (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 has three main aspects: setting, implementing and monitoring the rules for the health system; assuring a level playing field for purchasers, providers and patients; and defining strategic directions for the health system as a whole.

Stewardship can also be subdivided into the subfunctions of system design, performance assessment, priority-setting, regulation, intersectoral advocacy and consumer protection (4). In short, stewardship involves governing, disseminating information about, coordinating and regulating the health system at various levels.

1.1.3.2 Resource generation

Every level of a health system requires a balanced range of resources to function properly. They also need to be further developed to sustain health services over time and across levels and geographic areas. The required resources include facilities, equipment, consumable supplies, human resources, knowledge and information.

It is especially crucial that the quantity and quality of human resources adequately matches the demand for services across levels of health care and are equitably distributed throughout the country. Health providers' skills and knowledge need to be up to date and compatible with developments in technology and evidence-based medicine. Policy development on human and physical resource planning falls under the stewardship function, as do regulatory frameworks for assuring high-quality service provision and consumer

protection, but actual workforce volume, distribution and professional development (including training, continuing medical education (CME) and research) are usually measured as part of resource generation.

1.1.3.3 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 & 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 subfunctions can be distinguished: revenue collection, fund-pooling and purchasing. Revenue collection means the mobilization of funds from primary (such as households and firms) and secondary (such as governments and donor agencies) sources. Funds can be mobilized through a number of mechanisms that vary with context, such as out-of-pocket payments, voluntary insurance rated by income, voluntary insurance rated by risk, compulsory insurance, general taxes, earmarked taxes, donations from nongovernmental organizations (NGOs) and donor agency transfers. Fund-pooling uses various forms of health insurance to share and reduce health risks. Purchasing is the allocation of funds to cover health providers' costs (forstaffing, durable goods and operations, for example), whether institutional or individual, for specific interventions (4). The way these subfunctions are organized and executed affects the accessibility of health services.

1.1.3.4 Service delivery

Service provision involves the mix of inputs needed to deliver health interventions within a specific organizational setting (4). It includes preventive, curative and rehabilitative services delivered to individual patients and larger populations (through, for instance, health education and promotion) in public or private institutions. Providing services is what the health system does: it is not what the health system is.

1.1.4 The Primary Care Evaluation Framework

PHC characteristics vary from country to country, and different definitions of what constitutes PHC exist, but a comprehensive or well-developed PHC system should have the following characteristics (10):

Primary (health) 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.

The Primary Care Evaluation Framework (Fig. 2), from which the PCET has been developed, encompasses the four health care system functions (as described above) combined with the four key characteristics of primary (health) care services that are part of service delivery.

1.1.5 What do the four key characteristics of a good PHC system involve?

1.1.5.1 Access to services

In general, access to health services can be defined as the ease with which health care is

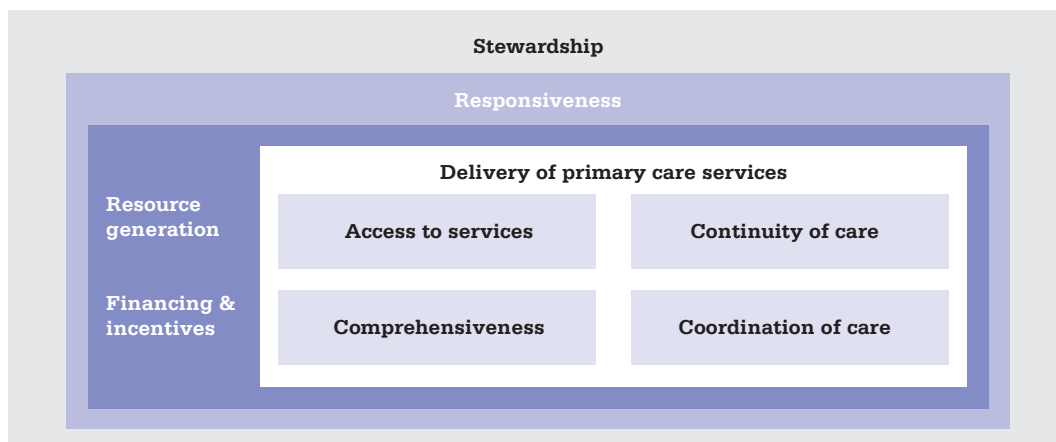
obtained (6). Alternatively, it can be seen as “the patient’s ability to receive care where and when it is needed” (12). Various physical, psychological, sociocultural, informational and financial barriers restrict accessibility. For instance, the Primary Care Evaluation Scheme addresses geographic obstacles (distance to, and distribution of, general practices), obstacles in the organization of PHC practices (office hours, distance consultations, waiting times) and financial obstacles (cost-sharing, out-of-pocket payments).

1.1.5.2 Continuity of services

Health care interventions should be geared to patient needs over an extended period and cover subsequent episodes of care and treatment. A general definition of service continuity is “follow-up from one visit to the next” (13). WHO provides a more comprehensive definition that takes into account the potential involvement of several health care providers(12), describing continuity 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 visits over the long term (longitudinal continuity).

Fig. 2. Primary Care Evaluation Framework



Source: WHO Regional Office for Europe (11).

Several levels of continuity have been distinguished (14). First, informational continuity signifies an organized body of medical and social history about a patient that is accessible to any health care professional caring for him or her. Second, longitudinal continuity points to an accessible, familiar environment in which a patient customarily receives health care from a provider or team of providers. Third, interpersonal continuity is an ongoing personal relationship between patient and provider, characterized by personal trust and respect (14). Reid et al. also add management continuity, which is the provision of timely, complementary services as part of a shared management plan (15). The Primary Care Evaluation Scheme includes informational, longitudinal and interpersonal continuity of care.

1.1.5.3 Coordination of delivery

PHC is the most common entry point to health care and often provides a gatekeeping function to other levels of care, so coordination of services at PHC level is a key determinant of the responsiveness of health service provision and the health system as a whole. The potential for problems in coordination are particularly evident at the interfaces between primary and secondary care and between curative care and public health services in the field of health promotion (16). 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). In terms of health care, it can be defined as (12):

... 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 inter-linkages among staff members and agencies over a longer period of treatment.

Dimensions of coordination in the Primary Care Evaluation Scheme include collaboration in the same PHC practice, collaboration between PHC providers (such as general practitioners (GPs), home care nurses and physiotherapists) and collaboration between primary and other levels of care through consultation and referral.

1.1.5.4 Comprehensiveness

Comprehensiveness can be defined as the extent to which a health care provider directly offers a full range of services or specifically arranges for their provision elsewhere (17). Comprehensiveness in the PHC setting refers to the fact that services can encompass curative, rehabilitative and supportive care, as well as health promotion and disease prevention (16,18). It also refers to the ability simultaneously to consider several conditions (particularly those that are chronic) for a single patient. The comprehensiveness of services refers not only to the range of services provided, but also to practice conditions, facilities, equipment and the professional skills of the primary service provider. PHC workers' links to community services and the community also play a role. All these dimensions are incorporated in the Primary Care Evaluation Scheme.

1.1.6 The Primary Care Evaluation Scheme

Taking the Primary Care Evaluation Framework (11) as its basis, the Primary Care Evaluation Scheme provides further details by focusing on specific measurable topics and items relating to essential features and national priorities for change in primary (health) care and the facilitating conditions. The Primary Care Evaluation Scheme, which forms the basis of the PCET, includes a number of key dimensions that have been identified for every PHC system function. Each dimension has in turn been translated into one or more information items or proxy indicators for the dimension (Table 1).

Table 1. Overview of selected functions, dimensions and information items

Functions	Dimension	Selected items/proxies	
Stewardship	Policy development	Primary care policy priorities	
	Professional development	(Re-)accreditation system for primary care	
		Quality assurance mechanisms for primary care	
	Conditions for the care process	Laws and regulations	
		Human resources planning	
	Conditions for responsiveness	Involvement of professionals and patients in policy process Patient rights; complaint procedures	
Resource generation	Workforce volume	Numbers and density	
	Professional development	Role and organization of professionals	
		Education in primary care	
		Scientific development and quality of care	
	Professional morale	Job satisfaction	
	Facilities and equipment	Medical equipment Other equipment	
Financing and incentives	Health care/ primary care financing	Primary care funding	
	Health care expenditures	Expenditures on primary care	
	Incentives for professionals	Entrepreneurship Mode of remuneration	
	Financial access for patients	Cost sharing/out-of-pocket payment for primary care	
Service Delivery	Geographic access	Distance to primary care practice Distribution of primary care physicians	
	Access to services	Organizational access	List size Primary care provider workload Primary care outside office hours
Delivery of Care			Home visits in primary care Electronic access Planning of non-acute consultations
		Responsiveness	Timeliness of care Service aspects
			Clinics for specific patient groups

Functions	Dimension	Selected items/proxies
Service Delivery	Informational continuity	Computerization of the practice
		Medical records
Continuity	Longitudinal continuity	Patient lists
		Patient habits with first-contact visits/referrals
	Interpersonal continuity	Endurance of patient-provider relationship
		Patient-provider relationship
Service Delivery	Cohesion within primary care	Primary care practice management
		Collaboration among gps/fds
Coordination	Coordination with other care levels	Collaboration of primary care physician with other primary careworkers
		Referral system/gatekeeping
		Shared care arrangements
Service Delivery	Practice conditions	Premises, equipment
	Service delivery	Medical procedures
Comprehensiveness		Preventive, rehabilitative, educational activities
		Disease management
	Community orientation	Practice policy
		Monitoring and evaluation
		Community links
	Professional skills	Technical skills

Source: WHO Regional Office for Europe (11).

To evaluate the complexity of a PHC system properly, the PCET gathers information from different administrative levels and supply and demand sides (health providers and patients). The PCET accordingly consists of three separate questionnaires: one for experts focusing on national PHC policies and structures, one for PHC physicians and one for patients. Together, the questionnaires cover the PHC functions, dimensions and information items identified in the Scheme. The physician and patient questionnaires are prestructured; the national questionnaire contains prestructured and open-ended questions and lists statistical data for submission.

1.2 PCET development and pilot testing

Development of the PCET commenced in February 2007 and concluded in May 2008, when the final instrument became available to WHO for its health system support activities with Member States. The successive stages of development are briefly explained below. The development process for the tool has been described in more detail elsewhere (19,20).

1.2.1 Literature review

As a first step, researchers at the Netherlands Institute for Health Services Research (NIVEL)

conducted a directed literature review based on the WHO performance framework (3) to gather information on possible ways to measure the key PHC system functions. They paid particular attention to PHC indicators and existing PHC performance measurement and evaluation tools and questionnaires and produced a preliminary listing of dimensions and items for the tool.

1.2.2 First consultation with experts from the European Region

A meeting of international experts was convened in March 2007 to discuss the outcomes of the literature review. Primary objectives were to: discuss and reach consensus on key concepts and definitions; discuss and endorse the provisional set of dimensions, proxy indicators and information items for the PCET; and improve the initial version of the Primary Care Evaluation Scheme (Table 1) to develop questions for the questionnaires. Participants also took the first steps towards pilot implementation of the provisional tool.

1.2.3 Drafting, validating and translating the questionnaires

Draft versions of the questionnaires were developed on the basis of information and feedback from the expert meeting. Experts' comments were incorporated in new versions of the three questionnaires that were subsequently tailored to the situation in the countries in which the tool would be piloted (the Russian Federation and Turkey). The terminology was adapted to national situations and some additional questions were included on topics relating to national PHC priorities, at the request of health authorities in the two Member States. The final versions were translated into Russian and Turkish with input from a PHC expert, then back-translated into English and compared to the original version.

1.2.4 Two pilots

The provisional tool was piloted in two provinces of Turkey and two districts of Moscow oblast, Russian Federation. Under the super-

vision of the WHO Regional Office for Europe and respective health ministries in the pilot countries, local partners worked together with the technical leader from NIVEL to organize the details of the fieldwork, including sampling procedures, fieldworker training and the logistics of data collection and entry. Meetings were organized with experts in both countries to discuss and validate answers to the national PHC questionnaires. Data were analysed, conclusions and policy recommendations formulated and a report produced for each pilot implementation, including a section on lessons learned (19,20).

1.2.5 Copenhagen consultation meeting

A review meeting with international experts discussed the draft report at the Regional Office in Copenhagen, Denmark on 14–15 April 2008. The meeting revised the three questionnaires, making some major changes. Specifically, meeting participants:

- rewrote questions to encourage factual responses instead of soliciting opinions;
- reordered the sequence of topics and questions;
- changed the national PHC questionnaire into a questionnaire and a template for a more comprehensive background document to be prepared by a small team of local experts (materials that a focus group directed by WHO and NIVEL would subsequently discuss and approve);
- reduced the size of the physician and patient questionnaires;
- made terminology and wording more consistent throughout the questionnaires;
- decided to complement the survey results with other information sources such as publicly available literature, interviews with health care workers and experts and personal observations during site visits;
- determined that individual countries would be able to add questions related to specific national priorities; and
- decided that the final report would contain a set of proxy indicators.

After revision, the PCET was made available to the countries of the European Region. An implementation scheme describing the steps involved in utilizing the PCET was prepared to inform implementers in Member States.

1.3 Implementation of the PCET in Tajikistan

Implementation of the PCET was agreed between the Ministry of Health and Social Protection (MoH) and the Regional Office in the context of the 2010/2011 Biennial Collaborative Agreement. Initial planning at WHO started in August 2010, including the process of the evaluation and profile for the national counterpart institution and related logistical requirements. The MoH identified the Republican Centre for Medical Statistics and Information (RCMSI) as the national counterpart for project implementation.

1.3.1 Country visits

Experts from the Regional Office and NIVEL made two visits to Tajikistan to provide information on the PCET and its implementation and to prepare the fieldwork and data entry jointly with counterparts.

1.3.1.1 First mission –2010

A first visit was made between 31 October and 4 November 2010, the purpose of which was to introduce and discuss the methodology, gather first-hand information about PHC in Tajikistan, start designing the work with the national counterpart (RCMSI) responsible for the data collection and support the research team and counterparts to prepare for the fieldwork. A workshop with 30 participants, including representatives from international donor organisations, focused on adaptation of the PCET to the situation in Tajikistan.

Consultations and the workshop resulted in the following outcomes and refinements:

- the study would compare pilot areas with non-pilot areas and urban with rural facilities;

- the study would include nurses working in remote health houses and PHC centres without doctors and their patients, with a new questionnaire being developed for nurses;
- interviewers would personally administer the questionnaire to patients; and
- the questionnaires would be translated into Russian, Tajik and Uzbek.

Additional topics of antenatal care, immunization and tuberculosis (TB) care were suggested.

1.3.1.2 Second mission – 2011

This mission took place on 4–7 July 2011 with the purpose of finalizing preparations for the fieldwork (the data collection), completing the last round of adaptations to the questionnaires, reviewing the draft nurse questionnaire, training fieldworkers, reviewing the sampling procedure (pilot and non-pilot, with selection of eight districts from 70) and target response, estimating the number of fieldworkers needed (around 30), scheduling the fieldwork (September–December 2011) and coordinating translation of questionnaires. The division of roles for the next steps in the project were also explained.

1.3.2 Observations from site visits

Nineteen site visits to urban and rural health care facilities, mostly PHC centres and health houses, were made during both missions. The visits included viewings of the facility, interviews with PHC managers, family doctors (FDs), district physicians/therapists (DPs), nurses, feldshers and medical specialists.

Observations from the visits can be summarized as follows.

- The pilot rayons visited seemed to have implemented family medicine (in terms of human resources, equipment and CME activities) better than non-pilot rayons.
- Capitation-based funding and greater financial autonomy were unequally dispersed across centres.

- Salary variation was seen, probably due to lack of mechanisms for performance management.
- Low wages, coupled with unattractiveness of the work, are major challenges to health reform. Many workers have additional jobs or occupations to make financial ends meet.
- Conditions for retraining are unattractive. Many retrained doctors do not go back to their original workplace after retraining; for others, moving to Dushanbe for six months to undergo retraining is nearly impossible because of family and financial reasons.
- Those retrained FDs who return to their original workplace find they are unable to practise as FDs because of the lack of a supportive environment. In addition, their patient populations are redistributed during the retraining period.
- Retrained FDs leave the country, particularly for the Russian Federation, where salaries are much higher.
- Many female health care staff stop working after they get married.
- Medical reporting is extensive, outdated and reportedly takes 15 minutes per patient.
- The system of specialist supervision of FDs is extensive and fragmented. Supervisors are not familiar with family medicine and the new tasks of FDs and continue to apply old criteria.
- Clinical guidelines are available but could not be located during most visits.
- Maternal and child health care and the prevention of infectious diseases are major tasks for FDs, DPs and nurses.
- FDs and DPs' workloads seem rather low. Physicians reported seeing 7–12 patients during their three daily office hours and made 3–5 home visits during the other three hours.
- FDs and DPs only work in office hours: they have no out-of-hours duties.
- PHC facilities are decent but very basic; the absence of running water is common and available equipment seems outdated.
- Poor roads and lack of means of transportation (cars) interfere with the provision of efficient and responsive care, especially in rural areas. Home visits are often made by walking or travelling by donkey in remote areas.

1.3.3 Extension of the PCET and adaptation to the context in Tajikistan

PCET questionnaires were adapted and extended for use in the national context of Tajikistan in cooperation with stakeholders and counterparts. No additional topics were suggested for the national-level questionnaire, however.

1.3.3.1 Questionnaire for FDs/DPs

Terminology was adapted or answering categories modified or removed in several questions. Questions on employment status and community representation were removed, while new questions were added on:

- current practice of retrained FDs
- travel time to district hospital (in different seasons)
- supplementary jobs of physicians
- information received from medical specialists after treatment
- numbers of other physicians working in the same centre
- referrals to secondary/tertiary-level care made during a four-week period
- perceived skills in performing specific laboratory tests
- TB care, in particular: identified new cases, number of supervised households with TB, number of patients currently receiving follow-up care, involvement in provision of follow-up activities, training on TB care, division of roles between physicians, nurses and feldshers, availability of (new) information materials on TB.

1.3.3.2 Patient questionnaire

As in the questionnaire for FDs and DPs, questions and terminology were adapted and, where necessary, answering categories amended or removed. Questions were added on:

- frequency of visits at home by FD or DP in the past 12 months

- frequency of visits at home by a nurse in the past 12 months.

1.3.3.3 Nurse questionnaire

A new questionnaire was developed, with 38 questions in the following categories:

- personal and practice information (11 questions)
- workload and time-spending (six)
- accessibility to patients (two)
- quality improvement (four)
- medical records and information (two)
- cooperation and coordination (two)
- medical equipment (two)
- clinical care (one)
- mother and child care/reproductive health (one)
- TB care (seven).

1.3.4 Sampling and target populations

The samples needed to be sufficiently large to enable comparisons of pilot and non-pilot areas, urban and rural facilities and regions. RCMSI identified the districts to be included in line with the general sampling strategy developed

by the research team. Four regions were included to ensure the survey provided nationwide coverage. Official lists of FDs, DPs and PHC nurses were used as the sampling frame. A target of 10 patients for each participating physician was set for the patients' survey.

All three regions and rayons of republican subordination (RRS) in Tajikistan were included in the survey. The numbers of physicians and nurses was small in the Gorno Badakhshan Autonomous Region (GBO) due to the fact that only 4% of the population resides here, despite it representing 40% of the country's territory. All physicians being retrained as a FD (up to October 2011) were included. The nurses were working in rural health houses with no physicians working on a daily basis. The target response among patients (10 for each FD and DP in the survey) amounted to 234 (FDs) plus 309 (DPs) multiplied by 10, giving a total of 5430. Key data describing the sampling by regions, districts and rayons are presented in Table 2. Regions and districts from other than reform-pilot areas were also selected.

Table 2. Selected regions: key data and number of PHC staff included for surveys (October 2011)

Region	District	Population (000s)	Rural health centres	Health houses	Hospitals	Total out-patient physicians	Included (target)		
							DPs	FDs	Nurses
Sughd	Spitamen	116.2	9	8	4	101	43	58	34
	Gonchi	139.0	16	22	8	67	65	2	44
RRS	Shahrinaw	96.7	15	14	1	74	31	43	35
	Faizabad	82.6	7	30	3	50	1	5	20
	Turzun-zadeh	242.7	27	50	7	259	60	75	85
	Gissar	245.0	35	41	7	156	50	31	52
Khatlon	Sarband	38.9	3	8	2	20	10	10	12
	Khuroson	92.2	11	24	6	35	35	–	16
GBO	Rushan	23.8	6	30	4	12	2	10	15
	Ishkashim	29.8	6	20	3	12	12	–	13
TOTAL							309	234	326

1.3.5 Response

The response of 255 among FDs exceeded the target of 234 as more FDs completed retraining after the target was set. The response among DPs of 225 was 73% of the target and that among nurses (299) represented 92%.

Fieldworkers recruited more than the targeted number of patients, with 5255 enlisted. No information was kept by fieldworkers about the number of patients who refused to be interviewed.

1.3.6 Role of fieldworkers

A team of 30 fieldworkers and their drivers was involved in collecting the data. Fieldworkers conducted personal interviews with patients they had recruited and distributed questionnaires to the FD, DP or nurse in the centre: if they preferred to be personally interviewed, the fieldworkers obliged.

Fieldworkers were recruited and trained by RCMSI. Their training addressed context and objectives of the survey, basic principles and structure of the PCET and the type of questions used, specific questionnaire topics, ways to approach and assist respondents (establishing a good rapport, offering clear explanations and stressing confidentiality), creating a suitable environment for patients to complete the questionnaire, checking readability and completeness of answers, and logistical issues, such as allocation to locations, planning and transport.

1.3.7 Information-gathering at national level

A team of MoH experts contributed to answering the questionnaire to enable information on PHC from a national perspective to be gathered. Information from the questionnaire and

statistical data were complemented by other sources of information to provide the overview on PHC provided in Chapter 3.

1.3.8 Data processing, analysis and reporting

RCMSI was responsible for data entry, using a software program provided by NIVEL. Raw data files were sent to NIVEL for processing and analysis. Codes that would have enabled linkages of data from patients to be matched to those of their own physicians were unfortunately not completed during the fieldwork.

1.3.9 Validation and finalization of the report

Validation workshops for the first draft report delivered by the NIVEL research team were conducted in June and November 2013 with representatives from the MoH, government and agency officials, health providers, national experts, development partners and WHO experts. Delegates discussed the methods and structure of the evaluation, study results and recommendations.

Following the workshop and based on participants' recommendations, a group of national experts updated information on PHC regulation and incorporated comments from workshop participants and others into a new version of the report. Additional inputs provided by stakeholders who did not attend the validation events were also gathered and integrated. The new draft report was translated into Russian and submitted to MoH specialists for clearance. The final update of information was performed by the Regional Office in collaboration with the research team at NIVEL.

Details on the application of the PCET in Tajikistan are summarized in Table 3.

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

Elements of implementation	Explanation
Target groups	FDs DPs PHC nurses Patients visiting FDs, DPs and PHC nurses Health care experts (for information at national level)
Locations (rayons)	Sughdoblast Spitamen Gonchi RRS Shahrinau Faizabad Tursun-zadeh Gissar Khatlon Sarband Huroson GBO Rushan Ishkashim
Type of data collection	Surveys among FDs, DPs and PHC nurses (in rural health houses) using pre-structured questionnaires (distributed and supported by fieldworkers) Patients: survey using prestructured questionnaires (personally administered via interviews conducted by fieldworkers) Health care experts: mixed approach, with a questionnaire and meeting for validation and feedback Observations/interviews during practice visits by research team
Method of recruitment/inclusion	FDs and DPs: pilot and non-pilot practices in selected districts in all four regions of Tajikistan PHC nurses: health houses in same districts Patients: 10 patients attending the practice of FDs/DPs and PHC nurses in health houses Health care experts identified and recruited by MoH (for information at national level)
Planned sample sizes	FDs: 234 (initial) DPs: 309 PHC nurses: 326 Patients (of FDs and DPs included in the survey): 5 430
Response	FDs: 255 (including FDs retrained after survey design) DPs: 225 (73%) PHC nurses: 299 (92%) Patients: 5 255 (more than initial target)
Instructions	RCMSI was instructed about sampling method, recruitment, study populations, lists of staff, logistics of surveys Fieldworkers received training for their roles Respondents (patients) were introduced to the survey and received explanations from fieldworkers
Coordination of fieldwork	RCMSI and WHO country office Fieldworkers: information to patients; administration of data collection NIVEL: general supervision
Data entry	RCMSI under auspices of NIVEL
Analysis and draft reporting	NIVEL
Validation and final report	NIVEL with inputs from the Regional Office and MoH

2. INTRODUCTION TO TAJIKISTAN

2.1 The country

Tajikistan is a landlocked country situated in central Asia bordering Kyrgyzstan in the north, China in the east, Afghanistan in the south and Uzbekistan (Fig. 3). It covers a total area of 143 100 km², mostly comprising mountainous

areas. The capital city of Dushanbe is situated in the west. Almost 80% of the population is Tajik, followed by just over 15% Uzbek and other groups such as Russian and Kyrgyz. The official religion is Islam and most of the population is Sunni Muslim.

Fig. 3. Tajikistan (showing location in central Asia)



Source: reproduced by permission of the United Nations Publications Board.

The country became independent in September 1991, after the collapse of the Soviet Union. A civil war ensued, lasting to 1997; this has hampered economic stability and growth. Tajikistan is an active member of the Economic Cooperation Organization, a platform for promoting, developing and improving trade and investment in central Asia which, besides Tajikistan, involves Afghanistan, Azerbaijan,

the Islamic Republic of Iran, Kazakhstan, Kyrgyzstan, Pakistan, Turkey, Turkmenistan and Uzbekistan. Its goals are to develop a unified market, achieve sustainability, remove barriers and develop infrastructure (21). The economic relationship between the European Union (EU) and Tajikistan is regulated through a partnership and cooperation agreement, which was signed in 2004 and came into

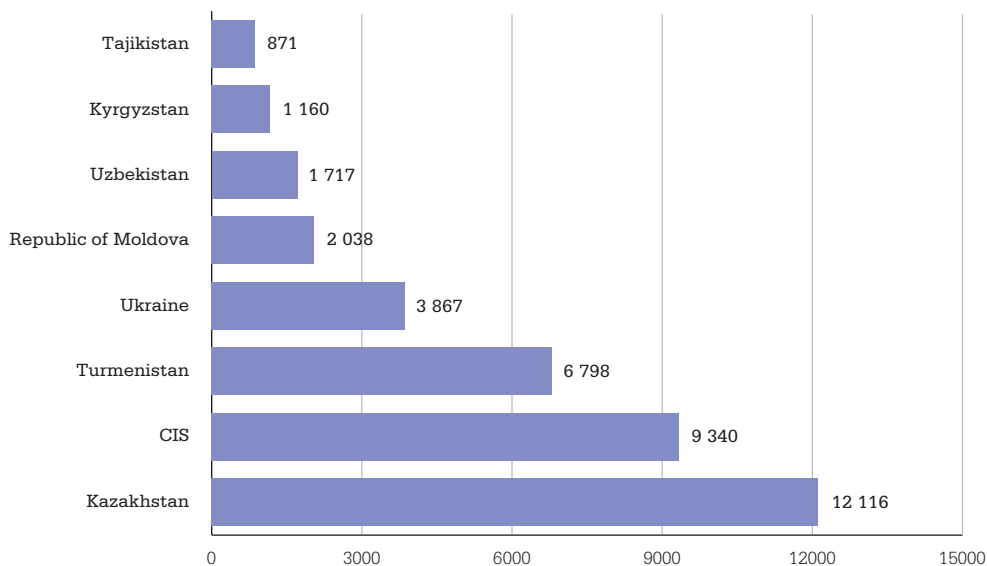
force in 2010. Trade is steadily growing, with the EU becoming the country's third trading partner (after Russia and China) in 2008 with a 10.3% external trade share. The EU imports aluminium, textiles and clothing, while exports into Tajikistan mainly comprise machinery, agricultural produce and chemical products.

Although the economic situation is improving gradually, Tajikistan remains one of the poorest countries of the former Soviet Union. The economy recovered after the civil war with steady economic growth between 2000 and 2008 (on average 8% per annum), but the global economic crises in 2009 had an adverse effect, with gross domestic product (GDP) falling 3.9% in 2009. Steady improvements have been seen since then; in 2013, GDP reached 7.4% growth. Notably, almost 49% of GDP (US\$ 4.1 billion) is accounted by remittance inflows (22). A strong correlation can be observed between

remittances and domestic consumption, with the latter increasing due to the growth of the former. Approximately 60% of food is imported, 90% by rail. Despite the efforts of the Government of Tajikistan, it is still one of the poorest countries in Europe and central Asia, with a GDP per capita of US\$ 871 in 2012 against an average of US\$ 9 340 for Commonwealth of Independent States (CIS) countries (Fig.4). The main sources of income are cotton, agriculture and aluminium production. Economic inequalities are significant, with just 20% of the population receiving nearly half of total income.

Tajikistan is divided into the three administrative regions of Sughd, Khatlon and GBAO and the RRS. Each oblast is divided into several rayons, which are further subdivided into jamoats (village-level, self-governing units).

Fig. 4. GDP rates, US\$ per capita, central Asia and CIS (2012)



Source: WHO Regional Office for Europe (23).

2.2 Population and health

According to estimates from 2012, the population of Tajikistan is 7 807 212, with an expected growth rate of 1.9% and a migration rate of -1.21 per 1000. Just over a quarter live in urban areas (26.4%) with 704 000 residing in Dushanbe. The male to female ratio is 49.5% to 50.5%. The total population fluctuates annually, in contrast to the steadily decreasing trend observed in neighbouring countries over

the past decade (24,25), but data on population characteristics and health-related topics remain of questionable accuracy and consistency (26).

Table 4 summarizes these and other key indicators for Tajikistan compared to averages for central Asian countries of Kazakhstan, Kyrgyzstan and Uzbekistan and the Republic of Moldova and Ukraine (23).

Table 4. Selected demographic, health and lifestyle indicators, 2012 data (unless otherwise indicated)

Indicator	Tajikistan	Kazakhstan	Kyrgyzstan	Republic of Moldova	Ukraine	Uzbekistan
Population 0–14 years (%)	35.9 ^a	24.4 ^c	30.2 ^c	16.2	14.5	33.0 ^a
Population 65+ years (%)	4.4 ^a	6.7 ^c	4.5 ^c	10.0	15.2	4.5 ^a
Life expectancy at birth (years)	73.7 ^a	68.6 ^c	70.0 ^c	71.1	71.3	70.5 ^a
Crude death rate (per 1 000)	4.2 ^a	8.9 ^c	6.6 ^c	11.1	15.4	5.4 ^a
Live birth rate (per 1 000)	27.8	22.7	27.1 ^d	11.1	11.2	21.0
Total fertility rate (children per woman)	3.5 ^a	2.7	3.1 ^d	1.3	1.5 ^d	2.2
Maternal deaths (per 100 000 live births)	32.9	13.7	47.5 ^d	30.4	12.9	20.2
Infant deaths (per 1 000 live births)	14.1 ^a	16.5 ^c	22.3 ^c	9.8	8.4	15.0 ^a
Infectious and parasitic disease SDR ^e	28.7 ^a	16.7 ^c	20.1 ^c	14.8	28.8	21.3 ^a
Diseases of circulatory system SDR	560.6 ^a	621.1 ^c	701.9 ^c	659.0	667.1	754.2 ^a
Malignant neoplasm SDR	72.8 ^a	157.0 ^c	114.0 ^c	163.2	163.1	77.4 ^a
Chronic liver disease and cirrhosis SDR	34.6 ^a	n.a.	63.0 ^c	82.1	n.a.	44.5 ^a
External-cause injury and poison SDR	32.9 ^a	116.4 ^c	86.8 ^c	85.1	83.5	48.7 ^a
Regular daily smokers 15+ (%)	n.a.	n.a.	20 ^a	27.1 ^b	23.3 ^c	n.a.
Pure alcohol consumption 15+ (litres per capita)	0.3 ^b	6.6 ^c	2.4 ^b	6.1 ^c	8.4 ^c	2.5 ^b

^a2005 data.

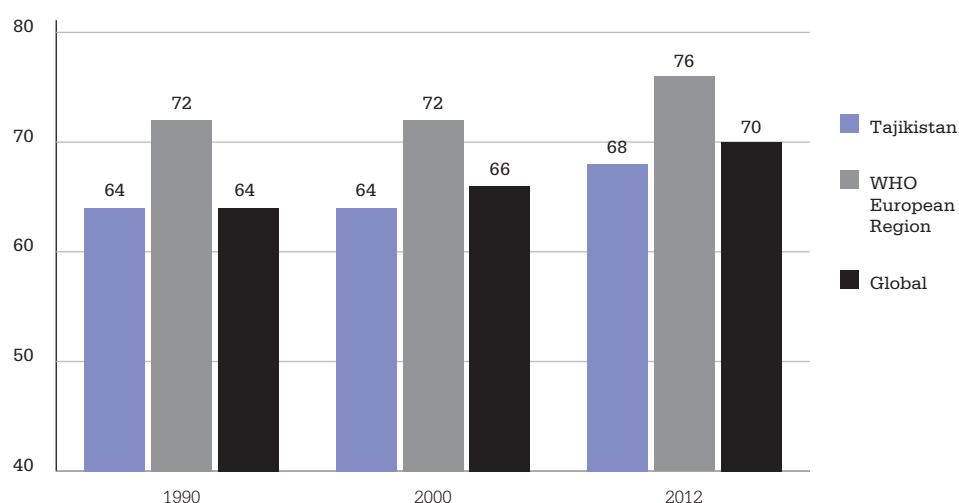
^b2009 data.

^c2010 data.

^d2011 data.

^eSDR = standardized death rate.

Source: WHO Regional Office for Europe (23).

Fig. 5. Life expectancy at birth (years) in Tajikistan, WHO European Region and globally

Source: WHO (27).

Average life expectancy at birth for people in Tajikistan (again, 2012 figures) is 68 years (67 for men and 69 for women), which is lower than that for the European Region (76 years) by eight years on average (27). Life expectancy at birth in Tajikistan, the European Region and globally is shown in Fig. 5.

The population is relatively young, with the proportion under 15 years much greater than

that of people over 60 (35.9% and 4.8% respectively). This can be explained in part by the high birth rate, reported in 2012 as 3.8 children per woman, compared to the European Region average of 1.6 (23). Maternal and under-5 mortality rates, however, remain high. As shown in Table 5, maternal mortality is higher only in Kyrgyzstan and Turkmenistan and the infant mortality rate is among the highest relative to the central Asian republics and Kazakhstan.

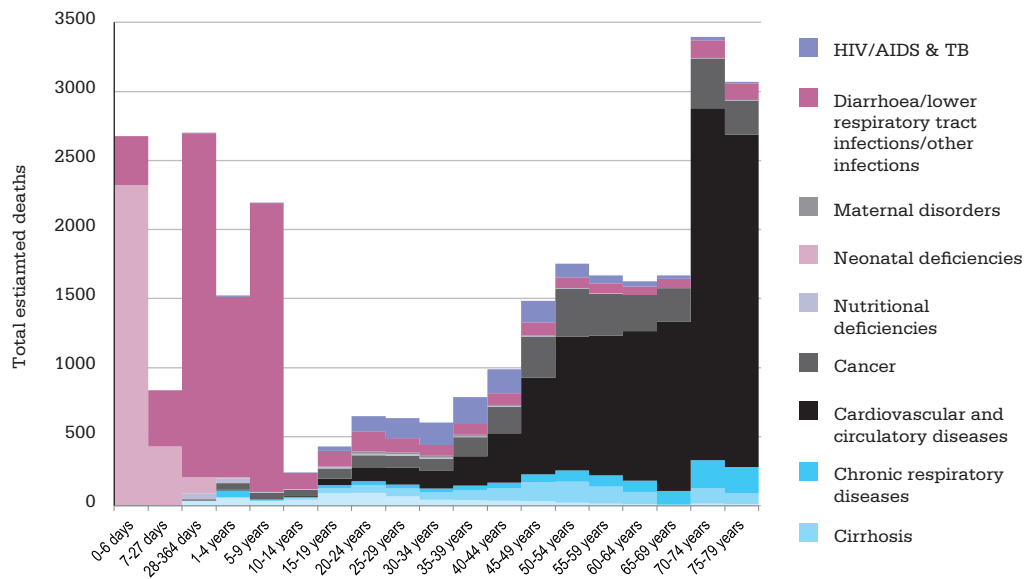
Table 5. Maternal and infant mortality rates in Tajikistan, central Asian republics and Kazakhstan (2012)

Countries	Maternal mortality ratio ^a	Under-5 mortality rate ^b
Kyrgyzstan	75	27
Tajikistan	44	58
Turkmenistan	61	53
Uzbekistan	36	40
Kazakhstan	26	19

^aPer 100 000 live births (interagency estimates).

^bPer 1000 live births, both sexes.

Source: WHO (27).

Fig. 6. Leading causes of death across the life course in Tajikistan (2010)

Source: Institute for Health Metrics and Evaluation(31). Reproduced with permission from the Institute for Health Metrics and Evaluation.

Tajikistan now faces a double burden of communicable and noncommunicable diseases (NCDs), which account for 62% and 32% of disability-adjusted life-years respectively (28). Similar to trends elsewhere in the European Region, NCDs account for more than half (59%) of mortality, with the proportion of deaths caused by NCDs increasing with later life (Fig. 6). Cardiovascular and circulatory diseases account for the greatest proportion (39%). These health trends reflect impoverishment of the population and deterioration of health services following the civil war and post-independence years, during which many previously eradicated diseases re-emerged due to poor public health services affecting water quality and health education (29,30).

2.2.1 Maternal and child health

Infant and under-5 mortality rates (34 per 1000 and 43 per 100 000 live births, respectively) are decreasing but remain higher than averages for the Region (32). The maternal mortality rate is also decreasing, from 65 deaths per 100 000 live births in 2010 (33) to 37 in 2011, according to official data. National data indicate that

over half of infant mortality (57%) occurs in the neonatal period, with leading causes of death beyond this stage including diarrhoea, lower respiratory-tract and other infectious diseases (see Fig. 6). Leading causes of maternal deaths nationally are nonpregnancy-related conditions, including hypertensive disorders (26%), hepatitis (13%) and cardiovascular conditions (8.4%).

In relation to child immunization against vaccine-preventable diseases, 88% of children aged 18–29 months in 2012 received all basic WHO-recommended vaccinations (32). Tajikistan demographic and health survey data also show the underweight trend remains high, with only a 1% decrease in children under 5 years whose weight is below two or three standard deviations for their age (from 17% in 2005 to 16% in 2012). In this context, the MoH continues to support women and children's health through initiatives such as promoting the use of contraceptives (achieving 29% in 2012, up from 5% in 1991) and issuing a law on childhood immunization and the national programme for immunization for 2011–2015 (34).

Fig. 7. Changes in the leading causes of death, 1990–2010

1990		2010
1 Lower respiratory infections (10 273) ^a		1 Ischaemic (9 060)
2 Ischaemic (7 683)		2 Stroke (5 466)
3 Diarrhoeal (5 424)		3 Lower respiratory infections (4 211)
4 Stroke (4 531)		4 Preterm birth complications (1 428)
5 Preterm birth complications (2 082)		5 Diarrhoeal (1 376)
6 Neonatal encephalopathy (1 444)		6 Cirrhosis (1 263)
7 Chronic obstructive pulmonary disease (1 362)		7 Congenital anomalies (1 249)
8 Congenital anomalies (942)		8 Chronic obstructive pulmonary disease (1 098)
9 Meningitis (877)		9 Neonatal encephalopathy (1 017)
10 Road injury (803)		10 TB (681)
12 Cirrhosis (738)		12 Road injury (619)
19 TB (335)		18 Meningitis (495)

^aNumber in brackets represents the estimated deaths by cause, all ages, males and females in 1990 and 2010.

Source: Institute for Health Metrics and Evaluation(31). Reproduced with permission from the Institute for Health Metrics and Evaluation.

2.2.2 NCDs

The burden of NCDs in Tajikistan is reported to be increasing, with leading causes of death attributed to cardiovascular disease (39%), cancers (7%), respiratory disease (3%), diabetes (2%) and other NCDs (8%) (28). Fig. 7 shows the growing burden, with an increase in ischaemic heart disease, strokes and cirrhosis between 1990 and 2010 paralleled by a decrease in childhood diseases such as lower respiratory-tract infections and preterm complications. Looking to the age-standardized death rate for all NCDs, higher mortality rates are recorded for females (760 per 100 000) than males (678): the biggest contributor is higher rates of cardiovascular disease and diabetes among women. Dietary risks, high blood pressure and household air pollution are the main risk factors contributing to the burden of NCDs, particularly cardiovascular and circulatory diseases. In addition, an estimated 40% of the population are overweight with 9% being considered obese, highlighting levels of physical activity and dietary patterns (28).

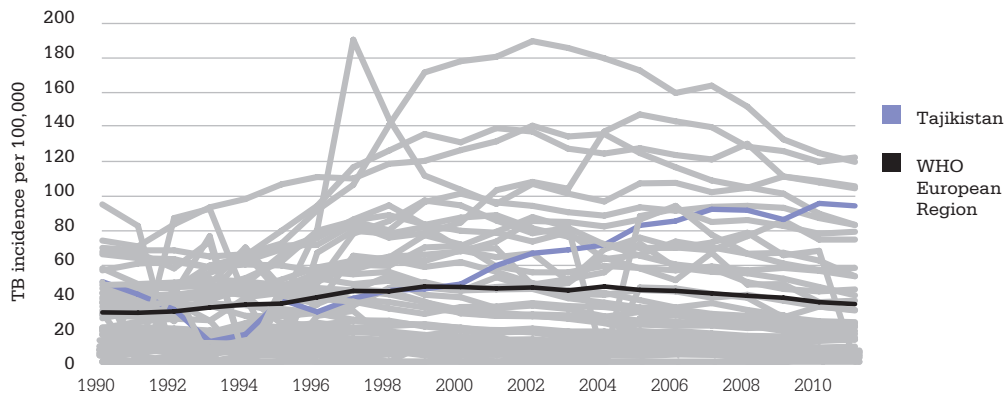
2.2.3 TB

The case notification rate for TB has shown a decreasing trend since the early 2000s but remains nearly three-fold higher than in the

early 1990s. Tajikistan is among the 18 high-priority countries in the European Region and 27 high-burden multidrug-resistant TB (MDR-TB) countries globally for intensified TB prevention and control. The estimated TB incidence rate of 90 cases per 100 000 in 2011 was among the highest in the Region and well above the regional average of 33 (Fig. 8). This high and persisting TB burden has been linked to factors such as late diagnosis, low public awareness about prevention methods and unequal distribution of disease among already marginalized populations, including those living in poverty, prisoners, migrants and people who are HIV-positive.

Much attention has been given to strengthening the delivery of TB services, signalling the commitment to improving prevention and control interventions. Achievements to date include: implementing the WHO-recommended directly observed treatment, short-course strategy since 2002, achieving full coverage by 2007; increasing the trend towards ambulatory treatment from the first day, rising from 9.6% in 2009 to 39.2% in 2011 and 45.3% in 2012; and continuing to increase coverage of MDR-TB treatment for diagnosed patients, up from 63% in 2011 to 70% in 2012.

Fig. 8. Trends in TB incidence per 100 000 population, WHO European Region and Tajikistan, 1990–2011



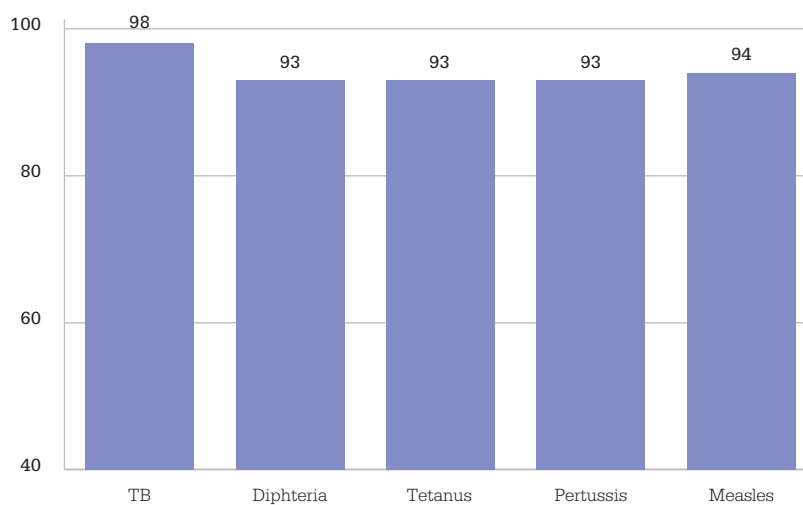
Source: WHO Regional Office for Europe (23).

2.2.4 Immunization

Financial constraints have had a serious impact on health promotion and disease prevention since the collapse of the Soviet Union, resulting not only in the reoccurrence of epidemic outbreaks of communicable diseases such as typhoid and TB, but also regular outbreaks of anthrax and Crimean–Congo haemorrhagic fever. Immunization coverage

deteriorated, leading to outbreaks of diphtheria and other vaccine-preventable diseases, especially among children, but slow and steady restoration of coverage has been seen since the implementation of the national immunization programme in 1994. Polio outbreaks in 2002 and 2010 were eradicated. Fig. 9 provides data on infant immunization rates.

Fig. 9. Infant immunization rates, 2010



Source: WHO Regional Office for Europe (23).

2.3 The health care system

The health care system in Tajikistan was based on the system of the former Soviet Union, the Semashko model, which emphasizes a curative focus with an extensive infrastructure and large numbers of health professionals. Health care was comprehensive, but patients had limited choices due to the hierarchical management system. The system stayed in place after the collapse of the Soviet Union, but facilities and equipment were destroyed in the civil war or became outdated due to economic constraints. The workforce rapidly decreased due to high emigration rates. The health system therefore needed to change and is currently undergoing significant transition.

Organization of health care services complies with the general administrative structure of the country, meaning the MoH is responsible for health services at national level and local authorities at oblast and rayon levels for most regional, rayon and rural health services. The MoH does not control the total health budget (29); health budgets are allocated centrally from the Ministry of Finance directly to financial units at oblast level. The MoH directly controls the budgets of health care facilities at republican levels.

The Law on Health Protection was adopted in 1997 and updated in 2002. It describes

the tasks of the MoH and, although complete implementation has not been achieved, addresses important issues such as the development of a national health policy, development and implementation of national disease-control programmes, pharmaceutical policy development and licensing control, and certification of institutions and personnel in the health care sector (35).

Total health expenditure per capita is low compared to other countries in the Region (Table 6) and is higher only than Kazakhstan among CIS countries in relation to proportion of GDP spent on health. The cost of health care, however, remains largely with the population, as out-of-pocket payments comprise 60.06% of total health expenditure, which is by far the highest in the Region.

Information on health care resources and utilization is provided in Table 7. The number of hospitals and hospital beds is high compared to other countries, but health personnel numbers across all categories are low. Low GP numbers are similar to elsewhere in the Region, but the number of physicians is lowest. This is reflected in the number of outpatient surgical procedures per year per 100 000 people: Tajiks make an average of 4.2 outpatient visits per year, which is low compared to other countries. The number of dentists is extremely low (0.7 per 100 000 population).

Table 6. Selected health care expenditure indicators, 2012

Indicator	Tajikistan	Kazakhstan	Kyrgyzstan	Republic of Moldova	Ukraine	Uzbekistan	CIS
Total health expenditure as % of GDP (WHO estimates)	5.8	4.8	7.1	11.7	7.6	5.9	6.3
Total health expenditure (PPP ^a US\$ per capita)	41.65	341.67	n.a.	357.04	n.a.	n.a.	n.a.
Private households' out-of-pocket payments on health (% of total health expenditure)	60.1	41.7	34.8	45.3	42.4	44.1	39.33

^aPurchasing power parity.

Source: WHO Regional Office for Europe (23).

Table 7. Selected health care resources and utilization indicators, 2012

Indicator	Tajikistan	Kazakhstan	Kyrgyzstan	Republic of Moldova	Ukraine	Uzbekistan
Hospitals (per 100 000)	5.7 ^a	5.5	2.6	2.4	5.2	2.6 ^b
Hospital beds (per 100 000)	488.7 ^a	700.7	476.1	622.6	890.7	438.9 ^b
Physicians (per 100 000)	169.68 ^a	349.5	195.8	282.6	349.42	225.5
GPs (per 100 000)	23.6 ^a	31.2	31.6	52.2	37.1	26.8
Nurses (per 100 000)	400.0 ^a	804.51	610.51	641.86	752	1 129.0
Dentists (per 100 000)	15.9 ^a	41.2	17.8 ^c	46.9	67.6	17.3
Pharmacists (per 100 000)	–	80.6	5.16	52.6 ^a	4.0	3.8
Inpatient surgical procedures per year (per 100 000)	1 912.9	4 304.3	3 035.4 ^a	4 697.5	5 357.7 ^a	2 761.4
Outpatient contacts (per person per year)	4.5	6.9	3.5 ^a	6.5	10.7 ^a	9.1

^a2011 data.^b2010 data.

Source: WHO Regional Office for Europe (23).

3. PHC IN TAJIKISTAN: HEALTH SYSTEM CONTEXT

This chapter addresses policies, regulations and structures relevant to PHC, with a special focus on the following areas: policy developments, aspects of financing, workforce, education of providers, quality assurance and the role of patients.

The chapter is based on responses to the national-level questionnaire from a team of experts and official statistical data, inputs from experts contracted ad hoc to update the information in 2013 and other literature and reports from the country.

The description of results follows the structure of health systems functions and characteristics, as described in Chapter 1. The chapter provides the context for the results of surveys of FDs/DPs, PHC nurses and their patients described in Chapters 4–6.

3.1 Stewardship/governance¹

3.1.1 Past reforms

Tajikistan introduced reform strategies for PHC in several regions in the 1990s. Family medicine was introduced in 1998 by the MoH decree on the Staged Transfer to Organization of Primary Health Care Based on Principle of General Practitioner (Family Doctor) for 1998–2000. One of the main priorities of reform in the health sector was the development of quality PHC based on family medicine and general practice was included in the official list of medical specialties in 1998.

Two strategic documents – a poverty-reduction strategy paper (36) and the conception

of health sector reform (37) – provided further impetus for introducing PHC based on family doctors into health system reforms.

The poverty-reduction strategy includes delivery of basic social services to the population, with an emphasis on targeting poor groups. This has been translated into the following health sector priorities: the development of PHC services, improvement of the quality of health services, provision of accessible and affordable health services and strengthening of public health services and medical statistics. The paper introduced the monitoring of four indicators directly linked to population health: infant and maternal mortality rates per 1000 live births; the percentage of the population with access to reproductive health services and safe drinking water; and communicable diseases rates.

The conception of health sector reform, approved by Government resolution No. 94 of 4 March 2002, included the strengthening of PHC services among its eight main objectives. It stated that health houses would function as the first point of contact and adopt a gatekeeping role for the entire population, particularly for people in rural areas in which secondary care facilities were not available. It also emphasized the need to increase the quality of care provided in PHC and rationalize the hospital sector to consolidate resources and improve efficiency. Other objectives envisaged increased funding for health and decreased out-of-pocket payments, investment in human resources for health (particularly for PHC), regulation of the largely unregulated market for drugs, increased management capacity in the sector, development of an information system and engagement of people in health reforms to create a sense of personal responsibility for health.

¹ This section is based on Khodjamurodov & Rechel (29), responses to the PCET national-level questionnaire and information provided by the Health Policy Analysis Unit of the MoH.

In relation to the last objective, a 2004 referendum amended the state's role in the health sector (Article 38 of the Constitution of the Republic of Tajikistan), allowing the introduction of formal copayments. Further measures and reforms undermined the high level of unofficial under-the-table payments as undocumented practice in PHC.

The above-mentioned documents, along with the health care financing strategy for 2005–2015 (approved in 2005) and the national health strategy for 2010–2020, have set the ground for all ongoing reforms and initiatives towards establishing a family medicine-based health services delivery model.

3.1.2 Health system governance: institutional arrangements

The roles of government bodies relevant to the health system are as follows.

The MoH is responsible for planning, managing and regulating health services and developing and implementing national health policies and strategies. It also purchases medical equipment, drugs and technology. The monthly collegium, chaired by the Minister of Health, is an important decision-making body within the ministry. The MoH has departments in the regions (oblasts) and districts (rayons) that manage health facilities technically and financially, working closely with local administrations.

The Government regulates and controls the national budget, and consequently the share for health care. Together with the MoH, it develops health policies and strategies, laws, orders and other legislative norms on the planning and implementation of health-related programmes and infrastructure.

The Ministry of Economics and Trade is involved in estimating and establishing the national budget, including the share for health care. The Ministry of Finance decides on health care's share of the national budget and

transfers funds to the MoH and local entities and authorities. It also monitors utilization and establishes audited accounts for deliberation in parliament. The Committee on State Income and Taxes collects the public taxes and levies that form the basis for public spending on health care. The Ministry of Education oversees medical education programmes and makes decisions (in coordination with the MoH) on medical curricula.

Various republican centres operate under the umbrella of the MoH, managing or overseeing specific programmes. These include the Republican Centre for Family Medicine, Republican Centre for Healthy Lifestyles, National Centre for Reproductive Health, Institution of Preventive Medicine, Republican Centre for Nutrition, Republican Centre for Immunoprophylaxis, Republican Centre for Eastern Medicine and the Republican Centre for Tuberculosis Control.

The State Service for Supervision of Medical Activities, established in 2008, is in charge of monitoring and regulating quality in health care, including all public and private providers and accreditation and certification procedures. The State Surveillance Service for Sanitary and Epidemiological Services is responsible for the prevention, monitoring and control of infectious diseases, occupational health, food safety and environmental health. It runs a network of laboratories and provides statistics on communicable diseases. The RCMSI (formerly known as Medstat) is responsible for collecting and analysing all routine data produced by the public health system and reported to the MoH. The Statistics Agency (Goskomstat), under the President of the Republic of Tajikistan, collects vital statistics such as data on births and deaths. The Service for State Control over Pharmaceutical Activities is responsible for registration of medicines and introduction of the list of essential drugs. It also plays an important role in accreditation and licensing pharmaceutical activity, controlling drug quality and inspecting pharmacies.

3.1.3 Centralized and decentralized health governance

3.1.3.1 PHC within the MoH

Overall responsibility for the development and implementation of PHC and family medicine reforms lies with the MoH. Health reforms, including those for PHC and family medicine, were under the Department for Coordination, Planning and Implementation of Reforms and responsibility for the provision of health services at primary care level under the Department of Service Delivery Management from 1994. MoH reorganization in December 2013 established the Department for Health Reforms, Primary Health Care and International Relationships to succeed the Department for Coordination, Planning and Implementation of Reforms, with responsibilities for service delivery at primary care level and a dedicated unit for PHC. The Department of Service Delivery Management no longer has direct responsibility for provision of services at primary care level.

3.1.3.2 Regional differences in PHC

The organization of health care services follows the administrative structure of the country. The MoH is responsible for health service delivery at national level, while local authorities at oblast and rayon level are in charge of most regional, district and village-based health services. The MoH therefore does not control the health budget (29) as health budgets from the national state budget are allocated centrally by the Ministry of Finance directly to finance departments at oblast level. The MoH directly controls only budgets for health facilities at republican level.

Administrative levels affecting how the health sector is governed are:

- MoH (republican level);
- health departments at regional (oblast) level and city executive authorities (khukumats) in Dushanbe;
- central, rayon or city hospitals that also perform the functions of rayon or city health care departments; and

- village (jamoat) level, governing the core of PHC services.

3.1.4 PHC policy development

PHC-relevant laws, acts, programmes and policy documents are briefly described below in chronological order.

- 1997: Law No. 421 of 15 May 1997 of the Republic of Tajikistan on health care protection. This defines interalia that the executive authorities of the state are responsible for the protection of the health of the population.
- 1998: Order No. 236 of 23 June 1998: staged implementation of family medicine. This addresses the introduction of family medicine to the health care system and the development of staffing norms for this area, and provides the basis for other legal initiatives.
- 2002: Government Decree No. 94 of 4 March 2002: conception of health sector reform in the Republic of Tajikistan. This decree indicates that PHC is one of the priorities of health care reforms in Tajikistan, defining a new structure for PHC and transforming the multilayered structure in rural areas into a two-tier system. Health houses, each linked to a rural health centre, referral centre and new second level of the health system, were identified as first-contact points in rural areas. Also significant in 2002 was the Resolution of the Government of the Republic of Tajikistan No. 252 of 30 December 2002 on the new organizational structure for PHC and Decree No. 436 of 5 November 2002: health care strategy for the Republic of Tajikistan to 2010. The latter builds on the WHO health for all strategy and advocates a multisectoral approach to health with a particular focus on improving the health of mothers and children (29).
- 2004: Government Decree No. 169 of 1 January 2004: strategy to rationalize the provision of care in medical facilities 2011–2016. This decree addresses issues such as equitable distribution of outpatient and inpatient services throughout the country, including the relevant provi-

sion of resources to primary and secondary medical facilities.

- 2005: Order No. 584 of 31 October 2005: new standards on family medicine, which details responsibilities of health facilities and staff members and includes a list of required equipment, staffing norms and workload (29).
- 2006: Order No. 13 of 12 January 2006: development of the family medicine model in the Republic of Tajikistan. This presents the countrywide introduction of family medicine as the organizational model in PHC and addresses questions about infrastructure and human resources.
- 2008: Government Decree No. 600 of 12 December 2008: basic benefit package to citizens of the Republic of Tajikistan in state health care facilities, which introduced a basic benefit package relevant to the provision of PHC and family medicine and included a list of 1200 items subject to formal copayments (29). The June 2008 decree of the MoH and Ministry of Finance on management and financing structure of primary care facilities in the MoH system allocates at least 40% of the city/district budget to PHC.
- 2009: Government Decree of 16 June 2009: revision of the basic benefit package and introduction of 12 copayment categories (29).
- 2010: Law No. 676 of the Republic of Tajikistan of 29 December 2010 on family medicine defines the legal basis and responsibilities for the provision of PHC in line with principles of family medicine at different levels, including national, local khukumat and specialist. Resolution of the Government of the Republic of Tajikistan No. 368 of 2 August 2010: the national health strategy of the Republic of Tajikistan for 2010–2020 defined the development of PHC as one of the priorities of health reforms and emphasized the need to continue the development of effective service delivery systems through integrating vertical services into PHC.
- 2011: Government Decree No. 330 of 1 July 2011: programme for family medicine de-

velopment for 2011–2015 aims to improve population access to medical care and integrate medical and sustainably developed services at PHC level in line with principles of family medicine, including objectives for further development. The strategic plan for the rationalization of medical facilities for 2011–2020 also addresses improved population access to medical services and defines new standards of planning, on which the health network will be developed in future.

- 2012: the plan for implementation of the programme for development of family medicine addresses the provision of sustainable services in PHC in line with family medicine principles.

Other relevant policy documents are summarized in Annex 1.

3.1.5 Professional regulation and monitoring

The MoH is the main regulator for health professionals and services in Tajikistan, using processes that have not changed much since the Soviet period. As mentioned above, however, the MoH issued new standards for family medicine in 2005 through Order No. 584 that provided a detailed description of health staff in PHC health facilities and defined norms, required equipment and workload.

In accordance with approved norms at PHC level, FDs require a Tajik State Medical University (TSMU) diploma of higher education, a certificate of completion of internship and a diploma in general medicine, in addition to specialization in family medicine. Nurses can start work after completing the general practice stream of one of Tajikistan's medical nursing colleges.

All physicians, including FDs, and nurses must recertify every five years. To do so, they must meet a number of established criteria, attend CME courses, take part in professional development activity and submit a report about their work practice to the MoH. Opportunities

for CME are scarce, however, due to lack of financial resources, so noncompliance has had little effect on continued medical practice for FDs. Discussion on how to improve this situation is ongoing, with other countries' accreditation and certification systems being examined.

Formal requirements for physicians working in PHC are (theoretically) the same regardless of whether they work in public or private practice, but there is little private practice in PHC (exceptions are pharmacists, dentists and some diagnostic centres and private practices in Dushanbe). Private health services are regulated by the Law on Health Protection of 1997: under Article 14, physicians are allowed to practice privately and be reimbursed through user fees, employer contributions or private health insurance. The Government has recently simplified licensing requirements and reduced the registration fee to encourage private practice.

3.1.6 Conditions for the health care process

3.1.6.1 Primary care workforce norms

The Order of the MoH No. 584 of 31 October 2005 approved staff schedule norms relative to population numbers for FDs, therapists and paediatricians that are similar to those established in other post-Soviet countries (Table 8). PHC physician shortages, especially in rural areas, nevertheless mean that in many instances, actual numbers deviate from the norms.

3.1.6.2 Mode of practice

Different modes of practice exist in rural and urban areas. In rural, PHC is delivered through health points, health houses (dom zdorovia or hohahoi salomati, formerly feldsher–midwife posts), rural health centres and rural hospitals. In urban, polyclinics and family medicine centres are the main modes of practice. Accordingly, combinations of physicians and other PHC staff working from the same (physical) practice and solo-practitioner practices exist. Many health houses are staffed by a retrained feldsher or PHC nurse who is supported by a doctor once a week or as necessary. There are no detailed statistics on how PHC teams are allocated, but experts estimate that in many rayons in Khatlon oblast, for example, feldshers provide PHC services on a single-handed basis, with only occasional support from other providers. In 2007, there were 134 health points, 1692 health houses, 593 rural health centres, 52 district (city) health centres and 24 urban health centres: the 134 health points were headed by 98 feldshers and 36 FDs in single-handed mode.

3.1.6.3 PHC gatekeeping

Patients (including adolescents to age 18 years) are usually assigned to a PHC facility in their area and a specific FD in the centre. Patients need a referral to be treated by a medical specialist so must visit a FD first, except in emergencies. No information was available on the extent of patients bypassing their FDs and going direct to specialists. The MoH is promoting integration between levels of health care, but there is very little follow up for patients after specialist or hospital care, so referrals back to PHC to support further treatment are not common.

Table 8. Population numbers per full-time PHC worker, official norms

Type of PHC physician	Population numbers/official norms
FD	1 200–1 500 ^a
DP/therapist	1 300
Paediatrician	850

^a1200 patients (children and adults) per FD in rural areas; 1500 in urban (Khodjamurodov & Rechel (29)).
Source: PCET national-level questionnaire; Khodjamurodov & Rechel (29).

3.1.7 Conditions for responsiveness

3.1.7.1 Stakeholder organizations

Professional associations in PHC currently have no major role in the development of health policy and registration or regulation of health professionals, either specifically in relation to PHC or for the health sector. At PHC level, an association for family medicine doctors has been established, but is generally not yet active at policy level. First steps are now being taken (“on paper,” as some experts say) to expand its function in advocating for the effective implementation of family medicine at all levels. More generally, physicians tend to influence policy-making through networking and informal means.

Health care workers are represented by a professional union, the executive body of which, the Central Committee of the Trade Union for Medical Staff of the Republic of Tajikistan, participates in negotiations and protects the interests of medical staff. The union advocates for regular salary increases with the Government and has representative branches at regional and local levels. Trade unions have considered themselves as stakeholders since the time of the Soviet Union and still feel close to the Government.

Various local and international NGOs have been established or commenced work in the Tajik health care sector since independence. Most of the more than 80 local NGOs active in health are supported by international agencies. Their focus is mainly on community-based health programmes that are closely linked to some of the goals of family medicine: health promotion and education of the population, HIV/AIDS prevention, reproductive health, safe motherhood, nutrition, mental health, drug use, safe water and sanitation.

Donors and bilateral and multilateral agencies have also been engaged to support health reforms since independence, providing policy, technical and funding support. Key actors include the Aga Khan Fund, the EU, the Ger-

man Agency for International Cooperation, the Swedish International Development Cooperation Agency, the Swiss Agency for Development and Cooperation, the United Kingdom Department for International Development, the United States Agency for International Development (USAID), WHO and the World Bank. To address aid fragmentation, these development partners have made efforts towards adopting a sector-wide approach. Many policies issued by the Government are based on this cooperative approach or were jointly developed by the Government and development partners.

3.1.7.2 Patient rights and patient organizations

The 1997 Law on Health Protection places responsibility on executive authorities of the state for the protection of population health. Patient rights are described in the Law on Public Health Protection, Article 22: Rights of Citizens for Health Protection and Social Security in Case of Complete or Partial Loss of Employability. Several other laws have indirect implications for patient protection. The 2002 health reform programme, for instance, addressed patient information and patient involvement in planning and delivery of services. No formal organization or association focusing on defending patient rights or informing the public about health care issues currently exists.

3.1.7.3 Patient empowerment and patient information

The health reform programme of 2002 set out five objectives, one of which dealt with patient information and involvement. The programme (37) stated that the population:

... should be actively involved in planning, operations and supervision pertaining to medical and sanitary aid using local and other resources and opportunities ... measures providing comprehensive, precise and timely information of issues with respect to health, medical and sanitary aid through various information channels should be developed.

Accordingly, the MoH created an Internet site from which people can access information and news on the health sector (38). The mass media report regularly on matters relating to health reforms, including health promotion and healthy lifestyles, but there is no consistent quality control over what is published. Many community health-based projects supported by NGOs and international partners have components of health information and education and usually work closely with local khukumats and community councils (mahalla), but these institutions do not have a clear formal role.

3.1.7.4 Patient complaint procedures

Patient complaint procedures are well established as they were part of the Soviet health care system. Each health facility is obliged to provide a complaints box in which patients can deposit handwritten comments. Complaint committees convene regularly to discuss issues with local khukumats. Responses are issued in writing or, if they suggest a major

problem, are referred to the next administrative level to the MoH and the Minister.

3.2 Resource generation²

3.2.1 PHC workforce

The health care system generally has a shortage of health care professionals, and this is reflected in PHC. Professionals are also unequally distributed, both functionally and geographically (29).

Shortages are reported for a number of PHC workers (Table 9), particularly FDs, nurses and physiotherapists. Shortages of gynaecologists, dentists and pharmacists are considered less important, although the number of dentists per 100 000 population is far below averages of other CIS countries.

² This section is based on responses to the PCET national-level questionnaire and Khodjamurodov & Rechel (29).

Table 9. Shortages reported for PHC professions

Professions	No shortage	Shortage in some regions	Shortage nationwide
FDs			■
PHC nurses		■	
Gynaecologists and obstetricians		■	
Dentists	■		
Pharmacists	■		
Physiotherapists		■	

Source: PCET national-level questionnaire.

Table 10. Health professionals (individuals) per 100 000 population, 1990–2011 (selected years)

Type of professional	1990	2000	2005	2010	2011
Physicians	255	167	157	169	170
Dentists	15	15	15	17	16
Pharmacists	12	11	–	–	–
Nurses	597	420	340	393	400
Midwives	129	63	54	53	53

Source: WHO Regional Office for Europe (23).

The outflow of medical personnel during and after the civil war is commonly identified as the leading cause of the current shortage. An estimated 10 000 physicians left the country or started working in other sectors to support their families between 1990 and 1999 (29). The decline was especially dramatic in relation to the number of nurses and midwives, particularly in PHC. Table 10 provides an overview of the health workforce in selected years between 1990 and 2011, demonstrating a decline in physicians per 100 000 population from 255 to 170.

The situation in PHC is similar: only 11.5% of physicians worked as FDs or DPs in 2012, and the ratio of FDs per 100 000 population was 24. The ratios for other personnel in PHC were also low compared to international standards: for nurses, for instance, it was 438 and for pharmacists 10 in 2009.

As Table 11 shows, however, retraining programmes and the creation of a regular Master's programme in general medicine are beginning to bring benefits. Numbers of active FDs and nurses have been increasing since 2009, from 1578 to 1842 doctors (2012) and 1721 to 3083 PHC nurses.

According to RCMSI data, the number of active physicians in Tajikistan in 2012 was 15 973(39). With a population of 7.8 million in 2012, this translates to a ratio of 205 physicians per 100 000 population.

Planning for health workers remains based on standards developed during the Soviet period. The MoH initiated a revision of the standards in 2010 to bring them into line with the country's current reality and context. This work

is still in progress, with only draft standards developed. The MoH launched an assessment to identify the main gaps and develop a comprehensive policy on human resources for health in 2013. Preliminary findings show that between 2009 and 2011, posts at hospital level increased by 4.6% for doctors and 1.4% for nurses. Actual staff working in health facilities are fewer than the official figures suggest, however, due to the fact that a single member of staff can occupy 1.75 posts or more.

There is a shortage of skilled health professionals at outpatient and inpatient levels. Health professionals are mainly concentrated in urban areas. Young graduates prefer to stay in urban settings, leading to an uneven distribution of the health workforce in the country (40).

3.2.2 Professional development and education

3.2.2.1 Professional organizations and journals

Professional associations of doctors or nurses existed in the Soviet period but acted only as scientific societies. New associations have been established over the past few years, including the National Association of Nurses, Association of Doctors and Association of Family Doctors, but they do not yet play a formal role in accreditation or management and have a negligible impact on health policy (41). Despite this, doctors are involved in political lobbying, with members of the Association of Family Doctors and National Association of Nurses being part of the Central Attestation Commission under the MoH and participating in a CME programme. Scientific-practical conferences on priority issues for FDs take place monthly.

Table 11. FDs and PHC nurses, 2009–2012

Year	Number of FDs	Number of PHC nurses
2009	1578	1721
2012	1842	3083

Source: PCET national-level questionnaire; Khodjamurodov & Rechel (29).

There is so far no specific professional journal on family medicine published in the country. In general, most health care workers have little access to modern periodicals and medical literature. A MoH website that publishes government resolutions and decisions of the board in the health sector is relevant to professional associations.

3.2.2.2 Medical education

Tajikistan has scarce education resources compared to neighbouring countries, particularly in relation to PHC, where most doctors had received very focused training as specialists as part of the Soviet system. Medical education for PHC workers now includes a major element of retraining which started in 1996 with a four-year course for upgrading feldshers in medical colleges but which now focuses on graduate doctors and PHC nurses.

There are three main medical universities or medical education institutes for physicians in Tajikistan, and the TSMU has four faculties. The bachelor's degree in general medicine, paediatrics and public health takes five years of study, usually followed by a Master's programme of two to three years. FD training is provided at undergraduate and postgraduate levels, the undergraduate element being provided through a six-year

programme at TSMU followed by three years of clinical practice.

Family medicine specialists in Dushanbe have additional three-year postgraduate training (a one-year clinical internship and two-year residency). The postgraduate six-month retraining programme for physicians is offered by the Tajik Institute for Post-diploma Vocational Training of Medical Staff and the Republican Educational and Clinical Centre of Family Medicine, which has branches in Dushanbe, Khatlon, Sughd, Tursun-zadeh, Vahdat, Shahrinai, Rasht, Penjikent, Dangara, Shaartuz, Istaravshan and Kanibadam. The programme consists of 23 modules and 200 tests, and participants have to document in detail the treatment of at least 500 patients for close review. The Republican Training and Clinical Centre of Family Medicine also organizes seminars and CME conferences.

Fundamental nursing education is offered at medical faculties. It lasts three years and includes specialization in family nursing of one year (42).

Retraining programmes and the institutes that provide them (summarized in Table 12) have been heavily supported by international technical programmes.

Table 12. Institutes of medical education involved in retraining of doctors and nurses: duration of education

Institute	Medical education for	Duration of education
TSMU	physicians	Bachelor (five years) and Master's (two years) in general medicine, paediatrics and public health Postgraduate/Master's programme (two years)
Tajik Institute for Post-diploma Vocational Training of Medical Staff	physicians	Postgraduate training: retraining programme in family medicine (six months), one-year clinical internship and two-year clinical residency
	nurses	Retraining programme in family medicine (six months)
Republican Training and Clinical Centre for Family Medicine	physicians	Retraining programme in family medicine (six months)
	nurses	Retraining programme in family medicine (six months)

Faculties of family medicine for training FDs were introduced at the Tajik Institute for Post-diploma Vocational Training of Medical Staff and in eight medical centres across the country in 1998 and at TSMU in 1999. The programmes started gradually: only 11 of the quota of 40 students registered for the training programme in family medicine at TSMU in its first year in 2004, for example (29). The first eight trainers for FDs (four) and nurses (four) were trained in St Petersburg, Russian Federation, in 1996/1997. Thereafter, up to 2002, 16 GPs and eight nurses undertook an 11-month training as trainers in family medicine in Kyrgyzstan. Since 2002, the Tajik Institute for Post-diploma Vocational Training of Medical Staff has been training the trainers in family medicine.

TSMU merged two faculties (health care and paediatric) into one general medicine faculty in 1996 with the purpose of training GPs (FDs). It established its first family medicine faculty in 1999 and a second in 2001. The Tajik Institute for Post-diploma Vocational Training of Medical Staff established a family medicine department in 1999 to retrain general specialists as FDs. Several specialists were retrained in neighbouring countries and abroad (in Bishkek, London and Israel) to increase the availability of FDs in the short term.

One hundred and four physicians had graduated by 2012. Retraining programmes have seen a rising trend: in 2005, after three years of operation, 442 doctors and 412 nurses had been retrained, but in 2012 alone the figures were 220 and 490.

Students have to agree to practice as a FD for a minimum of three years in an assigned location after their study to obtain their diploma. Local authorities (khukumats) are also party to these agreements, as they have to provide accommodation for the newly retrained doctors.

3.2.3 Quality assurance mechanisms and indicators

The State Surveillance Centre for Medical Activities was established in 2008 and is re-

sponsible for regulating the quality of medical care in all public and private health facilities in the country. Commonly used mechanisms to monitor PHC services include internal controls within practices and practice inspections by supervisors and local authorities. Obligatory periodic tests of physicians' and nurses' professional knowledge and skills (outside the relicensing process) and external clinical auditing using medical records are not common.

The MoH has set minimum criteria for technical equipment in PHC (Order No 584 of 31 October 2005). Indicators for monitoring the process of PHC and family medicine are set in the context of the reform programme, but not in a structural way. The MoH also uses questionnaires for doctors, nurses, managers and the public to evaluate service provision, but only in a rather ad hoc manner.

3.2.3.1 Clinical guidelines

The MoH aims to improve the quality of PHC jointly through externally supported projects. At present, well over 30 clinical guidelines have been developed; these are distributed by the Republican Centre for Family Medicine and its branches.

Since 2008, the State Surveillance Service for Medical Activities is responsible for regulating the quality of medical care. Commonly used mechanisms to monitor PHC services include internal controls in practices and practice inspection by supervisors and local authorities. Additionally, the MoH adopted a methodology for developing clinical practice guidelines (CPGs) in 2008 that includes prioritization of CPG topics, formation of CPG development working groups, coordination of reviews and approval mechanisms, and delineation of roles and responsibilities of key stakeholders. An expert group on developing CPGs through an evidence-based medicine approach was established by the MoH in November 2013. The group consists of six experts with a rotating chair and reports to the Deputy Minister for Health Services. It meets regularly a few times each month.

The Centre for Evidence-based Medicine is based at TSMU. CPG development methodology is based on the internationally accepted Appraisal of Guidelines for Research and Evaluation (AGREE) instrument. A 2012 study conducted by the USAID-funded Quality Health Care Project assessed the coordination of evidence-based medicine and CPG development at health-administration level (health systems) and its integration into medical education programmes and service-delivery level (points of care). Approximately 100 physicians from the TSMU, tertiary centres and PHC facilities were surveyed. Using a five-point Likert scale, respondents assessed the integration of evidence-based medicine at system level (including, for example, coordination of its introduction and development at the MoH) at 2.4; integration into the education system was rated 2.3 and health-facility level 2.5.

The Centre for Evidence-based Medicine plays a central role in the working group responsible for updating the essential drug list, but this process is not linked to the development and update of CPGs, which are usually created under different procedures.

The MoH is seeking to improve the quality of PHC through donor-supported projects, such as the WHO standards of evidence-based medicine that have recently been introduced in seven maternity wards. The USAID/ZdravPlus project, the Swiss Agency for Development and Cooperation/Sino and the German Society for International Cooperation are working to develop clinical standards and protocols for family medicine.

Despite progress in clinical guidelines development, acceptance of the need to improve is widespread and CPGs need to be integrated into the daily practice of the health workforce at all levels.

3.2.3.2 Research

The TSMU and the Tajik Institute for Post-diploma Vocational Training of Medical Staff are active in research. Research activities are

coordinated by the Department for Medical and Pharmaceutical Education, Science and Human Resources Policy at the MoH, many of them linked to international agencies.

3.3 Financing and incentives

3.3.1 PHC financing and expenditure

The Government adopted in 2006 a decree (No. 25 of 3 April 2006) on strengthening PHC by means of separating the PHC funds flow from secondary health care level and shifting the funding balance from hospitals towards PHC facilities. A joint decree of the MoH and Ministry of Finance on improvement of management and financing systems in PHC facilities in pilot districts (No. 609 of 25 December 2006) followed; this was rolled out throughout the whole country in 2008.

An attempt to introduce a new health service purchasing mechanism at PHC level – capitation – was launched in 2007 within the framework of the national health sector financing strategy for 2005–2015. It was introduced only partially: per capita purchasing of health services at PHC facilities applied only to unsecured budget-line items such as utility costs, travel and drugs, but the greatest proportion of health facilities' expenditure (88–90%, according to MoH financial reports) is associated with personnel wages, which emerge from secured budget-line items. This partial capitation was introduced countrywide by the end of 2010.

Work on introducing full capitation at PHC level (inclusive financing of all health facility costs) started in pilot districts in 2013 within the framework of a joint decree of the MoH and Ministry of Finance (No. 98/25 of 28 February 2013). A virtual analysis was conducted during March 2013 in the framework of the existing budget of health care facilities to introduce complete per capita financing in two cities of Sughd oblast (Kairakum and Istaravshan). A detailed analysis of all PHC health care facilities in Sughd oblast was carried out in May 2013, based on another joint decree (No.

237/49 of 24 April 2013), and full capitation was scaled-up for the whole Sughd oblast (without any increase in funding) during the second half of the year. The MoH and Ministry of Finance aim to work on developing a national standard for planning PHC facilities' expenditure based on capitation, but the formal purchasing mechanism will be improved in the meantime.

3.3.2 Financial incentives

3.3.2.1 Payment mechanisms

To improve the quality of, and access to, health services, the MoH will pilot an additional new purchasing mechanism offering financial incentives to PHC medical personnel; it is called performance-based financing and is supported by the World Bank. A coordination committee was established under the MoH to develop and implement the project. A draft package of indicators was created, based on which the quality of health services at PHC facilities would be assessed and incentives offered relative to performance. The aim is to pilot the developed methodology and package of indicators in PHC facilities in Spitamen rayon of Sughd oblast during 2014. It will then be implemented in eight rayons during five years, with the Government taking over the initiative if results are positive.

3.3.2.2 Income levels

The Government recognized that wages for health workers at PHC level were low so de-

termined in 2009 to increase them through the regulation on strengthening PHC. Family practitioners' wages consequently achieved parity with those of inpatient doctors by 2013, reaching around US\$ 123 to US\$ 153 per month (Table 13). The same trend could be observed for the salaries of nurses operating at PHC level, but wages for health workers remain very low compared to other sectors of the economy, despite the Government's repeated efforts to increase salaries in recent years. Becoming a physician or FD is therefore not very enticing from a financial perspective, and low salaries do not help to raise the low status of health professionals in relation to other professions (40). Doctors and nurses frequently take several additional positions in the health sector or elsewhere (such as agriculture or working with an international NGO) to earn additional income. They also rely on informal payments and in-kind contributions.

3.3.3 Financial access to health

Public health expenditure remains low in Tajikistan (27.7% of total health expenditure in 2012) despite slight growth between 2007 and 2011. Consequently, private expenditure represents the highest share of total health expenditure, with out-of-pocket payments reaching 62.5% in 2012 (approximately one third of which (28%) was expenditure on pharmaceuticals). Access to health services remains limited despite Government efforts over the last decade.

Table 13. Estimated gross monthly incomes (2013)

Professional group	Estimated average gross income per month (US\$)
FD/GP	123–153
PHC nurses	63–85
Inpatient doctors	100–140
Inpatient nurses	50–73

Source: MoH data, 2014.

The MoH introduced a basic benefit package in 2012 to ensure equal access to health services and formalize unofficial payments. Pensioners over 80 years, veterans and casualties of the Great Patriotic War, disabled children under 18 and children under 1 year are among the beneficiaries, based on their social status. The package was piloted in two rayons in 2004 and had expanded to eight by 2009 (43). It has been revised three times in response to a survey evaluating trends in patient financial burden and was expanded in 2014 to a further eight rayons; it is expected to be rolled out to the whole country in upcoming years.

The Government adopted a decree on the procedure of health service provision in public health facilities in 2008 which determines the types of health services provided for free and those that require copayments (made by the public). Initially it was envisaged that the decree would be applied to all types of health services, but it was implemented initially only in relation to laboratory, diagnostic, dental and high-technology services. The measure was nevertheless rolled out across the country in 2010. It should be noted that the copayments policies for this decree and the basic benefit package are not consistent.

The MoH conducted four waves of study between 2007 and 2013 to identify the financial burden on the population. Findings showed a mixed picture of basic benefit package impact on patients' financial burden at hospital level.

The proportion of patients who paid out of pocket decreased in pilot areas after its introduction, but payments doubled. Implementation of the basic benefit package also reduced the proportion of patients who paid at hospital level, but the overall financial burden remains high. This situation has arisen because the copayment scheme introduced with the basic benefit package only partially replaced the entire amount of unofficial payments.

Tajikistan employs a national essential drug list and formulary that is largely consistent with WHO exemplars. Access to quality medicines, particularly at outpatient level, is still limited and represents the main source of out-of-pocket expenditure (44). Indeed, out-of-pocket purchases of medicines is growing and currently represents 94% of all out-of-pocket money spent on health care. VAT of around 29% on average was introduced on medicines in 2012.

3.4 PHC service delivery

3.4.1 National data on utilization and provision of services

The health care system traditionally has focused on the development of hospitals. Links between primary and secondary care in relation to the sequence of treatment and distribution and screening of patients in primary care are weak (29).

Table 14. Key indicators of utilization of PHC services^a

Indicator	Number
Number of patient contacts with FDs/DPs per 1 000 population per year	4.2
Number of referrals made by FDs/DPs to medical specialists (per 1 000 patient contacts)	Up to 300
Number of hospital admissions from GPs (per 1 000 patient contacts)	Up to 200
Number of drug prescriptions by GPs (per 1 000 patient contacts)	n.a.

^aThe PCET survey among FDs/DPs and nurses also considered the frequency of contacts: the results are presented in Chapter 4.

Source: MoH interview, 2012.

The MoH has started to restructure primary care, supported by funds and expertise provided by the Regional Office, the World Bank, the Swiss Agency for Development and Cooperation and the Asian Development Bank. Primary care reform pilots are underway in eight regions across three areas.

The average number of patient visits to primary care facilities and PHC staff in 2009 was 4.2 per (Table 14). There are no detailed statistics about referral from FDs, but it is assumed that about one third of their patients are referred (equivalent to between 150–200 patients per 1000 patient contacts).

Data on drug prescriptions and use of medicines at PHC level are scarce. Expenses for purchase of medicines declined significantly after the proclamation of independence in 1991, but the cost of pharmaceuticals, most of which are imported, has increased substantially since then. The list of essential medicines introduced in 1994 is regularly reviewed but does not adequately provide medical facilities with all the necessary pharmaceutical supplies. The latest list of essential drugs, approved in September 2007, includes 282 named medications and 14 types of medical goods. The revised new list of essential drugs for 2012 includes 363 types of medicines but many pharmacists and doctors do not know about it and do not use it.

Quality control of medicines is insufficient, so many fake and counterfeit drugs and medicines of poor quality come into circulation. Poor availability of medicines has led people to rely on unsafe self-medication and some have turned to traditional healers.

FDs allocate 10–15 minutes per patient examination. In contrast to district doctors, FDs visit patients at home, providing preventive advice when appropriate. Current FD patient list sizes are above the national average of 1500 people, which could be explained by a shortage of FDs.

Information on the provision of PHC services based on FD, DP, PHC nurse and patient survey responses are presented in Chapters 4–6.

3.5 Current issues and plans for PHC

The national health strategy for Tajikistan, covering 2010–2020, confirms the strengthening of PHC as one of the main pillars of the provision of health services. Although much of the necessary fundamental work has been completed over the last decade, implementation of reform has generally been slow. A number of issues affects the ongoing reform process and implementation of family medicine at PHC level.

One of the most serious challenges mentioned by almost all experts in this area is the lack of financial resources, coupled with lack of human resources for PHC: these are seen as the key barriers to fully implementing PHC reforms. There is a need for 5000 family doctors and 1000 family nurses, but young graduates are reluctant to specialize in family medicine due to the still relatively low salaries (in comparison to other specialties and professions in other sectors) and the rather difficult working conditions, especially in rural areas, where support from team members is weak and infrastructure and equipment outdated or insufficient.

The sector is underfunded, with the lowest per capita spending on health in the European Region. Serious governance issues associated with the lack of funding include marked disparities in the level of health care expenditure across regions and rayons beyond the typical rural–urban divide. As a consequence, the provision of PHC varies in relation to availability of health staff, infrastructure, user fees and, accordingly, quality of care – which leaves part of the population of Tajikistan underserved. In addition, oversized hospital structures still create barriers to necessary investment in PHC.

In some ways, decisions made at national level are difficult to translate into the fragmented and decentralized budget system, in which local rayons and regions that are often not involved in the central decision-making process have the last say. This is also an issue for stakeholders working at the front line, with weak representation of FDs and nurses at policy level and their inability to take part in decision-making processes in a structured way. Experience in many countries has shown that empowering these groups results in better decisions and increases health workers' motivation to deliver improved services to the population.

Experts also called for further improvement of PHC in relation to quality of care, linked closely to lack of human resources, qualifications of health workers, lack of investment in health facilities and infrastructure and insufficient equipment available for FDs and nurses. PHC doctors and nurses need the means and

equipment to provide the quality of services demanded by the population to inspire their trust in PHC and dissuade them from bypassing PHC by accessing hospital care directly. Chapters 4 and 5 provide a good overview of the available resources in the pilot rayons for this study and show clearly that improvement is needed.

Finally, financial and physical access to PHC is still an issue in Tajikistan. Informal payments persist in some regions despite the introduction of a basic benefit package and official copayments, particularly in regions where financial incentives and wages for doctors are lowest. Patients delay or do not seek medical care because copayments are too high. Physical access to PHC facilities is still of concern, especially in the very remote mountainous regions of the country, mostly because road conditions are poor and public transport is not available. Whole villages are cut off during the winter season.

4. THE POSITION OF FDS AND DPs IN PHC

4.1 Results of the survey

This chapter presents the results of the survey among FDS and DPs in four regions: Sughd oblast (Spitamen, Gonchi districts and Chkalovsk town), RRS (Tursun-zadeh, Shahrinai, Hissar and Faizabad), GBAO (Rushan and Ishkashim) and Khatlon oblast (Sarband and Khuroson). The results are based on experiences and opinions of the FDS and DPs who participated in the study. The survey addressed the following topics: respondent and practice characteristics; workload and use of time; access and availability of services to patients; various aspects of quality of care; use of clinical information; coordination and cooperation; available medical equipment; and several dimensions of clinical task profiles, including mother and child care and TB care. Results presented in tables are broken down by region and type of physician (FD and DP).

4.2 Respondent characteristics

The survey had a total response of 480 FDS and DPs. Responses from the GBAO region (10) were too few to be included in calculations and these are not represented in the tables, but reference to them is made in the text.

Most tables either present findings by region or type of physician (FD or DP). A distinction is made in some between FDS and DPs working in urban and rural areas.

Table 15 shows that most respondents (71%) are FDS, but the proportion of FDS in Sughd is much smaller than in the other regions. Most physicians in Sughd and RRS work in rural settings, while in Khatlon region, most work in urban areas. All participants from GBAO region work in rural settings.

Table 16 provides key profile data on the FDS/DPs and their practices. Almost half of FDS and well over one third of DPs are women. The average age is 46 years, but FDS are somewhat younger and have a little less experience as physicians. Practically all FDS and DPs work with the general population, meaning they attend to male and female patients of all age groups. Physicians in the Sughd oblast region are older than in other regions, and rural doctors are older than their urban colleagues (47 and 45 years respectively, not in table). Almost two thirds of the FDS/DPs had completed a postgraduate or retraining programme to become a FD or are undertaking such a programme (not in table).

Table 15. FDS and DPs by region and urbanization

FDS and DPs	Sughd		RRS		Khatlon		Total	
	Number	%	Number	%	Number	%	Number	%
FDS	88	53.3	221	81.3	21	75.0	330	71.0
DPs	77	46.7	51	18.8	7	25.0	135	29.0
Urban:	53	31.5	116	42.3	24	85.7	193	44.7
• inner city	24	14.3	62	22.6	13	46.4	99	23.7
• suburban area	3	1.8	46	16.8	4	14.3	53	15.8
• small town	26	15.5	8	2.9	3	25.0	41	12.2
Rural	115	68.5	158	57.7	4	14.3	277	61.6
Total	168	100.0	274	100.0	28	100	470	100.0

Table 16. Summary of characteristics of FDs and DPs

Characteristics	FDs		DPs		Totals	
	Total	%	Total	%	Total	%
Gender:						
• male	172	52.1	85	63.0	258	54.9
• female	158	47.9	50	37.0	212	45.1
Average age (years)	45.2		48.0		46.0	
Average years working:						
• as a DP	14.1		15.7		14.5	
• as a FD	2.4		0.7		2.0	
• as another type of doctor	2.7		5.2		3.4	
• total	19.6		21.6		19.9	
Patient categories:						
• male	326	98.8	130	96.3	461	98.1
• female	325	98.5	132	97.8	462	98.3
• all age groups	326	98.8	135	100	466	99.1

4.3 Accessibility of care

4.3.1 Organizational access

4.3.1.1 Workload

Tables 17 and 18 show results on various aspects of workload. Although the average list size of FDs is smaller (1853 patients against 1966 for DPs), it is well above the national average of 1500. The average list size in Sughd oblast is smaller than in RRS and Khatlon. The average number of patient consultations in the office is relatively low (10 for FDs and 12 for DPs), but the number of home visits relatively high (24 per week for FDs and 22 for DPs). In

Khatlon, however, fewer home visits are made than in the other regions. Both groups of doctors work around 36 hours per week and report spending the equivalent of a full working week per month on professional reading, not including hours spent searching the Internet and attending courses (reported by 20%), which amount to an additional 18 hours.

Forty-five per cent of FDs and 46% of DPs report staff shortages (Table 17). The reported shortage of FDs is largest in RRS and for PHC nurses in Sughd. Support staff availability seems sufficient.

Table 17. Workload of FDs and DPs and their use of time

Aspects of workload	FDs		DPs		Total	
	Number	Mean	Number	Mean	Number	Mean
List size (number of patients)	306	1 853	119	1 966	430	1 875
Number of patient consultations per day	330	10.0	135	11.9	470	10.5
Number of home visits per week	325	24.4	130	22.3	459	23.7
Number of working hours per week	323	36.3	130	35.9	456	36.2
Number of hours reading per month	323	35.4	135	39	470	36.4
Number of hours searching the Internet per month	61	11.2	31	10.9	93	11.1
Number of hours attending courses/training per month	139	6.4	38	6.2	179	6.4
	Number	%	Number	%	Number	%
Reported staff shortages:						
• FDs	97	29.4	42	31.1	207	67.1
• PHC nurses	46	13.9	19	14.1	207	31.4
• support staff	2	0.6	1	0.7	207	1.5

Table 18. Workload of FDs/DPs and their use of time, by region

Aspects of workload	Sughd		RRS		Khatlon	
	Number	Mean	Number	Mean	Number	Mean
List size (number of patients)	167	1 772	236	1 936	27	1 990
Number of patient consultations per day	168	11.5	274	9.8	28	11.9
Number of home visits per week	167	21.4	264	25.9	28	15.3
Number of working hours per week	167	36.8	261	35.9	28	35.1
Number of hours reading per month	168	36.0	274	37.0	28	33.8
Number of hours searching the Internet per month	39	6.1	50	14.6	4	16.5
Number of hours attending courses/training per month	47	5.9	112	6.6	20	6.4
	Number	%	Number	%	Number	%
Reported staff shortages:						
• FDs	91	51.6	97	81.4	19	68.4
• PHC nurses	91	47.3	97	16.5	19	31.6
• support staff	91	1.1	97	2.1	19	0

4.3.1.2 Patients' access and availability of services

Patients can generally see their doctor (FDs and DPs) the same day in each of the regions (Tables 19 and 20). On average, about one third of the doctors (more DPs than FDs) report opening in the evening at least once per week. Evening opening is more common in Sughd than RRS, but is not reported at all from Khatlon. Khatlon is also the exception when it comes to monthly Sunday opening: it is rather rare there compared to Sughd and RRS, where it is offered by around half of respondents. Differences between FDs and DPs are small in this respect. A telephone number for patients to call when practices are closed is generally available.

Sessions or clinics for all patient groups identified are more frequently reported by FDs than DPs. Sessions for pregnant women and family planning are most common, being reported by

at least two thirds of FDs and well over half of DPs, and hypertension and diabetes sessions are reported by almost 60% of FDs and almost 50% of DPs. Fewer FDs and DPs from Khatlon report running special sessions (except for hypertension). Sessions for patients with hypertension and for older people are more frequently reported in Sughd than RRS, where one third of respondents have no sessions at all (a considerably greater proportion than in the other regions).

FDs work further from district hospital locations than DPs. More than three quarters of DPs but only two thirds of FDs work within 5 km of one. Distances are generally higher in RRS: half of respondents there work more than 5 km away. This represents only a small difference in travel time, however; the district hospital can be reached in most cases within 30 minutes, even in winter.

Table 19. Indicators of access to practice sites

Aspects of patients' access	FDs		DPs		Total	
	Number	%	Number	%	Number	%
Same-day visits possible	326	98.8	135	100.0	470	99.1
Evening opening at least once per week	102	30.9	66	48.9	469	36.4
Sunday opening (during day) at least once per month	144	43.6	64	47.4	470	45.3
Phone number available when practice is closed	301	91.2	126	93.3	470	91.9
Sessions for special patient groups:						
• diabetes	191	57.9	61	45.2	348	67.5
• hypertension	197	59.7	67	49.6	348	74.1
• family planning	223	67.6	79	58.5	348	85.1
• pregnant women	236	71.5	77	57.0	348	88.5
• older people	158	47.9	44	32.6	348	57.2
• other	75	22.7	26	19.3	348	28.5
No clinics or sessions for special patient groups	71	21.5	36	26.7	460	23.7
Practice situated 5 km or more from nearest district hospital	143	43.3	32	23.7	487	35.7
Travel time to district hospital less than 30 minutes:						
• in winter	206	62.4	87	64.4	462	64.5
• in other seasons	42	12.7	16	11.9	99	56.5

Table 20. Indicators of access to FD/DP practices, by region

Aspects of patients' access	Sughd		RRS		Khatlon	
	Number	%	Number	%	Number	%
Same-day visits possible	168	100.0	274	98.5	28	100.0
Evening opening at least once per week	167	48.5	274	32.8	28	0.0
Sunday day opening at least once per month	168	53.0	274	44.5	28	7.1
Phone number available when practice is closed	168	97.0	274	88.7	28	92.9
Sessions for special patient groups:						
• diabetes	147	67.9	177	67.8	24	62.5
• hypertension	147	79.6	177	68.9	24	79.2
• family planning	147	89.1	177	87.6	24	41.7
• pregnant women	147	88.4	177	91.5	24	66.7
• older people	147	65.3	177	54.2	24	29.2
• other	147	51.0	177	13.6	24	0.0
No clinics or sessions for special patient groups	162	9.3	271	33.6	27	11.1
Practice situated 5 km or more from nearest district hospital	168	22.6	273	49.8	28	0.0
Travel time to district hospital less than 30 minutes:						
• in winter	163	69.9	271	60.5	28	71.4
• in other seasons	29	44.8	64	57.8	6	100.0

4.3.1.3 Quality improvement

Clinical guidelines, expert directives and procedures for dealing with patient complaints are tools to improve the quality of care, while evaluations can be used to assess the satisfaction of patients and community representatives. Tables 21 and 22 show results on use of quality-improvement methods.

Three quarters of respondents have clinical guidelines available, with FDs more heavily represented. Guidelines seem to be used frequently when available, particularly among FDs. Availability and use is lower in RRS.

Complaints boxes and procedures for dealing with patient complaints are much more common in FD practices. Practices in RRS are doing more in this respect than Sughd and Khatlon, while a complaints procedure is absent in most practices in the GBAO region.

Evaluation methods such as patient satisfaction surveys, community interviews and job satisfaction interviews with practice staff are not generally practised, but are more frequently used by FDs. Sughd region is clearly behind RRS and Khatlon in using evaluation and feedback activities.

Table 21. Availability and use of clinical guidelines, complaints procedures and evaluation methods in FD and DP practices

Topics	FDs		DPs		Total	
	Total	%	Total	%	Number	%
Availability of clinical guidelines	275	83.3	82	60.7	470	77.0
Applying clinical guidelines:						
• frequently	217	65.8	60	44.4	470	60.0
• occasionally	50	15.2	22	16.3	470	15.3
• seldom/never	27	8.2	12	8.9	470	8.3
• guidelines not available	36	10.9	41	30.4	470	16.4
Having a box and a procedure for dealing with complaints	271	82.1	71	52.6	470	73.6
Using evaluation methods:						
• investigation of patient satisfaction	158	47.9	44	32.6	469	43.3
• interviewing community representatives about satisfaction with the practice	138	41.8	35	25.9	469	37.1
• interviewing FDs, DPs and nurses about job satisfaction	161	48.8	37	27.4	469	42.4

Table 22. Availability and use of clinical guidelines, complaints procedures and evaluation methods in FD and DP practices, by region

Topics	Sughd		RRS		Khatlon	
	Number	%	Number	%	Number	%
Availability of clinical guidelines	168	81.5	274	73.4	28	85.7
Applying clinical guidelines:						
• frequently	168	72.0	274	51.1	28	75.0
• occasionally	168	7.7	274	20.4	28	10.7
• seldom/never	168	4.2	274	11.7	28	0.0
• guidelines not available	168	16.1	274	16.8	28	14.3
Having a box and a procedure for dealing with complaints	168	66.1	274	79.6	28	60.7
Using evaluation methods:						
• investigation of patient satisfaction	167	19.8	274	55.5	28	64.3
• interviewing community representatives about satisfaction with the practice	167	19.2	274	45.3	28	64.3
• interviewing FDs, DPs and nurses about job satisfaction	167	26.9	274	49.6	28	64.3

4.4 Continuity of care

4.4.1 Informational continuity

Keeping patients' clinical records is a precondition for ensuring quality and continuity of care. Tables 23 and 24 suggest that patients' records are well maintained by practically all FDs and DPs in all regions (although slightly less so in RRS).

Having a system for retrieval of information is as important as having a system for storage. The identification of specific patient groups through, for instance, shared risk or diagnosis may enable the adoption of efficient approaches to monitoring and prevention. FDs and DPs' practice information systems seem reasonably capable of generating such lists, but more DPs report that the lists can easily be retrieved. Fewer FDs and DPs in the RRS region find that lists can easily be made from their medical files.

Computers are barely used throughout the country, with 87% of doctors indicating that they do not use a computer (computer-use among FDs is even rarer than among DPs).

Regional differences are apparent, with 95% of respondents in Sughd indicating that they do not use a computer compared to 85% in RRS and 68% in Khatlon. If a computer is used at all, it is most often for searching medical information on the Internet. Seven out of 10 respondents in the GBAO region indicate that they use a computer.

Exchange of information between FDs/DPs and medical specialists and hospitals about patients who are referred or hospitalized is a core element of continuity of care. Referral letters can play an important role in exchange processes. Almost 80% of respondents indicate that they use referral letters for all referred patients, with DPs doing slightly better. Routine use of referral letters is lower in RRS than Sughd and Khatlon. In relation to receiving information from medical specialists after treatment in secondary care is complete, only one third of respondents (more FDs than DPs) indicate that they (almost) always receive it in reasonable time. Transfer of information is better in Khatlon region, where it is almost twice as high as Sughd and RRS.

Table 23. Availability and use of clinical information and use of computers, by FDs and DPs

Topics	FDs		DPs		Total	
	Total	%	Total	%	Number	%
Keeping patients' records:						
• routinely for all contacts	303	91.8	122	90.4	470	91.5
• unless it is too busy	18	5.5	6	4.4	470	5.1
• for frequent patients only	6	1.8	1	0.7	470	1.5
• except for minor complaints	35	10.6	10	7.4	470	9.6
Easy to generate a list of patients by diagnosis or health risk	228	69.1	107	79.3	470	72.3
Using the computer for:						
• booking appointments	8	2.4	5	3.7	470	2.8
• writing bills/financial administration	7	2.1	4	3.0	470	2.4
• medicine prescriptions	2	0.6	1	0.7	470	0.6
• keeping patients' medical records	5	1.5	6	4.4	470	2.4
• writing referral letters	6	1.8	4	3.0	470	2.1
• searching medical information	27	8.2	14	10.4	470	8.7
• not using a computer	296	89.7	110	81.5	470	87.4
Using referral letters for all referred patients	259	78.5	110	81.5	470	79.4
(Almost) always receiving information from specialists after completion of treatment	118	35.8	40	29.6	470	34.3

Table 24. Availability and use of clinical information and use of computers, by region

Topics	Sughd		RRS		Khatlon	
	Number	%	Number	%	Number	%
Keeping patients' records:						
• routinely for all contacts	168	97.0	274	87.2	28	100.0
• unless it is too busy	168	3.6	274	5.8	28	7.1
• for frequent patients only	168	0.6	274	1.5	28	7.1
• except for minor complaints	168	2.4	274	14.2	28	7.1
Easy to generate a list of patients by diagnosis or health risk	168	91.1	274	58.0	28	100.0
Using the computer for:						
• booking appointments	168	2.4	274	1.5	28	17.9
• writing bills/financial administration	168	0.6	274	2.6	28	10.7
• medicine prescriptions	168	0.6	274	0.7	28	0.0
• keeping patients' medical records	168	2.4	274	2.6	28	0.0
• writing referral letters	168	1.8	274	1.8	28	7.1
• searching medical information	168	1.8	274	12.4	28	14.3
• not using a computer	168	94.6	274	85.0	28	67.9
Using referral letters for all referred patients	168	94.0	274	69.0	28	92.9
(Almost) always receiving information from specialists after completion of treatment	168	33.9	274	31.8	28	60.7

4.5 Coordination of care

4.5.1 Cohesion within PHC

Table 25 provides information on medical staff working in the same premises as the responding FD/DP. A large majority of FDs/DPs work in premises with several other physicians, with only a few DPs and very few FDs working solo. Two FDs/DPs working exclusively in the same building is also uncommon: most (71%) work in the same building with other FDs/DPs and medical specialists, most commonly dentists, gynaecologists, surgeons, ear, nose and throat specialists and ophthalmologists (not in table). On average, six FDs/DPs work in the same premises with eight medical specialists.

Tables 26 and 27 show information about other disciplines working in the practice.

More than 80% of FDs work with retrained PHC nurses, in contrast to DPs, only 42% of whom report doing so. Doctors in RRS work more often with retrained nurses (79%) than their colleagues in Sughd and Khatlon. Most FDs and DPs also work with (non-retrained) practice nurses. DPs work more frequently with midwives or birth assistants, although retrained nurses may to some extent substitute for midwives. Working with pharmacists is much less common, but is found more commonly among DPs.

Table 25. Medical staff working in the practice or centre, by region

Working in the same practice/centre	Sughd		RRS		Khatlon		Total	
	Number	%	Number	%	Number	%	Number	%
FDs working solo	0	0.0	7	3.2	0	0	330	2.1
DPs working solo	8	10.4	6	11.8	0	0	135	10.4
Two FDs/DPs working in the same building	168	2.4	274	10.2	28	3.6	470	7.0
Three or more FDs/DPs working in the same building	168	20.8	274	13.1	28	14.3	470	15.9
FDs/DPs and medical specialists working in the same building	168	72.0	274	69.7	28	82.1	470	71.3
Only medical specialists working in the same building	168	3.0	274	4.0	28	14.3	470	4.3
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Total number of FDs/DPs working with respondent in the same building	5.3	0–15	6.8	0–60	4.2	0–8	6.1	0–60
Total number of medical specialists working with respondent in the same building	6.4	0–46	8.7	0–47	8.1	0–21	7.8	0–47

Table 26. Other disciplines working in the practice or centre, by FD and DP

Other disciplines	FDs		DPs		Total	
	Number	%	Number	%	Number	%
PHC practice nurses	266	80.6	57	42.2	480	69.4
Practice nurses (non-retrained)	277	83.9	123	91.1	480	85.7
Midwife/birth assistant	226	68.5	117	86.7	480	73.8
Pharmacist	33	10.0	27	20.0	480	13.0
Other	20	6.1	4	3.0	480	5.1

Table 27. Other disciplines working in the practice or centre, by region

Other disciplines	Sughd		RRS		Khatlon	
	Number	%	Number	%	Number	%
PHC practice nurses	168	56.0	274	78.8	28	57.1
Practice nurses (non-retrained)	168	76.2	274	90.5	28	96.4
Midwife/birth assistant	168	71.4	274	72.6	28	100.0
Pharmacist	168	13.7	274	13.9	28	0.0
Other	168	1.2	274	7.7	28	3.6

Most respondents have regular meetings with other medical and nursing staff, as shown in Tables 28 and 29. More FDs report frequent meetings, particularly with colleagues and nurses. DPs work more often with midwives

so have more intensive cooperation with them than FDs. Interregional differences are modest, although Sughdis behind RRS and Khatlon in relation to frequent meetings involving FDs/DPs, midwives and pharmacists.

Table 28. Face-to-face meetings of FDs and DPs with other PHC workers

Face-to-face meeting at least once per month with	FDs		DPs		Total	
	Number	%	Number	%	Number	%
Other FDs/DPs	297	90.0	94	69.6	478	84.6
PHC nurse(s)	298	90.3	97	71.9	473	86.0
Midwife/birth assistant(s)	206	62.4	90	66.7	470	65.0
Pharmacist(s)	71	21.5	23	17.0	463	21.0

Table 29. Face-to-face meetings of FDs and DPs with other PHC workers, by region

Face-to-face meeting at least once per month with	Sughd		RRS		Khatlon	
	Number	%	Number	%	Number	%
Other FDs/DPs	167	83.8	273	84.2	28	92.9
PHC nurse(s)	164	80.5	271	88.2	28	96.4
Midwife/birth assistant(s)	165	55.2	267	68.5	28	89.3
Pharmacist(s)	157	3.2	268	29.9	28	35.7

4.5.2 Contact with other care levels and the community

As Tables 30 and 31 show, the frequency of FDs/DPs seeking advice from medical specialists is generally high, with little differences between FDs and DPs. Fewer FDs “sometimes” or “frequently” ask for advice from paediatricians and internists, however; this could be explained by the retraining programme in family medicine aiming, among other things, to enable FDs to substitute (to some extent) for tasks traditionally provided by these two specialties. Fewer FDs/DPs in RRS report seeking advice from medical specialists than those in Sughd and Khatlon.

Data presented in Table 30 suggest that the family physicians surveyed do not have sufficient knowledge in the fields of, for instance,

paediatrics, gynaecology and ophthalmology, so seek advice frequently. Tables 32 and 33 present the number of patients referred by FDs and DPs to medical specialists in the four-week period prior to completing the questionnaire.

The number of referrals is not high. The average referral rate of FDs (5.5%) is higher than that among DPs (4.2%), but variation within both groups is considerable. On average, FDs report more referrals to gynaecologists than DPs, but the opposite is true for referrals to internists. Referrals are higher in RRS than in Sughd and Khatlon (referral rates reported by the 10 respondents from GBAO are lower than in the other regions). It should be noted that self-referrals and other bypasses of primary care are not included in these figures.

Table 30. Consultation and advice between FDs and DPs and medical specialists

“Frequently” or “sometimes” asking advice from	FDs		DPs		Total	
	Number	%	Number	%	Number	%
Paediatrician(s)	233	70.6	115	85.2	465	75.5
Internist(s)	247	74.9	120	88.9	467	79.4
Gynaecologist(s)	309	93.6	128	94.8	470	94.1
Surgeon(s)	299	90.6	127	94.0	469	91.9
Neurologist(s)	304	92.2	130	96.3	469	93.6
Dermatologist(s)	279	85.4	113	83.7	464	86.0

Table 31. Consultation and advice between FDs and DPs and medical specialists, by region

“Frequently” or “sometimes” asking advice from	Sughd		RRS		Khatlon	
	Number	%	Number	%	Number	%
Paediatrician(s)	165	84.2	272	68.0	28	96.4
Internist(s)	165	84.2	274	75.9	28	85.7
Gynaecologist(s)	168	100.0	274	90.9	28	89.3
Surgeon(s)	167	95.8	274	89.1	28	96.4
Neurologist(s)	167	98.2	274	90.5	28	96.4
Dermatologist(s)	162	92.0	274	81.0	28	100.0

Table 32. Self-reported number of patients referred by FDs and DPs to medical specialists during the previous four weeks

Patients referred to specialists over the past four weeks: ^a	FDs		DPs		Total	
	Mean	Range	Mean	Range	Mean	Range
Paediatrician	1.2	0–18	1.2	0–10	1.2	0–18
Internal diseases specialist	1.4	0–20	1.9	0–45	1.5	0–45
Gynaecologist	1.6	0–21	1.1	0–14	1.5	0–21
Surgeon	1.1	0–20	0.9	0–20	1.1	0–20
Neurologist	1.6	0–30	1.5	0–12	1.6	0–30
Dermatologist	0.6	0–10	0.5	0–10	0.6	0–10
Ear, nose and throat specialist	0.8	0–12	0.6	0–10	0.7	0–12
Ophthalmologist	0.9	0–20	1.0	0–42	0.9	0–42
Other specialty	0.9	0–22	0.6	0–8	0.8	0–22
	FDs		DPs		Total	
Total referrals per four weeks	10.9		9.9		9.8	
Reported referrals as percentage of all office contacts and home visits	5.5% ^b		4.2% ^c		4.7% ^d	

^aThese self-reported referral rates should be taken as indicative only.

^bFDs: 10 consultations per day = 200 per month, $100/200 \times 10.9 = 5.5\%$.

^cDPs: 11.9 consultations per day = 238 per month, $100/238 \times 9.9 = 4.2\%$.

^dTotal: 10.5 consultations per day = 210 per month, $100/210 \times 9.8 = 4.7\%$.

Table 33. Self-reported number of patients referred by FDs/DPs to medical specialists during the previous four weeks, by region

Patients referred to specialists over the past four weeks: ^a	Sughd		RRS		Khatlon	
	Mean	Range	Mean	Range	Mean	Range
Paediatrician	1.6 (0–18)	168	1.0 (0–15)	274	0.5 (0–4)	28
Internal diseases specialist	0.9 (0–10)	168	1.7 (0–45)	274	2.7 (0–24)	28
Gynaecologist	1.4 (0–14)	168	1.5 (0–21)	274	1.7 (0–20)	28
Surgeon	0.9	0–7	1.2	0–20	0.7	0–4
Neurologist	1.5	0–30	1.7	0–20	1.0	0–5
Dermatologist	0.7	0–6	0.5	0–10	0.4	0–10
Ear, nose and throat specialist	0.8	0–8	0.7	0–12	0.5	0–10
Ophthalmologist	0.8	0–20	1.0	0–42	0.8	0–20
Other specialty	0.4	0–6	1.1	0–22	0.5	0–4
	FDs		DPs		Total	
Total referrals per four weeks	8.98		10.45		8.79	
Reported referrals as percentage of all office contacts and home visits	3.0%		4.1%		2.8%	

^aThese self-reported referral rates should be taken as indicative only.

Table 34. FD and DP connections with the community

Regular meetings with	FDs		DPs		Total	
	Number	%	Number	%	Number	%
Local authorities	274	42.0	119	88.1	470	84.4
Community/social workers	221	63.9	105	77.8	467	68.3

Table 35. FD and DP connections with the community, by region

Regular meetings with	Sughd		RRS		Khatlon	
	Number	%	Number	%	Number	%
Local authorities	168	84.4	274	83.6	28	92.9
Community/social workers	168	64.2	274	70.1	28	75.0

DPs maintain better connections with the community. Regular meetings with local authorities are reported by 88% of DPs but only 42% of FDs (Table 34). Regular meetings with social/community workers are reported by 64% of FDs and 78% of DPs. Differences between regions are modest (Table 35).

4.6 Comprehensiveness of care

4.6.1 Practice conditions

FDs and DPs were asked whether health education materials, such as leaflets and posters, are displayed and available in the waiting room of their practice. Results are shown in Tables 36 and 37. Most respondents report having a

wide range of health education materials available, with over 90% displaying information on healthy diet, sexually transmitted infections (STIs), vaccinations and contraception and over 80% on cardiovascular disease, smoking cessation, diabetes and self-treatment of colds and coughs. Gaps relate to information materials on obesity (reported as available in only two thirds of practices) and social services (fewer than half).

FDs report better availability of materials on two topics: obesity and self-treatment of colds and coughs. Availability is lower in RRS than in Sughd and Khatlon, particularly for obesity, diabetes, self-treatment of colds and coughs and social services.

Table 36. Availability of health education materials for patients in waiting rooms of FDs/DPs

Available health education materials	FDs		DPs		Total	
	Number	%	Number	%	Number	%
Cardiovascular disease risks	285	86.4	122	90.4	470	87.2
Healthy diet	326	98.8	131	97.0	470	98.3
Smoking cessation	287	87.0	118	87.4	470	87.3
Obesity	218	66.1	65	48.1	470	61.3
Diabetes	280	84.8	118	87.4	470	85.7
STIs	323	97.9	132	97.8	470	97.9
Vaccinations	326	98.8	133	98.5	470	98.7
Contraception	325	98.5	133	98.5	470	98.5
Self-treatment of colds and coughs	295	89.4	139	42.1	470	88.7
Social services	139	42.1	48	35.6	470	40.9
Average material available	85.0%		78.3%		84.4%	

Table 37. Availability of health education materials for patients in waiting rooms of FDs/DPs, by region

Available health education materials	Sughd		RRS		Khatlon	
	Number	%	Number	%	Number	%
Cardiovascular disease risks	168	96.4	274	81.4	28	89.3
Healthy diet	168	99.4	274	97.8	28	96.4
Smoking cessation	168	91.1	274	84.7	28	89.3
Obesity	168	70.2	274	55.5	28	64.3
Diabetes	168	97.0	274	78.1	28	92.9
STIs	168	97.6	274	97.8	28	100.0
Vaccinations	168	99.4	274	98.2	28	100.0
Contraception	168	99.4	274	98.2	28	96.4
Self-treatment of colds and coughs	168	96.4	274	82.8	28	100.0
Social services	168	45.8	274	35.8	28	60.7
Average material available	89.2%		81.0%		88.9%	

4.6.2 Medical equipment

FDs and DPs were asked to indicate which items of medical equipment from a list of 30 they had at their disposal. Table 38 and Fig. 10 show that FDs (with on average 19 items from the list) are clearly better equipped than DPs (14). Marked differences can be observed between the regions (Table 39 and Fig. 11). Practices in Sughd are poorly equipped, with

an average of only 13 items, but the situation is much better in RRS, with 20 items on average. Khatlon is best equipped, the average number of items in that region being 24. It should be noted that this only provides an indication of the quantity of equipment as reported by FDs and DPs; it does not offer information about the quality of the equipment and whether it is ready to be used effectively.

In relation to individual items, stethoscopes, thermometers and tongue depressors are almost universally available, and tape measures and infant scales are widely available (in at least three quarters of the FD/DP practices in

all regions). The 25 other items are less widely available in at least one of the regions. Fewer than 30% of FDs/DPs have access to a car for home visits.

Table 38. Items of practice equipment available to FDs and DPs

Number of items	FDs		DPs		Total	
	Total	%	Total	%	Total	%
15 or fewer	92	27.9	90	66.7	184	52.4
16–20	79	23.9	16	11.9	96	21.6
21–25	116	35.2	18	13.3	136	35.8
26–30	43	13.0	11	8.1	54	24.9
Total	330	100.0	135	100.0	470	100.0
Average number of items available (from list of 30)	19.0		13.7		17.5	

Table 39. Items of practice equipment available to FDs/DPs, by region

Number of items	Sughd		RRS		Khatlon	
	Total	%	Total	%	Total	%
15 or fewer	116	69.0	67	24.5	1	3.6
16–20	31	18.5	64	23.4	1	3.6
21–25	17	10.1	109	39.8	10	35.7
26–30	4	2.4	34	12.4	16	57.1
Total	168	100.0	274	100.0	28	100.0
Average number of items available (from list of 30)	12.9		19.6		24.8	

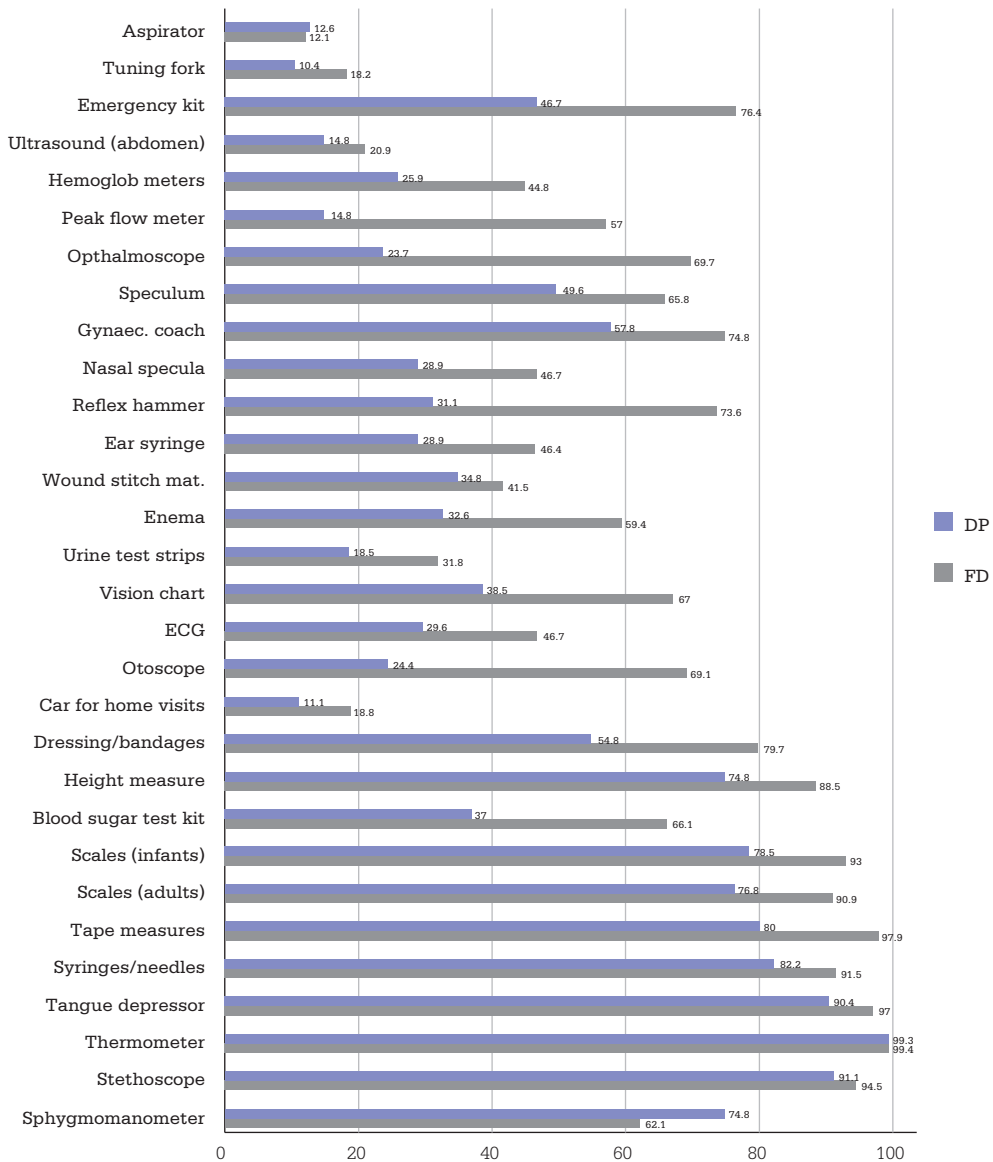
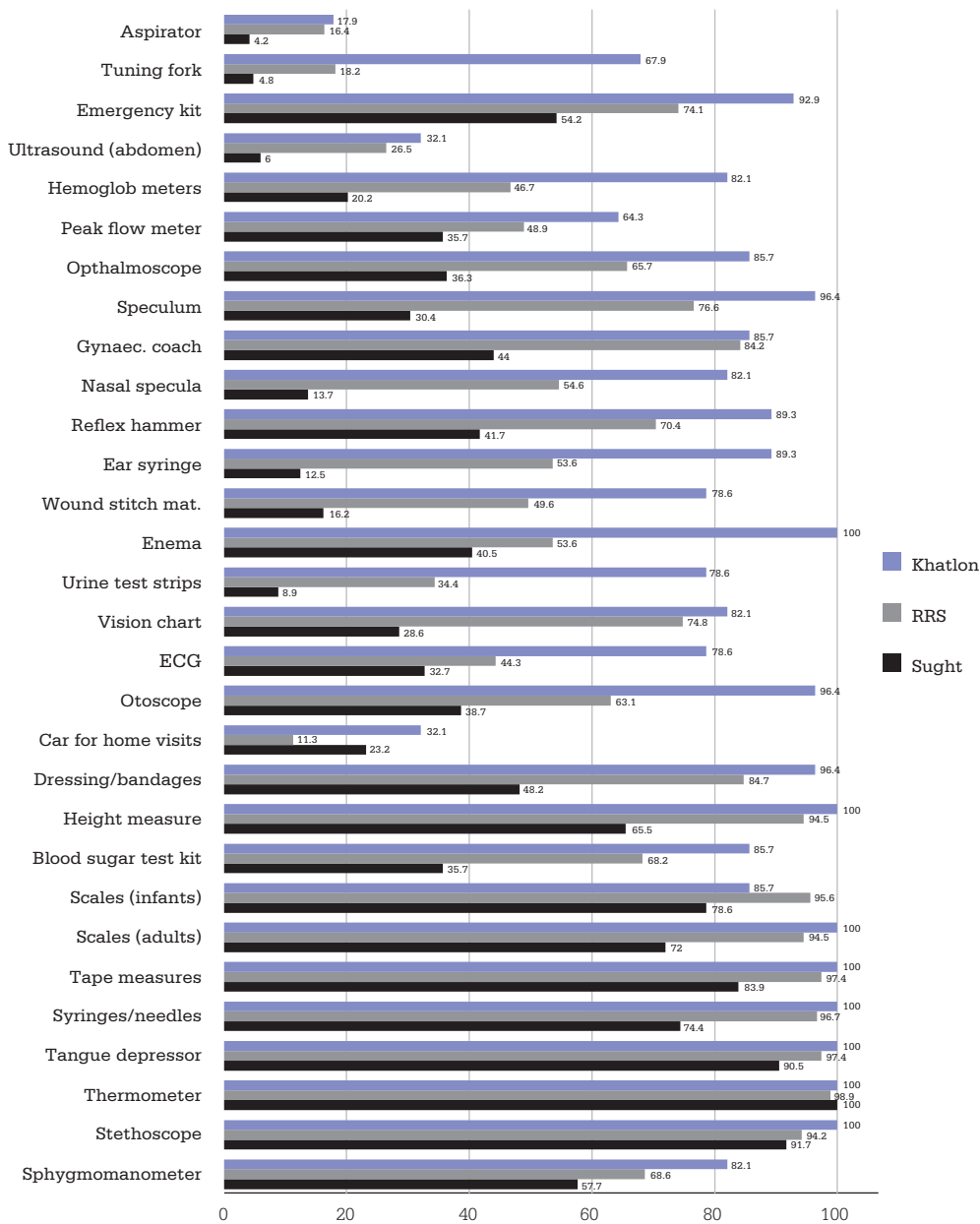
Fig. 10. Practice equipment for FDs and DPs (%)

Fig. 11. Available practice equipment by regions for FDs and DPs (%)

The availability of microbiological laboratory services and diagnostic X-ray facilities in primary care is poor (Tables 40 and 41). Almost one third of FDs/DPs report that microbiological laboratory services are not or are insufficiently available and almost one

quarter report likewise for X-ray facilities. The situation is more favourable for FDs for both diagnostic facilities but is particularly concerning in Sughd, with 60% having no or poor access to laboratory services and 45% no or poor access to X-ray.

Table 40. FDs and DPs' access to laboratory services and X-ray facilities

Type of service and degree of access	FDs		DPs		Total	
	Total	%	Total	%	Number	%
Availability of microbiological laboratory services:						
fully available in practice or building	86	26.1	25	18.5	470	24.5
fully available outside practice or building	161	48.8	45	33.3	470	44.0
not or insufficiently available	83	25.2	65	48.1	470	31.5
Availability of X-ray facilities:						
fully available in practice or building	113	34.2	58	43.0	470	37.0
fully available outside practice or building	150	45.5	39	28.9	470	40.6
not or insufficiently available	67	20.3	28	28.1	470	22.3

Table 41. Access of FDs and DPs to laboratory and X-ray services, by region

Type of service and degree of access	Sughd		RRS		Khatlon	
	Number	%	Number	%	Number	%
Availability of microbiological laboratory services:						
fully available in practice or building	168	28.0	274	19.0	28	57.1
fully available outside practice or building	168	12.5	274	65.7	28	21.4
not or insufficiently available	168	59.5	274	15.3	28	21.4
Availability of X-ray facilities:						
fully available in practice or building	168	40.5	274	33.6	28	50.0
fully available outside practice or building	168	14.9	274	56.2	28	42.9
not or insufficiently available	168	44.6	274	10.2	28	7.1

The ability of FDs, DPs and nurses independently to perform laboratory tests is also relevant to this area (Tables 42 and 43). Skills levels are generally low. The most regularly

performed tests in practices are urine protein, haemoglobin and blood sugar tests (respectively reported by 49%, 49% and 43% of FDs/DPs).

Table 42. Available skills to perform laboratory tests in FD and DP practices

Skills in testing for	FDs		DPs		Total	
	Total	%	Total	%	Number	%
Haemoglobin	179	54.2	50	37.0	470	49.2
Leucocyte count in blood	76	23.0	18	13.3	470	20.2
Blood sugar	172	52.1	29	22.1	470	43.0
Leucocyte count in urine	73	22.1	22	16.3	470	20.6
Protein count in urine	185	56.1	45	33.3	470	49.4
Helminth-eggs count in faeces	68	20.6	20	14.8	470	19.4

Table 43. Available skills to perform laboratory tests in FD and DP practices, by region

Skills in testing for	Sughd		RRS		Khatlon	
	Number	%	Number	%	Number	%
Haemoglobin	168	39.3	274	57.3	28	28.6
Leucocyte count in blood	168	14.3	274	24.8	28	10.7
Blood sugar	168	34.5	274	50.0	28	25.0
Leucocyte count in urine	168	20.2	274	21.2	28	17.9
Protein count in urine	168	45.2	274	51.5	28	53.6
Helminth-eggs count in faeces	168	25.0	274	17.9	28	0.0

4.6.3 Health service delivery

4.6.3.1 Clinical task profiles

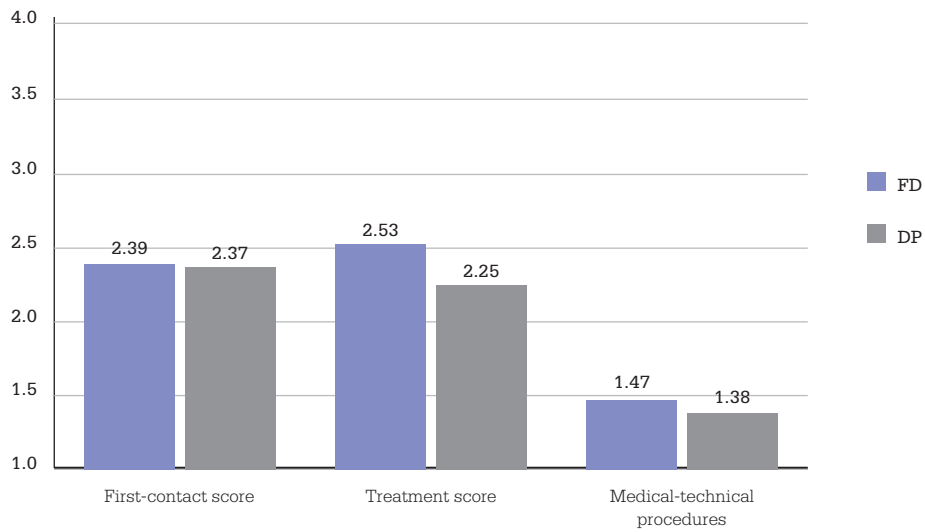
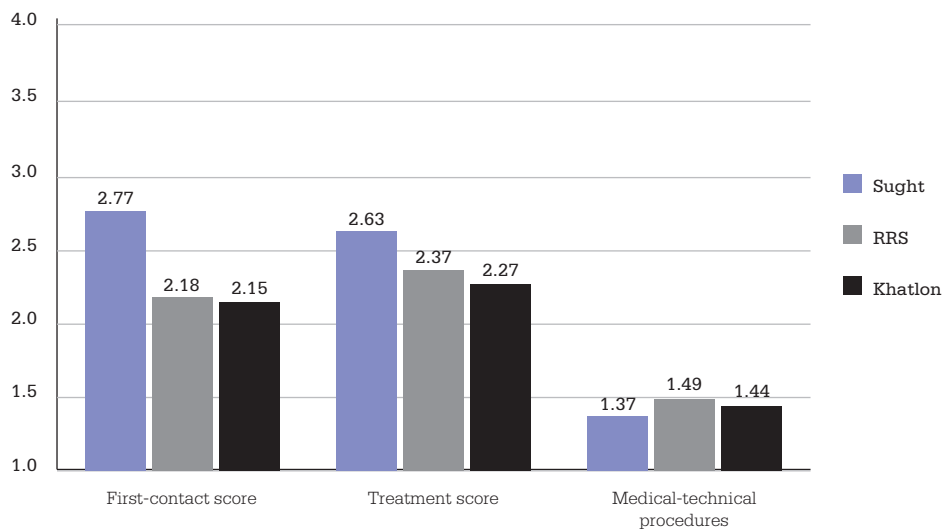
Three elements of FDs and DPs' clinical task profiles are distinguished: their role as first contact for patients' health problems; the provision of medical-technical procedures; and the treatment and follow up of diseases. Each task has been measured by means of lists of items which together indicate FDs and DPs' degree of involvement (details of the methodology are provided in Chapter 1).

The first-contact role was measured with 18 items reflecting a variety of health problems of men, women and children, and had a maximum score of four. FDs/DPs could indicate whether their patients would address them with these problems either "(almost) always", "usually", "occasionally", "seldom/never" or "do not know". Fig. 12 and 13 summarize the results, with more detail provided in Table A2.1 (Annex 2). Percentages refer to FDs/DPs who estimated that they would be "(almost) always" or "usually" be the doctor of first con-

tact; percentages in brackets are those who responded "occasionally".

FDs' role in first contact is no stronger than that of DPs: their scores are equal. Examination of individual items reveals that FDs report lower involvement in three of four items on health problems of children and equal involvement on the remaining item. FDs are more involved in three of the five items on women's health problems, but are only marginally more involved than DPs if non-medical problems (such as relationship problems and issues related to work) are considered. FDs and DPs in Sughd have a stronger role in first contact with health problems than those in RRS and Khatlon.

An additional question (not in the table) asked whether FDs and DPs are available to provide palliative care (including management of pain) for patients with cancer. Approximately one third answered that they are "(almost) always" or "usually" involved in these activities (40% in Sughd region, 37% in RRS and 32% in Khatlon).

Fig. 12. FDs and DPs' clinical tasks profile**Fig. 13. FDs and DPs' clinical tasks profile, by region**

Tables 44 and 45 list eight activities, including screening, specific examinations and rehabilitation. FDs and DPs are heavily involved in these activities, with the exception of screen-

ing for cervical and breast cancer. FDs are more involved in six of the activities, and FDs/DPs in the Sughd region more so than those in the other regions.

Table 44. FDs and DPs' involvement in activities for specific groups

Involvement in	FDs		DPs		Total	
	Number	%	Number	%	Number	%
Examination/screening for STIs	266	80.6	98	72.6	470	78.3
Examination/screening for HIV/AIDS	264	80.0	100	74.1	470	78.3
TB examination/screening	282	85.5	108	80.0	470	84.1
Influenza vaccination for high-risk groups	264	80.0	94	69.6	470	77.0
Rehabilitation care	242	73.3	85	63.0	470	70.2
Examination/screening of children in schools	303	91.8	125	92.6	470	92.1
Cervical cancer examination/screening	92	27.9	32	23.7	469	27.1
Breast cancer examination/screening	140	42.4	41	30.4	470	39.2
Total coverage for specific groups (range 0–100%)	70.2%		63.3%		68.2%	

Table 45. FDs and DPs' involvement in activities for specific groups, by region

Involvement in:	Sughd		RRS		Khatlon	
	Number	%	Number	%	Number	%
Examination/screening for STIs	168	82.1	274	75.9	28	78.6
Examination/screening for HIV/AIDS	168	82.7	274	75.2	28	82.1
TB examination/screening	168	89.3	274	79.6	28	96.4
Influenza vaccination for high-risk groups	168	78.0	274	76.3	28	78.6
Rehabilitation care	168	75.6	274	69.7	28	42.9
Examination/screening of children in schools	168	95.2	274	90.9	28	85.7
Cervical cancer examination/screening	167	38.9	274	22.3	28	3.6
Breast cancer examination/screening	168	53.0	274	33.6	28	10.7
Total coverage for specific groups (range 0–100%)	74.3%		65.4%		59.8%	

Addressing mother and child health and reproductive health issues is common among FDs and DPs. All respondents usually provide some form of family planning and contraceptive services to all or most women in the practice population. Routine antenatal care, immunization and paediatric surveillance

are also common tasks, as shown in Tables 46 and 47.

FDs are more involved in providing these services than DPs, and FDs and DPs in Sughd are most heavily involved, followed by RRS and Khatlon.

Table 46. Services provided by FDs and DPs to mothers and children in the practice

Services provided to all or most patients who need	FDs		DPs		Total	
	Number	%	Number	%	Number	%
Family planning and contraception	292	88.5	116	85.9	470	87.8
Routine antenatal care	300	90.9	115	85.2	470	89.3
Normal immunizations (for children under 7 years)	315	95.5	111	82.2	469	91.9
Routine paediatric surveillance (for children under 7 years)	312	94.6	112	83	470	91.3

Table 47. Services provided by FDs and DPs to mothers and children in the practice, by region

Services provided to all or most patients who need	Sughd		RRS		Khatlon	
	Number	%	Number	%	Number	%
Family planning and contraception	168	98.8	274	82.8	28	71.4
Routine antenatal care	168	95.8	274	86.1	28	82.1
Normal immunizations (for children under 7 years)	167	94.6	274	92.0	28	75.0
Routine paediatric surveillance (for children under 7 years)	168	95.2	274	90.5	28	75.0

As some respondents did not provide data about their involvement in TB care, Tables 48 and 49 are based on information from just over half.

FDs/DPs who answered the questions jointly identified 580 new cases of TB in 2010, with a minimum of one and a maximum of 50. The mean number of new cases identified was 1.6.

Differences between FDs and DPs in involvement in TB care are small, but those between regions are somewhat larger, with relatively more activity in RRS. Respondents from the GBAO region, however, report a much higher average of 9.4 new cases per FD/DP.

Table 48. TB care provided by FDs and DPs

TB care	FDs		DPs		Total	
	Number	Mean	Number	Mean	Number	Mean
Number of new cases identified	232	1.6	78	1.7	267	1.6
Number of households supervised per day	237	2.2	79	2.6	283	2.3
Number of patients receiving follow-up treatment	187	2.1	61	2.0	250	2.1

Table 49. TB care provided by FDs and DPs, by region

TB care	Sughd		RRS		Khatlon	
	Number	Mean	Number	Mean	Number	Mean
Number of new cases identified	104	1.7	142	2.2	21	1.3
Number of households supervised per day	109	2.5	148	2.6	26	2.4
Number of patients receiving follow-up treatment	85	1.6	141	2.3	24	2.3

On average, one FD/DP (or staff member) supervises 2.5 households with a TB case (identified in 2010) and 2.2 patients receive follow-up TB treatment, as prescribed by a phthysiologist (TB specialist). Fourteen per cent are not actively involved in follow-up TB care, but for those who are, involvement most commonly takes the form of performing daily supervision of TB drug intakes (Tables 50 and 51).

Around three quarters of FDs and one third of DPs have been trained to provide elements of TB care (Table 52). Most doctors were trained in 2008, but some had their training as long ago as 1976. FDs and DPs in RRS and Khatlon are more likely to be trained in TB care than those in the Sughd region (Table 53).

Table 50. Involvement of FDs and DPs (or their staff) in TB follow-up care

Involvement of FD/DP or staff	FDs		DPs		Total	
	Number	%	Number	%	Number	%
No patients receiving follow-up TB treatment	89	27.0	48	35.6	439	31.9
Not involved in activities of TB follow up	31	9.4	29	21.5	425	14.6
Involvement in:						
• writing free prescriptions	57	17.3	18	13.3	235	23.0
• periodic handing over of TB drugs	83	25.2	9	10.1	239	25.1
• performing daily supervision of intake of TB drugs	126	38.2	38	28.1	238	39.0

Table 51. Involvement of FDs and DPs (or their staff) in TB follow-up care, by region

Involvement of FD/DP or staff	Sughd		RRS		Khatlon	
	Number	%	Number	%	Number	%
No patients receiving follow-up TB treatment	167	38.9	244	29.1	28	14.3
Not involved in activities of TB follow up	159	19.5	238	12.6	28	3.6
Involvement in:						
• writing free prescriptions	78	47.4	133	12.0	24	4.2
• periodic handing over of TB drugs	78	11.5	137	37.2	24	0.0
• performing daily supervision of intake of TB drugs	78	48.7	136	40.4	24	0.0

Table 52. Training of FDs and DPs (or their staff) in TB follow-up care

Training of FD/DP or staff in	FDs		DPs		Total	
	Number	%	Number	%	Number	%
How to give information to the general public on TB and TB prevention	248	75.2	52	38.5	479	64.7
The procedure to follow in case of suspected TB	241	73.0	47	34.8	478	62.3
How to counsel TB patients	242	73.3	48	35.6	478	62.8
How to apply directly observed treatment of TB patients	244	73.9	48	35.6	479	63.0

Table 53. Training of FDs and DPs (or their staff) in TB follow-up care, by region

Training of FD and DPs(or their staff) in	Sughd		RRS		Khatlon	
	Number	%	Number	%	Number	%
How to give information to the general public on TB and TB prevention	168	55.4	273	69.6	28	67.9
The procedure to follow in case of suspected TB	167	51.5	273	67.8	28	67.9
How to counsel TB patients	167	52.7	273	67.4	28	71.4
How to apply directly observed treatment of TB patients	168	51.8	273	67.4	28	82.1

FDs (or their nurses) are more frequently involved in directly observed treatment of TB than DPs. Differences between FDs and DPs in relation to other activities, such as providing information, early diagnosis and

monitoring, are small. FDs and DPs in Sughd are more involved in activities related to TB care than those in the other regions (Tables 54 and 55).

Table 54. Involvement of FDs and DPs (or their nurses) in TB-related activities

FD/DP or nurse primarily involved in	FDs		DPs		Total	
	Number	%	Number	%	Number	%
Providing information and preventing TB among the population	286	86.7	114	84.4	470	86.2
Identification/early diagnosis of TB cases	149	45.2	55	40.7	470	44.0
Monitoring and follow-up of at-risk groups	252	76.4	98	72.6	470	75.3
Directly observed treatment of TB patients	282	85.5	93	68.9	470	80.9

Table 55. Involvement of FDs and DPs (or their nurses) in TB-related activities, by region

FD/DP or nurse primarily involved in:	Sughd		RRS		Khatlon	
	Number	%	Number	%	Number	%
Providing information and preventing TB among the population	168	93.5	274	83.6	28	67.9
Identification/early diagnosis of TB cases	168	51.8	274	38.3	28	53.6
Monitoring and follow-up of at-risk groups	168	85.1	274	72.3	28	46.4
Directly observed treatment of TB patients	168	83.9	274	80.7	28	64.3

The vast majority of FDs and DPs in all regions confirmed receipt of new information materials about TB (such as posters and leaflets) during

the previous 12 months for use in the waiting room or distribution to patients (Tables 56 and 57).

Table 56. New information materials on TB received by FDs and DPs (or their nurses)

TB materials	FDs		DPs		Total	
	Number	%	Number	%	Number	%
New TB information materials received during previous 12 months	292	88.5	121	89.6	470	88.9

Table 57. New information materials on TB received by FDs and DPs (or their nurses), by region

TB materials	Sughd		RRS		Khatlon	
	Number	%	Number	%	Number	%
New TB information materials received during previous 12 months	168	96.4	274	83.9	28	92.2

5. NURSES AND THEIR POSITION IN PHC

5.1 Results of the survey

This chapter presents results of the survey among nurses working in health houses or rural health centres with or without daily availability of a physician. The results are based on the nurses' experiences and opinions. The survey addressed the following topics: respondent and practice characteristics; workload and use of time; access and availability of services to patients; various aspects of quality of care; medical records and use of clinical information; coordination and cooperation; available medical equipment; clinical care; mother and child care; and reproductive health and TB care.

5.2 Respondent and practice characteristics

A total of 299 nurses responded: 78 from Sughd, 194 from RRS and 27 from Khatlon.

The average age was 40.3 years, ranging from 22 to 63. They had been working as nurses on average for 14 years but with a wide range of experience, varying from just having started to over 40 years. In relation to urbanization, the survey considered inner cities, suburban areas and small towns as urban (as opposed to rural); eight nurses could not define their working area and have been added to the rural group.

Table 58 establishes that nursing care is usually provided by women: 89.3% of the responding nurses are female. Most (77.6%) characterise the place in which they currently work as rural. Almost all work for a patient population consisting of males and females of all age groups.

Table 58. Nurses, by region and urbanization

Nurses	Sughd		RRS		Khatlon		Total	
	Total	%	Total	%	Total	%	Total	%
Gender:								
• male	11	14.1	14	7.2	9	33.3	34	10.7
• female	67	85.9	180	92.8	18	66.7	265	89.3
Total	78	100.0	194	100.0	27	100.0	299	100.0
Average age (years)	39.5		41.1		37.9		40.4	
Average years working as a nurse or feldsher	10.2		16.9		10.9		14.6	
Urbanization								
Urban:	34	43.6	32	16.5	6	22.2	72	29.8
• inner city	0	0.0	26	13.4	2	7.4	28	13.0
• suburban area	1	1.3	5	2.6	4	14.8	10	7.4
• small town	33	42.3	1	0.5	0	0.0	34	41.1
Rural	43	55.1	162	83.5	21	77.8	226	77.6
Not known	1	1.3	0	0.0	0	0.0	1	1.3
Patients seen by nurse:								
• male	78	100.0	185	95.9	27	100.0	290	97.4
• female	78	100.0	190	98.4	27	100.0	295	99.0
• all age groups	78	100.0	189	97.4	27	100.0	294	98.3

Table 59. Summary of characteristics of nurses, by region

Characteristics of nurses	Sughd		RRS		Khatlon		Total	
	Total	%	Total	%	Total	%	Total	%
Work place:								
• health house	12	15.4	133	68.6	20	74.1	165	65.4
• rural health centre with daily physician	15	19.2	39	20.1	7	25.9	61	20.5
• rural health centre without daily physician	51	65.4	22	11.3	0	0.0	73	49.1
Nurses who have completed are training programme	21	26.9	66	34.0	5	18.5	92	31.5

Table 59 provides key profile data about the nurses and their workplaces. Almost two thirds are employed by a health house, although this applies to only 15% in Sughd region, where most (65.4%) work in a rural health centre without daily availability of a physician. Respondents from the other regions indicate that most rural centres have a physician available on a daily basis. A third have completed (31.5%) or are currently completing (3.4%) a specialized family practice retraining course.

pating nurses. The average number of patient visits per day is 8.3, home visits 32.7 per week and working hours 37.5 per week. The nurses spend on average 14.2 hours per month reading professional journals or accessing nursing information and another 6.6 hours on training and attending courses.

Regional differences on reported shortages of staff (existing for more than six months) are substantial. Shortages of doctors are most often cited in the RRS region (65.9%) and shortages of nurses in Khatlon (75.0%).

5.3 Accessibility of care

5.3.1 Organizational access

5.3.1.1 Workload

Table 60 provides an overview of various aspects of workload as reported by the partici-

Table 60. Nurses' self-reported workload and use of time

Aspects of workload	Sughd		RRS		Khatlon		Total	
	Number	Mean	Number	Mean	Number	Mean	Number	Mean
List size (number of patients)	78	1 687	185	1 311	27	1 499	290	1 429
Number of patient consultations per day	78	10.1	194	7.3	27	10.2	299	8.3
Number of home visits per week	78	40.9	194	31.6	27	17.3	299	32.7
Number of working hours per week	78	39.6	194	35.7	27	44.6	299	37.5
Number of hours reading per month	75	16.7	17.8	13.2	27	13.4	280	14.2
Number of hours attending courses/training per month	22	7.8	78	5.6	14	10.2	114	6.6
	Number	%	Number	%	Number	%	Number	%
Number reporting staff shortages:								
• doctors	21	19.0	41	65.9	4	25.0	66	48.5
• nurses	21	57.1	41	31.7	4	75.0	66	42.4
• support staff	21	23.8	41	2.4	4	0.0	66	9.1

5.3.1.2 Patients' access and availability of services

Patients can see the nurse on the same day (Table 61), at least during office hours. One fifth of the nurses reported opening in the evening at least once per week. If practices are closed, it is standard procedure that a telephone number is provided for patients who need support out of hours.

Activities or so-called patient schools for specific patient groups are available for pregnant women (96.5%) and for providing information

on family planning (82.6%). Special sessions for people with diabetes and hypertension are offered to a lesser degree and activities for older people are far less common: just 58.7% reported such sessions.

Table 61 shows that most nurses (79%) work within 5 km of the nearest FD/DP practice, although this applies to only 22.2% in the GBAO region. Just over half indicate that the distance to the nearest hospital is at least 5 km, with those in the GBAO region again reporting the longest distances.

Table 61. Indicators of access to the practice

Aspects of patients' access	Sughd		RRS		Khatlon		Total	
	Number	%	Number	%	Number	%	Number	%
Same day visits are possible	78	100.0	194	98.5	27	100.0	299	99.0
Evening opening at least once per week	78	30.8	194	19.6	27	3.7	299	21.1
Sunday opening (during day) at least once per month	78	59.0	194	24.7	27	3.7	299	31.8
Phone number available when practice is closed	78	88.5	194	84.5	27	96.3	299	86.6
Sessions for special patient groups:								
• diabetes	74	71.6	100	67.0	27	25.9	201	63.2
• hypertension	74	70.3	100	69.0	27	48.1	201	66.7
• family planning	74	82.4	100	87.0	27	66.7	201	82.6
• pregnant women	74	98.6	100	97.0	27	88.9	201	96.5
• older people	74	55.4	100	71.0	27	22.2	201	58.7
• other groups	74	47.3	100	6.0	27	0.0	201	20.4
No sessions for special patient groups	78	5.1	194	47.4	0.0		229	32.1
More than 5 km distance from this practice to nearest office with a daily available FD/DP	74	21.6	190	17.9	27	40.7	291	21.0
More than 5 km distance from practice to nearest district hospital	69	26.1	177	63.3	28	40.7	273	51.8

5.3.1.3 Quality improvement

Table 62 shows use of different methods of quality improvement. Complaints procedures are more frequently reported than clinical guidelines and evaluative methods, with few

differences between urban and rural nurses, but evaluative methods to determine the satisfaction of patients, community representatives and practice personnel are used more in urban settings.

Table 62. Availability and use of clinical guidelines, complaints procedures, evaluation methods and CME

Quality improvement	Sughd		RRS		Khatlon		Total	
	Number	%	Number	%	Number	%	Number	%
Availability of clinical guidelines	77	46.8	194	19.6	27	25.9	298	27.2
Applying clinical guidelines:								
• frequently	78	3.8	194	18.0	27	11.1	299	13.7
• occasionally	78	1.3	194	2.6	27	14.8	299	3.4
• seldom/never	78	43.6	194	7.7	27	7.4	299	17.0
• guidelines not available	78	51.3	194	71.6	27	66.7	299	65.9
Having a box and a procedure for dealing with complaints	78	44.9	190	47.9	27	44.4	204	67.7
Using evaluation methods:								
• investigation of patient satisfaction	78	47.4	193	38.3	27	37.0	298	40.6
• interviewing community representatives about satisfaction with the practice	78	23.1	194	29.9	27	33.3	299	28.4
• interviewing nurses about job satisfaction	78	33.3	193	32.6	27	40.7	298	33.5

5.4 Continuity of care

5.4.1 Informational continuity

Regularly keeping nursing records of medical information given to patients is a precondition of quality and continuity of care and is part of the daily practice of two thirds of the nurses (Table 63). Retrieval of information is equally important, as the identification of patient groups on the basis of shared diagnosis, health risk or age can support effective approaches to active monitoring and prevention. Nurses' practice information systems do not, however, seem to be tailored to generating such lists (not in table).

The information that accompanies patients when they are referred to medical specialists or are hospitalized (and also follows them after treatment) represents a core element of cooperation between primary and secondary

care. Most respondents indicate that they always (or usually) inform (by telephone or letter) the FD/DP or medical specialist about referred patients. Computers are not widely used, with only five of the 25 nurses who answered this question reporting computer use, most commonly for searching information on the Internet (not in table): this finding might not be representative due to the low response and should be considered only as indicative.

As Table 63 shows, information materials are widely available within the centres, with 72.7% of the listed materials available in all practices. Information on vaccinations, STIs, healthy diet and contraception are particularly widely available; information on self-treatment of colds and coughs, smoking cessation, diabetes and cardiovascular disease tends to be available to a lesser degree.

Table 63. Medical records and information material

Medical records and information material	Sughd		RRS		Khatlon		Total	
	Number	%	Number	%	Number	%	Number	%
Keeping patients' records:								
• routinely for all contacts	78	84.6	194	78.9	27	88.9	299	81.3
• unless it is too busy	78	17.9	194	6.7	27	11.1	299	10.0
• for frequent patients only	78	0.0	194	5.7	27	0.0	299	3.7
• except for minor complaints	78	0.0	194	23.2	27	0.0	299	15.1
Cardiovascular disease risks	78	80.8	194	52.1	27	92.6	299	63.2
Healthy diet	78	98.7	194	91.2	27	100.0	299	94.0
Smoking cessation	78	84.6	194	59.8	27	81.5	299	68.2
Obesity	78	35.9	194	28.9	27	40.7	299	31.8
Diabetes	78	89.7	194	47.9	27	96.3	299	63.2
STIs	78	97.4	194	93.3	27	100.0	299	94.0
Vaccinations	78	100.0	194	98.5	27	100.0	299	68.2
Contraception	78	96.2	194	91.8	27	100.0	299	31.8
Self-treatment of colds and coughs	78	98.7	194	80.4	27	88.9	299	63.2
Social services	78	42.3	194	21.6	27	29.6	299	94.0
Average material available	82.4%		66.6%		83.0%		72.7%	

5.5 Coordination of care

5.5.1 Cohesion within PHC

All respondents work with one or more nurses and auxiliaries in the same health centre, but only one respondent indicated that a midwife was also present.

Practice nurses work in almost all health houses, but other health professionals are

less commonly present (Table 64). Feldshers are rare in Sughd and Khatlon, while midwives are present in most health houses except in the Khatlon region. FDs are not available in the health houses in Sughd and only rarely in Khatlon, and DPs are not available in either region. Support staff nevertheless work in most health houses. The number of staff working in a health house can vary greatly between, but also within, regions.

Table 64. Health professionals working in health houses

Working in the health house	Sughd		RRS		Khatlon		Total	
	Number	%	Number	%	Number	%	Number	%
Practice nurses	78	93.6	194	95.9	27	100.0	299	95.7
Feldshers	78	12.8	194	52.1	27	22.2	299	39.1
Midwives	78	91.0	194	67.0	27	40.7	299	70.9
FDs	78	82.1	194	29.4	27	3.7	299	40.8
DPs	78	5.1	194	15.5	27	0.0	299	11.4
Support staff	78	62.8	194	61.9	27	88.9	299	64.6
Total	78	100.0	194	100.0	27	100.0	299	100.0
Total number of following workers in health house	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Practice nurses	7.8	0–17	3.1	0–31	1.9	1–3	4.2	0–31
Feldshers	0.3	0–12	0.5	0–1	0.2	0–1	0.4	0–12
Midwives	1.7	0–21	0.7	0–3	0.5	0–2	0.9	0–21
FDs	7.0	0–17	0.5	0–3	0.0	0–1	2.2	0–17
DPs	0.1	0–1	0.2	0–4	0.0	0	0.2	0–4
Support staff	1.1	0–11	0.9	0–21	1.0	0–2	1.0	0–21

Table 65. Face-to-face meetings with other professionals

Face-to-face meeting at least once per month with	Sughd		RRS		Khatlon		Total	
	Number	%	Number	%	Number	%	Number	%
FDs/DPs	78	61.5	192	60.9	27	55.6	297	60.6
Other nurse(s)/feldshers	78	78.2	193	66.8	27	100.0	298	72.8
Midwife/midwives	78	60.3	193	57.5	27	63.0	298	58.7

Regular meetings with FDs/DPs and other nurses are reported by all respondents (Table 65) and most had them with practice midwives and social workers.

have at their disposal in their centre. Table 66 and Fig. 14 show that the average per nurse is 11 items. Half (48.6%) have between 11 and 15, but four items (aspirator, peak flow meter, urine test strips and the use of a car for home visits) are not available to more than half.

5.6 Comprehensiveness of care

5.6.1 Medical equipment

Participating nurses were asked to indicate which items of equipment from a list of 20 they

Table 66. Number of items of equipment available to nurses (from a list of 20)

Number of items of equipment	Sughd		RRS		Khatlon		Total	
	Total	%	Total	%	Total	%	Total	%
5 or fewer	17	21.8	8	4.1	0	0.0	25	16.1
6–10	38	48.7	54	27.8	8	29.6	100	35.9
11–15	20	25.6	105	54.1	19	70.4	144	52.3
16–20	3	3.8	27	13.9	0	0.0	30	12.9
Total	78	100.0	194	100.0	27	100.0	299	100.0
Average number of items per nurse (from list of 20)	8.7		11.8		11.3		10.9	

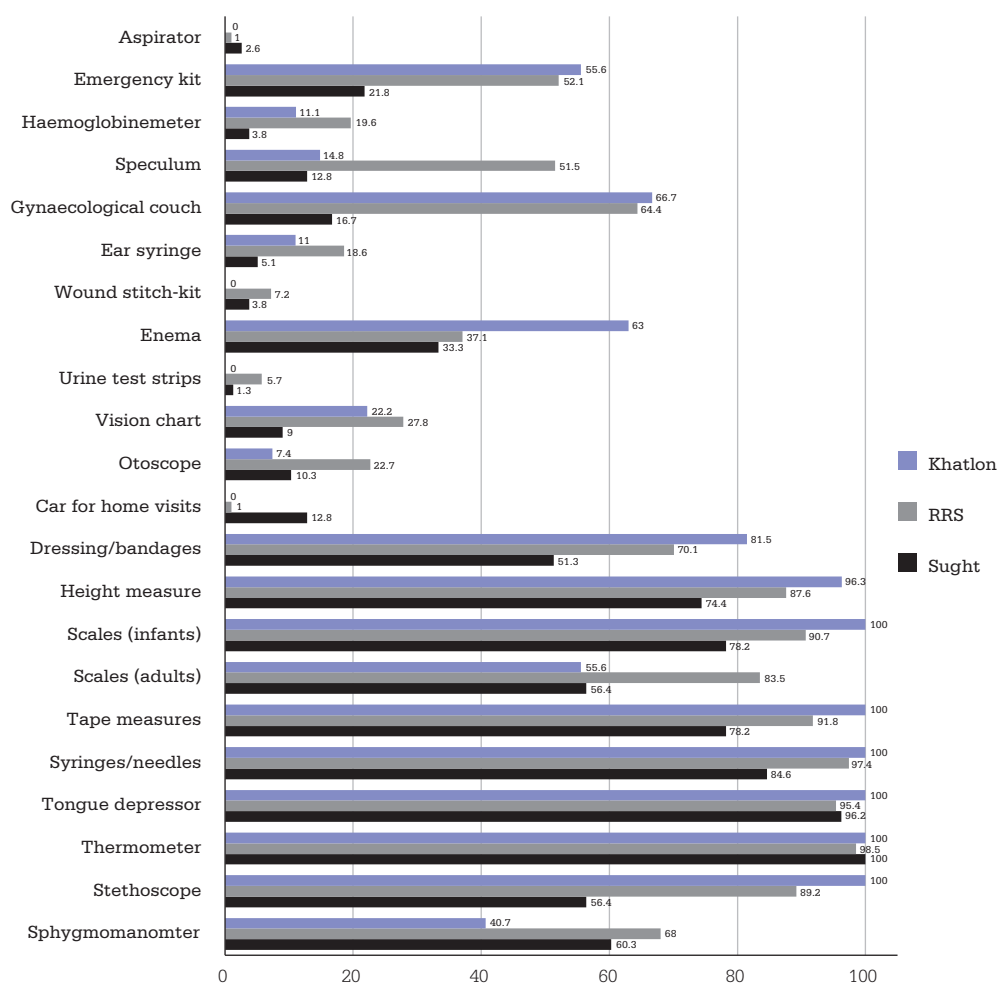
Fig. 14. Items of medical equipment available to nurses, by region

Table 67 shows that on average, a quarter of responding nurses indicate that they are sufficiently skilled to perform haemoglobin tests and urine protein counts. Self-reported skills

in performing other laboratory tests are much lower, ranging from 2.6% to 8.8% of nurses possessing relevant skills.

Table 67. Self-reported skills in performing laboratory tests

Self-reported skills for	Sughd		RRS		Khatlon		Total	
	Number	%	Number	%	Number	%	Number	%
Haemoglobin	78	17.9	194	30.9	27	11.1	299	25.7
Leucocyte blood count	78	2.6	194	8.8	27	0.0	299	6.4
Blood sugar	78	2.6	194	11.3	27	0.0	299	8.0
Leucocyte count in urine	78	2.6	194	5.7	27	0.0	299	4.4
Protein count in urine	78	26.9	194	24.7	27	25.9	299	25.4
Helminth-eggs count in faeces	78	3.8	194	5.2	27	0.0	299	4.4

5.6.2 Delivery of services

5.6.2.1 Role as first contact for patients' health problems

The first-contact role was measured with 10 items relating to a range of problems of men, women and children. Nurses could indicate whether their patients present with these problems either “(almost) always”, “usually”, “occasionally”, “seldom/never” or “do not know”. Fig. 15 and Table 68 show the results.

Percentages refer to nurses who estimated that they would be “(almost) always” or “usually” the person of first contact and percentages in brackets to those who ticked the answer “occasionally”.

Fig. 15 and Table 68 show a relatively small difference between regions in nurses' role as the health professional of first contact. The first contact score is based on 10 items (maximum score is four).

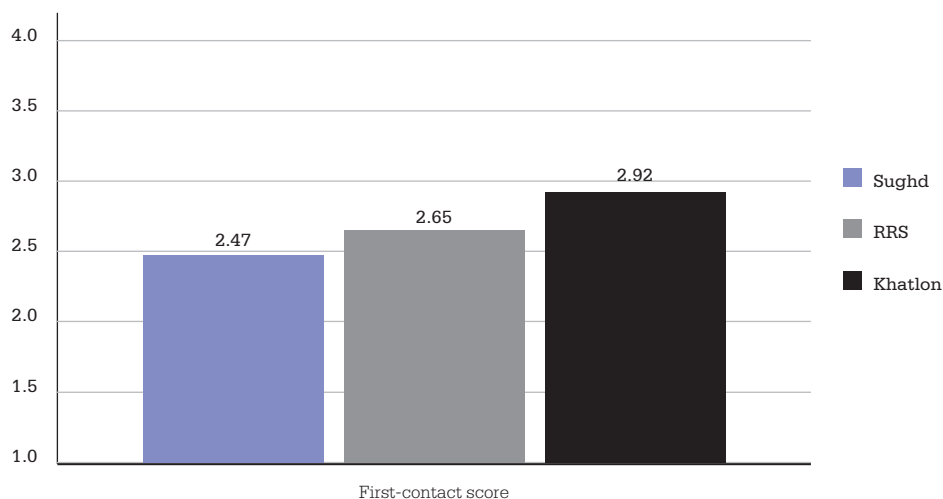
Fig. 15. Nurses' role in first contact for patients' health problems

Table 68. Nurses' role in first contact with patients' health problems

Nurse estimated to be the first contact in case of	Sughd		RRS		Khatlon		Total	
	Number	% ^a	Number	% ^a	Number	% ^a	Number	% ^a
Child with rash	78	62.8 (37.2)	194	58.8 (35.6)	27	66.7 (33.3)	299	60.6 (35.8)
Child with severe cough	78	84.6 (14.4)	194	74.2 (21.6)	27	100.0 (0.0)	299	79.2 (17.8)
Child aged 7 with enuresis	78	47.4 (35.9)	194	47.4 (32.0)	27	63.0 (18.8)	299	48.8 (31.8)
Child aged 8 with hearing problem	78	26.9 (39.7)	194	36.1 (28.9)	27	51.9 (25.9)	299	35.1 (31.4)
Woman aged 20 for confirmation of pregnancy	78	62.8 (12.8)	194	74.7 (13.4)	27	85.2 (11.1)	299	72.5 (13.0)
Woman aged 50 with lump in her breast	78	19.2 (33.3)	194	37.1 (18.0)	27	59.3 (22.2)	299	34.4 (22.4)
Woman aged 60 with polyuria	78	14.1 (43.6)	194	36.1 (24.2)	27	44.4 (18.5)	299	31.1 (28.7)
Man aged 28 with a first convulsion	78	26.9 (33.3)	194	25.8 (32.0)	27	51.9 (11.1)	299	28.4 (30.5)
Man aged 52 with alcohol addiction problems	78	7.7 (30.8)	193	20.7 (19.7)	27	11.1 (11.1)	298	16.5 (21.9)
Man with symptoms of TB	78	50.0 (28.2)	193	52.8 (19.7)	27	66.7 (18.5)	298	53.5 (21.9)
Total score for first contact (range 1–4) ^b	2.47		2.65		2.92		2.63	

^aPercentages are the sum of responses “(almost) always” and “usually” to being the person of first contact; those in brackets refer to responses of “occasionally”.

^bAnswers have been weighted as follows to calculate the score: seldom/never = 1; occasionally = 2; usually = 3; (almost) always = 4.

5.6.2.2 Mother and child health/reproductive health

Mother and child health and reproductive health in Tajikistan fall within the remit of PHC nurses. Most respondents indicate that they usually provide family planning and contracep-

tion services and routine antenatal care to all or most women. Immunization and paediatric surveillance are also clear PHC nursing tasks. Table 69 shows the extent to which nurses are involved in these services.

Table 69. Services provided by nurses to all or most mothers and children

Nurses providing the following services to all or most	Sughd		RRS		Khatlon		Total	
	Number	%	Number	%	Number	%	Number	%
Family planning/contraception	78	85.9	194	85.7	27	96.3	299	86.7
Routine antenatal care	78	84.6	194	92.3	27	100.0	299	91.0
Routine immunization for children under 7 years	78	98.7	194	95.4	27	100.0	299	96.7
Routine paediatric surveillance of children under 7 years	78	97.4	194	93.8	27	70.4	299	92.6

Table 70. TB care provided by PHC nurses

TB care by PHC nurses	Sughd		RRS		Khatlon		Total	
	Number	Mean	Number	Mean	Number	Mean	Number	Mean
Number of new cases identified	41	1.5	127	1.4	26	1.3	194	1.4
Number of households supervised per day	39	1.4	123	1.2	25	1.4	187	1.3
Number of patients receiving follow-up treatment	25	1.2	68	1.8	18	1.9	111	1.7

5.6.2.3 TB care

A substantial minority of respondents could not provide numbers in relation to the TB care they offer or did not answer the questions. Those who answered identified that they cared for 297 new cases of TB in the population in 2010, with a minimum of zero and a maximum of 10 new cases in the RRS region. The average number of new cases identified by nurses was 1.4 (Table 70); it was higher in the GBAO region (2.15) (not in Table). On average, 1.3 households with TB cases identified in 2010 are being supervised by nurses and 1.7 patients currently receive follow-up TB treatment, as prescribed by a phthysiologist.

Only a minority of nurses in all regions have been instructed or trained specifically to pro-

vide TB care (Table 71). On average, nurses had received their most recent training in 2008, but for some this was as long ago as 1982.

Almost two thirds indicated that they provide information on TB and TB prevention to the public, with the highest number in Khatlon (Table 72). Identification and early diagnosis, however, is performed by fewer than half, with the highest percentage (63.8%) being found in Sughd and the lowest (33.3%) in Khatlon. Monitoring and direct observations are performed on average by half of the nurses, but again regional differences exist.

Table 71. Nurses' training in TB follow-up care

Training on	Sughd		RRS		Khatlon		Total	
	Number	%	Number	%	Number	%	Number	%
How to give information to the general public on TB and TB prevention	78	37.2	194	47.4	27	48.1	299	44.8
The procedure to follow in case of suspected TB	78	33.3	194	47.4	27	40.7	299	43.1
How to counsel TB patients	78	35.9	193	47.2	27	40.7	298	43.7
How to apply directly observed treatment of TB patients	78	38.5	193	45.6	27	48.1	298	44.0

Table 72. Involvement of nurses in TB-related activities

Nurses primarily involved in	Sughd		RRS		Khatlon		Total	
	Number	%	Number	%	Number	%	Number	%
Providing information on TB and TB prevention to the public	69	58.0	194	63.9	27	74.1	290	63.4
Identification/early diagnosis of TB cases	69	63.8	193	46.1	27	33.3	289	49.1
Monitoring and follow up of at-risk groups	69	52.2	192	47.9	27	29.6	288	47.2
Directly observed treatment of TB patients	69	21.7	192	57.3	27	81.5	288	51.0

Most nurses in Sughd and RRS and all in Khatlon indicate that they had received new information materials on TB (such as posters

and leaflets) in the past 12 months for use in the waiting room or to distribute among their patients (Table 73).

Table 73. New information materials on TB received

TB materials	Sughd		RRS		Khatlon		Total	
	Number	%	Number	%	Number	%	Number	%
New TB information materials received during the past 12 months	78	70.5	194	71.6	27	100.0	299	73.9

6. PATIENTS' VIEWS AND EXPERIENCES IN PHC

6.1 Results of the survey

Patients in each FD and DP practice included in the survey were asked by trained field-workers to take part in interviews about their perspectives of the care provided in the PHC practice. The aim was to achieve a response from 10 patients per practice. The survey methodology is described in more detail in Chapter 1.

This chapter describes the subjective views and experiences of patients related to particular FD and DP practices, which should enable an evaluation of these systems from a users' perspective. However, the practice codes on the patients' questionnaires were not properly maintained during the fieldwork, so specific links cannot be made. Answers of patients of FDs therefore cannot be compared to those of patients of DPs.

6.2 Respondent characteristics

The survey had a response from 5255 patients: 1733 were from Sughd, 3157 from RRS and

361 from Khatlon. Three quarters (74%) were female (Table 74); it is not unusual for women to be over represented among patients visiting PHC facilities.

The average age of respondents is 37.5 years, with a minimum of 16 and a maximum of 99. Those from Sughd average 36.3 (the youngest) and from Khatlon 40. Respondents from the GBAO region are older (42 years) (not in table). Table 75 shows the age distribution of respondents by category. The largest group (59%) is between 21 and 40 years and fewer than 20% are older than 50.

Over a quarter of the patients who completed the questionnaire are employed (16.6%) or self-employed (10.1%) and 7.5% are retired. Almost half (45.4%) are mainly involved in looking after their family and home. On average, 14.3% are unemployed, with the lowest unemployment rate being found in the RRS region. In Khatlon, 34.6% live with their own family, including children, but the figure is much higher in Sughd and RRS (79.7% and 74.6% respectively).

Table 74. Gender distribution of patients, by region

Characteristics	Sughd		RRS		Khatlon		Total	
	Total	%	Total	%	Total	%	Total	%
Gender:								
• male	502	29.0	793	25.1	75	20.8	1 370	26.3
• female	1 231	71.0	2 364	74.9	286	79.2	3 881	74.0
Total	1 733	100.0	3 157	100.0	361	100.0	5 251	100.0

Table 75. Patients' age, occupational background and living situation

Patients' backgrounds	Sughd		RRS		Khatlon		Total	
	Total	%	Total	%	Total	%	Total	%
Average age (years)	36.3		37.8		40.0		37.5	
Age (years):								
• less than 20	93	5.4	104	3.3	19	5.3	221	4.3
• 21–30	624	36.0	1129	35.8	101	28.0	1 854	35.4
• 31–40	423	24.4	761	24.1	94	26.0	1 278	24.3
• 41–50	320	18.5	540	17.1	67	18.6	927	17.7
• 51–60	191	11.0	412	13.0	32	8.9	635	12.2
• over 60	82	4.7	210	6.7	48	13.3	340	7.1
Total	1 734	100.0	3 160	100.0	361	100.0	5 255	100.0
Occupation:								
• in school/education	99	5.7	68	2.2	4	1.1	171	4.2
• unemployed	308	17.8	344	10.9	56	15.5	708	14.3
• unable to work	10	0.6	10	0.8	3	0.8	38	0.4
• looking after family/home	616	35.5	1 559	49.4	162	44.9	2 337	45.4
• employed	309	17.8	516	16.3	29	8.0	854	16.6
• self-employed	197	11.4	303	9.6	20	5.5	520	10.1
• pensioned/retired	60	3.5	234	7.4	47	13.0	341	7.5
• other	134	7.7	109	2.3	40	11.1	283	6.1
Total	1 733	100.0	3 158	100.0	361	100.0	5 252	100.0
Living situation:								
• alone	55	3.2	69	2.2	20	5.5	144	3.0
• with parents	155	8.9	351	11.1	13	3.6	519	10.3
• with husband/wife	133	7.7	279	8.8	186	51.5	598	21.8
• with family (including children)	1 382	79.7	2 354	74.6	125	34.6	3 861	75.1
• other	9	0.5	103	3.3	17	4.7	129	3.3
Total	1 734	100.0	3 156	100.0	361	100.0	5 251	100.0

6.3 Accessibility of care

6.3.1 Financial access

The PHC services listed in Table 76 are usually available free of charge, except for prescribed medication or injections. On average, over half of respondents report full or partial payment for medicines or injections prescribed by their FD/DP (the figure is highest in Sughd (72.8%)).

Additionally, 41.2% report that they had to pay for a visit to a specialist after referral by their FD, but differences between regions are large, as Table 76 shows. At least 30% of respondents in the Sughd region report having to pay for all services and 96.4% in the GBAO region indicate (co)payment for medicines and injections (not in table).

Table 76. Services for which (co)payment from patients is required

Type of service	Sughd		RRS		Khatlon		Total	
	Total	%	Total	%	Total	%	Total	%
Visit to FD/DP	628	36.2	418	13.2	1	0.3	1 047	27.0
Medicines or injections prescribed by FD/DP	1 263	72.8	1 254	39.7	114	31.6	2 631	55.2
A visit to a specialist after referral by FD/DP	860	49.6	1 127	35.7	31	8.6	2 018	41.2
Home visit by FD/DP	631	36.4	607	19.2	37	10.2	1 275	27.5
Regular check up of baby or young child	552	31.8	192	6.1	4	1.1	748	25.0

Table 77. Patients reporting delaying or abstaining from service use due to copayments

In the past year decided:	Sughd		RRS		Khatlon		Total	
	Total	%	Total	%	Total	%	Total	%
not to visit or delay a visit because the visit could not be paid	578	33.3	320	10.1	1	0.3	899	25.0

Almost 25% on average report that they have decided not to visit, or to delay a visit, to their doctor because of (co)payments (Table 77), with the highest indication of this financial barrier to access reported in the Sughd region (one third of patients) followed by RRS (10.1%). Very few reported this in Khatlon and GBAO.

6.3.2 Geographic access and responsiveness

The following aspects of service delivery of the primary care centre or polyclinic are considered: attainability and accessibility; opening hours and convenience; and patient-friendliness.

Table 78 and Fig. 16 show that almost 70% in the RRS and Sughd regions can reach their preferred FD/DP within 20 minutes. Patients in Khatlon have longer average travelling times to their preferred doctor, but just 6.4% exceed 40 minutes. There are big regional differences concerning time taken to reach a preferred pharmacist: it is less than 20 minutes for 59.2% of respondents in Sughd, but considerably longer in the other two regions. Patients in Sughd have the shortest travel times and those in Khatlon the longest.

Table 78. Patients' travel time to primary care providers

Provider and distance	Sughd		RRS		Khatlon		Total	
	Total	%	Total	%	Total	%	Total	%
FD/DP:								
• up to 20 minutes	1 150	66.3	2 108	66.7	133	36.8	3 391	65.4
• 20–40 minutes	448	25.8	846	26.8	205	56.8	1 499	30.6
• 40–60 minutes	78	4.5	142	4.5	21	5.8	241	4.6
• more than 60 minutes	41	2.4	55	1.7	1	0.3	97	2.0
• don't know	17	1.0	9	0.3	1	0.3	27	0.7
Total	1 734	100.0	3 160	100.0	361	100.0	5 255	100.0
Preferred pharmacist:								
• up to 20 minutes	1 027	59.2	788	24.9	73	20.2	1 888	43.4
• 20–40 minutes	473	27.3	944	29.9	151	41.8	1 568	30.3
• 40–60 minutes	128	7.4	971	30.7	132	36.6	1 231	28.9
• more than 60 minutes	87	5.0	441	14.0	4	1.1	532	12.4
• don't know	19	1.1	16	0.5	1	0.3	36	0.8
Total	1 734	100.0	3 160	100.0	361	100.0	5 255	100.0
Preferred dentist:								
• up to 20 minutes	825	47.6	860	27.2	70	19.4	1 755	36.5
• 20–40 minutes	582	33.6	936	29.6	131	36.3	1 649	31.5
• 40–60 minutes	160	9.2	826	26.1	134	37.1	1 120	25.0
• more than 60 minutes	142	8.2	526	16.6	17	4.7	685	14.6
• don't know	25	1.4	12	0.4	9	2.5	46	1.4
Total	1 734	100.0	3 106	100.0	361	100.0	5 255	100.0
Nearest hospital:								
• up to 20 minutes	752	43.4	579	18.3	86	23.8	1 417	32.0
• 20–40 minutes	698	40.3	869	27.5	142	39.3	1 709	33.7
• 40–60 minutes	148	8.5	1 112	35.2	114	31.6	1 374	32.0
• more than 60 minutes	119	6.9	582	18.4	18	5.0	719	16.2
• don't know	17	1.0	18	0.6	1	0.3	36	0.8
Total	1 734	100.0	3 160	100.0	361	100.0	5 255	100.0

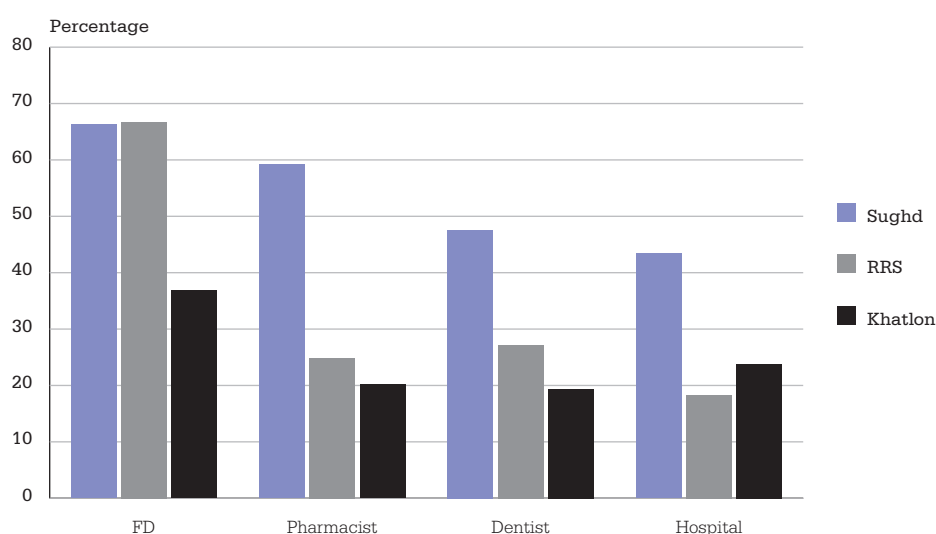
Fig. 16. Patients with travel times up to 20 minutes to health care facilities

Table 79 shows results of patient responses to a list of 15 indicators of service aspects of their FD/DP practice, 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”: numbers and percentages in the table refer to those answering “Yes, I agree”.

On average, 71.7% indicate that they can easily reach the practice or centre by public transport. This is just 16.7% in the GBAO region, but while public transport access is low in GBAO, there is no indication that this influences travel times (not in table).

Responses to opening hours and access to the FD/DP, either face to face or by telephone, are positive. Most patients find that a FD/DP is always available during opening hours and that it is possible to visit a FD/DP the same day if necessary. Visiting a FD/DP on a Sunday or after 18:00 hours, however, is not common practice: only one in four reports that visiting

a doctor on a Sunday or once a week after 18:00 hours is possible. The vast majority of respondents are nevertheless satisfied with their practice opening hours and are very positive about reception-area staff.

Waiting times seem to be acceptable, except in the RRS region, where half of respondents report that making an appointment with their FD/DP takes too much time and that they wait for long periods in the waiting room to see the doctor. Patients are highly positive about the kindness and helpfulness of reception staff and convenience of the waiting room, but physical access to practices or centres for people with disabilities or those using a wheelchair or walking aid can be improved in all regions: just 36.6% of respondents are positive about physical access for these patients.

Availability of a website is not important for most respondents. Almost two thirds (62.5%) do not know whether their practice has a website. Half are aware of the existence of a complaints box in the practice or centre.

Table 79. Patients' experience of quality in the PHC practice/centre, by region

Patients agreeing with the following statements	Sughd		RRS		Khatlon		Total	
	Total	%	Total	%	Total	%	Total	%
I can easily reach the practice by public transport	1 126	64.9	2 419	76.6	171	47.4	3 716	71.7
The practice/centre is well accessible for disabled people and those using a wheelchair	846	48.8	747	23.6	22	6.1	1 615	36.6
The waiting room for patients is convenient	1 471	84.8	2 960	93.7	343	95.0	4 774	91.1
My practice/centre has a website	72	4.2	147	4.7	1	0.3	220	4.5
My practice/centre has a complaints box that I can use to submit a complaint if I am not satisfied	768	44.3	1 614	51.1	219	60.7	2 601	49.9
When the practice is open and I want to visit a FD/DP urgently, it is possible to have the visit the same day	1 502	86.6	2 999	94.9	355	98.3	4 856	92.6

Patients agreeing with the following statements	Sughd		RRS		Khatlon		Total	
	Total	%	Total	%	Total	%	Total	%
During opening hours it is easy to get a doctor on the telephone for advice	1 499	86.4	2 454	77.7	294	81.4	4 247	81.0
When I visit the practice there is always at least one doctor available	1 569	90.5	2 969	94.0	274	75.9	4 812	91.8
When the practice is closed, there is a telephone number to call when I get sick	1 102	63.6	2 133	67.5	334	92.5	3 569	68.6
In this practice, it is possible to visit a FD/DP on Sundays	444	25.6	870	27.5	7	1.9	1 321	26.7
In this practice, it is possible to visit a FD/DP after 18:00 hours (at least once per week)	262	15.1	850	26.9	1	0.3	1 113	24.1
I am satisfied about current opening hours of the practice	1 513	87.3	2 965	93.8	328	90.9	4 806	91.6
Staff at the reception area are kind and helpful	1 574	90.8	3 044	96.3	358	99.2	4 976	94.8
Making an appointment with my FD/DP takes too much time	437	25.2	1 663	52.6	37	10.2	2 137	46.3
I need to wait a long time in the waiting room to see the FD/DP	418	24.1	1 567	49.6	47	13.0	2 032	43.5

6.4 Continuity of care

6.4.1 Longitudinal and interpersonal continuity

Patients consult their FD/DP in the office almost nine times per year (Table 80). Those in the GBAO region have the lowest average (4.3 visits annually) (not in table). Only three patients indicated that they had not seen their doctor during the previous year: almost

a quarter had visited 10–12 times and 16.2% more than 13. Patients had also visited a nurse around 11 times (only four had not done so). Again, the patients from the GBAO region had a lower average, with 4.8 annual visits (not in table). Home visits are more frequent than visits to the practice, with patients receiving 10 home visits on average from their FD/DP and 16 from a nurse.

Table 80. Patients' frequency of visits to their FD/DP and nurse during the previous 12 months

Visit frequency in past 12 months	Sughd		RRS		Khatlon		Total	
	Total	%	Total	%	Total	%	Total	%
FD/DP in the office:								
• no visits	3	0.2	0	0.0	0	0.0	3	0.2
• 1–3	356	21.7	805	28.9	45	12.6	1 206	26.2
• 4–6	343	20.9	894	32.1	183	51.1	1 420	31.8
• 7–9	151	9.2	221	7.9	29	8.1	401	8.4
• 10–12	486	29.6	457	16.4	92	25.7	1 035	23.4
• 13 or more	305	18.6	412	14.8	9	2.5	726	16.2
Average annual visits with FD/DP	9.5		8.8		6.7		8.9	
Nurse in the PHC office:								
• no visits	3	0.2	1	0.0	0	0.0	4	0.2
• 1–3	471	30.8	708	24.2	35	9.7	1 214	26.3
• 4–6	422	27.6	675	23.1	143	39.6	1 240	26.5
• 7–9	152	9.9	215	7.3	54	15.0	421	9.2
• 10–12	259	16.9	572	19.5	83	23.0	914	19.1
• 13 or more	223	14.6	755	25.8	46	12.7	1 024	22.8
Average annual visits with PHC nurse	8.3		13.4		8.0		11.4	
FD/DP at home:								
• no visits	3	0.2	4	0.2	0	0.0	7	0.2
• 1–3	402	25.3	751	29.0	57	16.0	1 210	27.2
• 4–6	437	27.5	581	22.4	134	37.6	1 152	26.1
• 7–9	171	10.8	227	8.8	42	11.8	440	9.9
• 10–12	271	17.1	454	17.5	99	27.8	824	18.6
• 13 or more	305	19.2	574	22.2	24	6.7	903	20.8
Average annual visits with FD/DP at home	9.2		11.0		7.2		10.0	
PHC nurse at home:								
• no visits	3	0.2	0	0.0	0	0.0	3	0.2
• 1–3	238	15.2	300	9.8	34	9.5	572	12.0
• 4–6	237	15.2	532	17.4	108	30.1	877	18.4
• 7–9	126	8.1	322	10.6	42	11.7	490	10.1
• 10–12	334	21.4	686	22.5	65	18.1	1 085	21.9
• 13 or more	624	39.9	1209	39.7	110	30.6	1 943	39.2
Average annual visit with PHC nurse at home	15.6		17.6		10.7		16.5	

The focus of the following section is the perceived functioning of FD/DPs in relation to personal relationships with their patients. Important aspects in this evaluation are communication between doctor and patient, how patients perceive the doctor's competence, and the patients' trust and confidence in the doctor.

The conditions for a relationship between doctor and patient in areas such as personal continuity and time available to patients in consultations are fundamental to the evalua-

tion and appear to be good. More than 60% of patients have been enrolled with their FD/DP for more than three years (Table 81) (92.7% in the GBAO region). A large majority can see the same doctor every time they visit the practice. The duration of consultation is relatively long, with an average of almost 20 minutes and a range from 15 minutes in Khatlon up to 20 in the RRS region. The average consultation length in the GBAO region is 24 minutes (not in table). Most could visit their FD/DP the same day after making an appointment.

Table 81. Patients' experiences with their doctor, by region

Contact experiences	Sughd		RRS		Khatlon		Total	
	Total	%	Total	%	Total	%	Total	%
Length of time being a patient with this FD/DP (years):								
• less than 1	149	8.6	461	14.6	19	5.3	629	12.9
• 1–3	290	16.7	614	19.4	83	23.0	987	18.9
• more than 3	1 100	63.4	1 937	61.3	190	52.6	3 227	61.5
• I don't know	195	11.2	146	4.6	69	19.1	410	10.2
If I visit a FD/DP in my practice, I see the same doctor each visit	1 493	86.2	2 764	87.5	278	77.0	4 535	86.4
Estimated duration of a consultation (minutes):								
• under 5	38	2.2	34	1.1	0	0.0	72	1.7
• 6–10	222	12.9	352	11.2	60	16.6	634	12.3
• 11–15	364	21.1	847	26.8	213	59.0	1 424	30.2
• more than 15	1 099	63.8	1 923	60.9	88	24.4	3 110	60.9
Average length of a consultation (minutes)	19.8		20.1		15.4		19.9	
Estimated time between making an appointment and visiting the FD/DP:								
• the visit is the same day	1 561	90.0	2 709	85.7	351	97.2	4 620	88.0
• I have to wait one day	44	2.5	106	3.4	3	0.8	153	3.1
• 2–3 days	6	0.3	25	0.8	1	0.3	32	0.7
• more than 3 days	17	1.0	36	1.1	1	1.4	58	1.0
• I never make appointments	56	3.2	275	8.7	0	0.0	331	7.8
• I don't know	50	2.9	9	0.3	1	0.3	60	2.5

Table 82 summarizes patients' evaluations of their FD/DP. Numbers and percentages refer to those answering "Yes, I agree".

Most are positive about their FD's knowledge of their personal situation and 87.1% assume the FD will know about their past problems and illnesses from the medical records. Communication skills, such as listening and giving explanations, are well appreciated and 68.3% agree that their FD/DP deals not just with medical problems, but can also help with personal issues and worries.

Almost every respondent (96.1%) agrees that their doctor would visit them at home if asked.

The statement "After a visit to my FD/DP, I feel able to cope better with my health problem/illness" is an overall judgement about his or her perceived quality: on average, 83.5% of patients agree (97% in the GBAO region (not in table)).

On average, 87.4% indicate that they would visit their FD/DP with a new health problem before seeking help from a medical specialist, but most are not very positive about the equipment in the practice. Just over 44% do not agree that the medical equipment in the practice is sufficient; this is higher in the GBAO region, with 78% disagreeing.

Table 82. Patients' agreement to statements about their doctor, by region

Agreement with statements	Sughd		RRS		Khatlon		Total	
	Total	%	Total	%	Total	%	Total	%
My FD/DP knows my personal situation (such as my work or home situation)	1 338	77.2	2 757	87.2	132	36.6	4 227	82.5
My FD/DP knows the problems and illnesses I have had in the past (from my medical records)	1 493	86.1	2 724	86.2	356	98.6	4 573	87.1
My FD/DP takes sufficient time to talk to me	1 522	87.8	3 028	95.8	358	99.2	4 908	93.6
My FD/DP listens well to me	1 614	93.1	3 037	96.1	359	99.4	5 010	95.4
My FD/DP deals not just with medical problems, but can also help with personal issues and worries	1 286	74.2	2 087	66.0	54	15.0	3 427	68.3
My FD/DP gives clear explanations about my illnesses and prescribed medicines	1 496	86.3	2 993	94.7	357	98.9	4 846	92.4
My FD/DP would visit me at home if I asked for it	1 635	94.3	3 055	96.7	360	99.7	5 050	96.1
After a visit to my FD/DP, I feel able to cope better with my health problem/illness	1 503	86.7	2 570	81.3	313	86.7	4 386	83.5
When I have a new health problem, I go to my FD/DP before going to a medical specialist	1 403	80.9	2 862	90.6	316	87.5	4 581	87.4
My practice/centre has sufficient medical equipment	1 059	61.1	1 681	53.2	176	48.8	2 916	55.8

Table 83 provides an overview of the type and frequency of advice provided by FP/DPs on health lifestyles reported by patients.

Table 83. Patients' assessment of involvement of FD/DP in promoting healthy behaviour, by region

Topic	Sughd		RRS		Khatlon		Total	
	Total	%	Total	%	Total	%	Total	%
Healthy eating	1 620	93.4	2 858	90.4	356	98.6	4 834	92.0
Physical activity	1 572	90.7	2 687	85.0	349	96.7	4 608	87.8
Use of alcohol	1 463	84.4	1 947	61.6	266	73.7	3 676	71.5
Reducing or stopping smoking	1 481	85.4	1 941	61.4	264	73.1	3 686	71.9

Table 84. Patients' freedom to choose and change their PHC physician, by region

Option	Sughd		RRS		Khatlon		Total	
	Total	%	Total	%	Total	%	Total	%
Patients assigned to their doctor	1 440	83.1	2 174	68.9	231	64.0	3 845	73.9
Patients who cannot change to another doctor	772	41.6	1 723	54.5	170	47.1	2 615	51.3

6.5 Perceived coordination of care and choice of provider

Most patients responded that they had been assigned to their current doctor (Table 84); while more than one third indicate they are free to change to another FD/DP at any time, 51.3% cannot do so.

Table 85 shows results on patients' experiences of exchange of information and levels of cooperation between their doctor and other health care professionals. Numbers and percentages in the table refer to those answering "Yes, I agree".

Patients are generally positive about information exchange, but there is room for improve-

ment. Almost 60% agree that other health providers (in addition to their own doctor) hold information about their health status. This number was lowest in Khatlon (12.5%). After being treated by a medical specialist, 79.7% on average answered that their FD/DP would know the results of the treatment. Most (84%) recognize the need to visit their FD/DP before accessing medical specialists at secondary and tertiary level. There is general agreement that FDs/DPs and nurses work well together (88.1%) and 64% responded that sometimes a nurse provides independent consultations, making a visit to the FD/DP unnecessary. Only 23.5% in the Khatlon region agree with that statement, however.

Table 85. Patients' experiences of information exchange and cooperation, by region

Statements	Sughd		RRS		Khatlon		Total	
	Total	%	Total	%	Total	%	Total	%
If I visit a doctor other than my own FD/DP, he/she has all the necessary information about me	1 295	74.7	1 414	44.7	45	12.5	2 754	58.3
When I am referred, my FD/DP informs the medical specialist about my illness	1 388	80.0	2 523	79.8	343	95.0	4 254	81.1
If I have been treated by a medical specialist, my FD/DP knows the results	1 364	78.7	2 461	77.9	347	96.1	4 172	79.7
To see a specialist, I first need to visit my FD/DP for a referral	1 412	81.4	2 660	84.2	338	93.6	4 410	84.0
My FD/DP and the practice nurse work well together	1 482	85.5	2 831	89.6	316	87.5	4 629	88.1
Sometimes a nurse does the consultation, making it unnecessary to see my FD/DP	1 334	76.9	1 889	59.8	85	23.5	3 308	65.8

7. POLICY RECOMMENDATIONS

The recommendations are based on data from the surveys among FDs/DPs, PHC nurses and patients, information gathered from national-level experts and observations made by researchers at site visits.

Pro-PHC policy actions

Health policy aiming to strengthen primary care should be pursued vigorously.

The current lack of resources for primary care poses a serious obstacle to the ongoing development of the primary care programme. Further efforts should be made to allocate resources to achieve the targeted 40% of the health budget for PHC in Tursun-zadeh, Spitamen and other pilot rayons.

Coordinated action should be undertaken to expand the role of FDs in line with the family medicine model.

Survey results show that differences between the service profiles of FDs and DPs are small; retrained FDs are expected to assume more comprehensive roles.

Shortage of staff in PHC, particularly FDs and nurses in rural areas, should be addressed, starting with a human resource plan.

Official reports and the survey results point to the serious problem of staff shortages. Quick solutions may not be possible, but a human resource plan can map the problem and enable decision-makers to distribute scarce resources fairly.

Financial and geographic access

The problem of unmet health needs in the population should be investigated and action taken to improve access to services,

especially in rural areas, and consequently promote responsiveness.

Focus should be placed on the effects of widespread copayments on the demand for health care. A limited curative service profile among FDs and DPs, limited diagnostic possibilities in PHC and low referral rates to secondary care are indicative of underdemand and unmet needs.

The basic benefit package should be further revised and harmonized in relation to current copayment schemes to explore inequities, especially for identified population groups and geographic areas.

Attention should be paid to possible inequities arising as a consequence of decentralization. Growing regional autonomy may result in differences in health care service funding between districts and regions, which may have implications for (geographic) inequities.

Scope of practice, skill mix and material resources

Nurses in primary care should be more involved in patient care and less in administration. This may alleviate the problem of physician shortages.

Nurses can have greater involvement in clinical work than is currently the case in areas such as the management and follow up of patients with NCDs, providing information and promoting patient empowerment: these are important domains for nurses. Administration can be organized more efficiently and may largely be delegated to other staff.

Sufficient equipment should be available in primary care. FDs and DPs should have full access to laboratory and X-ray facilities to enable them to function effectively as

providers of first-contact care, delivering efficient triage and undertaking gatekeeping roles.

Patients are critical about the availability and quality of practice equipment. Means of transportation and primary care premises and facilities also need to be considered, particularly accessibility for people who use wheelchairs and other mobility devices. Many physicians report having insufficient or no access to diagnostic laboratory and X-ray facilities.

Computer use in PHC settings to, for instance, maintain patients' medical records, exchange information with other health care workers and facilitate distance learning should be further developed.

While financial resources to introduce computers on a wider scale are cur-

rently lacking, opportunities in relation to management and clinical information and teaching and education should be explored.

Education and training

Joint action is needed at medical universities and in CME to expand the competencies of FDs and primary care nurses.

Lack of competencies and skills among physicians and nurses are an obstacle to further expanding the scope of services at PHC level and consequently to the realization of reform aims. New approaches in education and teaching should be explored, including distance learning.

REFERENCES

1. 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/__data/assets/pdf_file/0010/88093/RC55_eres08.pdf, accessed 18 August 2014).
2. Smith, PC, Mossialos E, Papanicolas I. Performance measurement for health system improvement: experiences, challenges and prospects. Copenhagen: WHO Regional Office for Europe; 2008 (<http://www.who.int/management/district/performance/PerformanceMeasurementHealthSystemImprovement2.pdf>, accessed 18 August 2014).
3. The World Health Report 2000. Health systems: improving performance. Geneva: World Health Organization; 2000 (http://www.who.int/whr/2000/en/whr00_en.pdf, accessed 18 August 2014).
4. Murray C, Frenk J. World health report 2000: a step towards evidence-based health policy. *Lancet* 2009;357:1698–700.
5. Atun RA, Menabde N, Saluvere K, Jesse M, Habicht J. Introducing a complex health innovation – primary health care reforms in Estonia (multimethods evaluation). *Health Policy* 2006;79:79–91.
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 18 August 2014).
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, accessed 18 August 2014).
8. Watson DE. 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 strengthening: glossary [website]. Geneva: World Health Organization; 2011 (http://www.who.int/healthsystems/Glossary_January2011.pdf, accessed 10 September 2014).
10. Starfield B. Primary care. Balancing health needs, services and technology. New York (NY): Oxford University Press; 1998.
11. Primary care evaluation tool [website]. Copenhagen: Who Regional Office for Europe; 2010 (http://www.euro.who.int/__data/assets/pdf_file/0004/107851/PrimaryCareEvalTool.pdf?ua=1, accessed 10 September 2014).
12. Health Evidence Network of the WHO Regional Office for Europe. What are the arguments for community-based mental health care? Copenhagen: WHO Regional Office for Europe; 2004 (http://www.euro.who.int/__data/assets/pdf_file/0019/74710/E82976.pdf, accessed 18 August 2014).
13. Starfield BH, Simborg DW, Horn SD, Yourtee SA. Continuity and coordination in primary care: their achieve-

- ment and utility. *Med Care* 1976;14:625–36.
14. Saultz JW. Defining and measuring interpersonal continuity of care. *Ann Fam Med* 2003;1:134–43 (<http://www.annfam-med.org/cgi/content/full/1/3/134>, accessed 18 August 2014).
 15. Reid R, Haggerty J, McKendry R. Defusing the confusion: concepts and measures of continuity of healthcare. Ottawa: Canadian Health Services Research Foundation; 2002.
 16. Boerma WGW. Coordination and integration in European primary care. In: Saltman RB, Rico A, Boerma WGW, editors. *Primary care in the driver's seat? Organizational reform in European primary care*. Maidenhead: Open University Press; 2006: 3–21 (http://www.euro.who.int/Document/E87932_chapt1.pdf, accessed 18 August 2014).
 17. Starfield B. Primary care and health. A cross-national comparison. *JAMA* 1991; 266:2268–71.
 18. Boerma WGW. Profiles of general practice in Europe. An international study of variation in the tasks of general practitioners. Utrecht: Netherlands Institute for Health Services Research; 2003 (<http://www.nivel.nl/pdf/profiles-of-general-practice-in-europe.pdf>, accessed 18 August 2014).
 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 (http://www.euro.who.int/__data/assets/pdf_file/0008/100250/E92468.pdf, accessed 18 August 2014).
 20. 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 (http://www.euro.who.int/__data/assets/pdf_file/0007/53863/E92219.pdf, accessed 18 August 2014).
 21. Economic Cooperation Organization. Sustainable socio-economic development for people of the region [website]. Tehran: Economic Cooperation Organization; 2014 (<http://www.ecosecretariat.org/in2.htm>, accessed 18 August 2014).
 22. Tajikistan overview [website]. Washington (DC): World Bank; 2014 (<http://www.worldbank.org/en/country/tajikistan/overview>, accessed 18 August 2014).
 23. European Health for All database [online database]. Copenhagen: WHO Regional Office for Europe; 2014 (<http://www.euro.who.int/en/what-we-do/data-and-evidence/databases/european-health-for-all-database-hfa-db2>, accessed 18 August 2014).
 24. The world factbook. Central Asia: Tajikistan [website]. Washington (DC): Central Intelligence Agency; 2012 (<https://www.cia.gov/library/publications/the-world-factbook/geos/ti.html>, accessed 18 August 2014).
 25. UN data. Tajikistan [online database]. New York (NY): United Nations Statistics Division; 2014 (<http://data.un.org/CountryProfile.aspx?crName=TAJIKISTAN>, accessed 18 August 2014).
 26. Tajikistan health sector note. Washington (DC): World Bank; 2005 (<http://documents.worldbank.org/curated/en/2005/06/6623304/tajikistan-health-sector-note>, accessed 18 August 2014).

27. Global Health Observatory data repository [online database]. Geneva: World Health Organization; 2013 (<http://apps.who.int/gho/data/?theme=main>, accessed 18 August 2014).
28. Akkazieva B, Smith B, Tello J, Sautenkova N, Krasovsky K, Jakab M, Yuldasheva L, Shoismatuloeva M. Health system barriers and innovations for better NCD outcomes: Tajikistan. Copenhagen: WHO Regional Office for Europe; 2014.
29. Khodjamurodov G, Rechel B. Tajikistan: health system review. *Health Systems in Transition* 2010;12(2):1–154 (http://www.euro.who.int/__data/assets/pdf_file/0009/119691/E94243.pdf, accessed 18 August 2014).
30. European Observatory on Health Systems and Policies. Policy brief. Copenhagen: WHO Regional Office for Europe; 2002 (<http://www.euro.who.int/en/about-us/partners/observatory/policy-briefs-and-summaries/health-care-in-central-asia>, accessed 18 August 2014).
31. Institute for Health Metrics and Evaluation (IHME). The Global Burden of Disease Study 2010. Seattle, WA: IHME; 2013. (<http://ghdx.healthdata.org/global-burden-disease-study-2010-gbd-2010-data-downloads>, accessed 18 August 2014).
32. Tajikistan demographic and health survey 2012. Dushanbe and Calverton (MA): Statistical Agency under the President of the Republic of Tajikistan, Ministry of Health of Tajikistan and ICF International; 2012 (<http://dhsprogram.com/pubs/pdf/FR279/FR279.pdf>, accessed 18 August 2014).
33. Tajikistan – statistics [online database]. Geneva: UNICEF; 2013 (http://www.unicef.org/infobycountry/Tajikistan_statistics.html, accessed 10 September 2014).
34. Joint annual review of third year of the National Health Strategy of the Republic of Tajikistan for 2010–2012. Dushanbe: Ministry of Health and Social Security; 2013.
35. Resolution No. 436 of 5 November 2002, on the health care strategy until 2010. Dushanbe: Ministry of Health and Social Protection; 2002.
36. Poverty reduction strategy paper. Dushanbe: Government of the Republic of Tajikistan; 2002. (<http://planipolis.iiep.unesco.org/upload/Tajikistan/PRSP/Tajikistan%20PRSP%202002.pdf>, accessed 18 August 2014).
37. Government Decree No. 94 of 4 March 2002: conception of health sector reform in the Republic of Tajikistan. Dushanbe: Government of the Republic of Tajikistan; 2002.
38. Ministry of Health and Social Protection of the Republic of Tajikistan [web site]. Ministry of Health and Social Protection; 2004–2010 (<http://www.health.tj>, accessed 18 August 2014).
39. Republican Centre for Medical Statistics and Information [web site]. Dushanbe: Republican Centre for Medical Statistics and Information; 2004–2010 (<http://www.stat.tj/en/>, accessed 18 August 2014).
40. Policy brief # 6. Opinions of the graduates of TSMU and interns of TIPMT regarding selection of family medicine as their specialty. Dushanbe: Health Policy Analysis Unit, Ministry of Health and Social Protection; 2013.
41. Wyss K, Schild N. Human resource development in Tajikistan: report established for the Department of Human Resources for Health of the World Health

- Organization. Basel: Swiss Tropical Institute; 2006.
42. Nurses and midwives: a force for health. Survey on the situation of nursing and midwifery in the Member States of the European Region. Copenhagen: WHO Regional Office for Europe; 2010 (http://www.euro.who.int/__data/assets/pdf_file/0019/114157/E93980.pdf, accessed 18 August 2014).
43. Policy brief # 4. Review of health financing reforms in Tajikistan. Dushanbe: Health Policy Analysis Unit, Ministry of Health and Social Protection; 2013.
44. Aizsilniece I. Provision of technical support to the State Service for Medical Practice Supervision in auditing PHC facilities to conclude about adherence to PHC CPGs. Geneva: World Health Organization; 2013.

ANNEX I. STRATEGIES, LAWS AND ORDERS

Law on family medicine 2010

The law provides definitions of the main terms used (such as primary health care, family medicine and family medicine specialists), regulates functions in the field of family medicine, establishes Ministry of Health authority in the area, determines competencies of local governing bodies and defines rights and obligations of family medicine specialists.

National health strategy 2010–2020

This guiding national health strategy, adopted in 2010, has health service delivery as one of the four key priority components for developing the health system. The following are identified within the service delivery pillar as key areas of focus: strengthening family medicine; improving health quality assurance, including the accreditation of health care professionals, facilities and education standards; developing clinical guidelines and further introducing evidence-based medicine; improving access to health care; committing to priority programmes, including maternal and child health, communicable diseases and noncommunicable diseases; increasing community involvement on health issues; and strengthening public health and healthy lifestyle promotion.

Health sector financing strategy 2005–2015

The strategy identifies priority health sector financing reforms at primary and secondary level, including time-phased increases of government budget allocations to the health sector, pooling of funds, establishment of a new

payment system for providers, rationalization of facilities, salary increases for providers and formalization of copayments.

Piloting of per capita financing at primary health care level commenced in 2007 and was implemented gradually throughout the country. It applied only to unsecured line expenses, however, when secured expenses (salaries) account for the greatest part. Full per capita financing commenced in pilot districts in 2013. Case-based funding is being introduced at hospital level. Under plans to rationalize health facilities, funds will be reallocated to other health expenditure sectors, notably primary health care, and to ensure efficient distribution of outpatient and inpatient services. Prescribed free care for vulnerable groups and copayments for the remainder of the population were formalized with the introduction of the basic benefit package, which aims to facilitate equal access. The concept of mandatory health insurance was introduced to establish the Health Care Insurance Fund as the single health system financer, but implementation has been postponed until 2014.

Strategy for the prevention and control of noncommunicable diseases and injuries 2013–2023

This strategy is considered in mid-term (2013–2016) and long-term (2017–2023) phases of implementation and is grounded in the strategic directions of interagency cooperation and coordination, development of epidemiological surveillance, regulation of quality of care and equity regarding noncommunicable diseases. Priorities include intersectoral coordination, recognition of environmental influences, identification of high-risk population groups,

early detection and screening, improvement of health service management (at all levels of care), adaptation and implementation of WHO-recommended clinical protocols, development of human resource capacity in detection, prevention and treatment, and introduction of policies on tobacco control, table-salt consumption, food and child nutrition strengthening.

The plan was developed in recognition that the responsibility for health extends beyond the health sector alone and harnesses the involvement of experts from a wide range of sectors. It integrates existing policy, programmes and laws and is committed to the equitable participation and empowerment of civil society.

National reproductive health strategy 2004–2014

This strategy defines the current women's reproductive health context in Tajikistan and presents an overview of reproductive health policy developments within the programme. It acknowledges men and women's rights to information and access to secure, efficient, affordable and acceptable methods of family planning and the importance of protection against, and treatment of, sexually transmitted infections in improving reproductive health outcomes. It is committed to promoting reproductive choice, safe pregnancy, infection control, adolescent sexual and reproductive health and the reproductive health of refugees and displaced persons, and to combatting sexual compulsion and violence, illegal trafficking and selling of women, and breast cancer. Awareness-raising, skills development, provision of information, screening and strengthening of services through integration, improved quality, increased access, enhanced information, education and communication, capacity-building, promotion of gender equality and monitoring and evaluation are key tools identified in the strategy as being crucial to improving reproductive health outcomes.

Child and adolescent health programme 2008–2015

The programme outlines a plan to reduce high levels of child and maternal mortality, based on principles of the life-course approach, justice and human rights, gender approaches, inter-sectoral collaboration and the involvement of target groups in implementation. It focuses on legislation, access to (and quality of) services provided, development of local capacity, individual, family and community involvement through skills, knowledge and capacity-development, and assessment, monitoring and evaluation. The complex interaction of social and economic factors, infections, quality of care, maternity hospitals' infrastructure, malnutrition and lack of micronutrients, maternal anaemia and lack of parental skills and knowledge are identified as key concerns related to high maternal and child mortality. Objectives include: ensuring safe pregnancy and delivery; regionalizing perinatal care; halting the spread of HIV and sexually transmitted infections and preventing mother–child transmission; establishing a nutrition-monitoring mechanism and a neonatal resuscitation mechanism; and providing adequate care for neonates within families.

Safe motherhood action plan 2008–2015

The plan outlines strategies and actions to improve access to safe motherhood services (including emergency obstetric and neonatal care) through developing policy and improving legislation, building service management capacity through system improvement, developing safe motherhood infrastructure and neonatal care facilities through human and physical resource development (including education seminars, inclusion of safe motherhood principles in the education curriculum and the development of facility criteria and inventories) and provision of essential medicines and equipment, mobilizing the community, increasing access to quality care

through awareness-raising among the population and capacity-building of public health councils, and developing the monitoring and evaluation system.

Strategy for improving welfare of the population 2013–2015

This strategy emphasizes the low level of public funding for health (and the large proportion of the population who are financially vulnerable) as the biggest obstacle impeding the effective organization of medical services. A minimum of 9–10% of gross domestic product, largely sourced from public funds, is recommended to meet the requirements of health care institutions and ensure optimal financial protection for the population. In line with health service priorities and identified challenges, the strategy prescribes the following strategic tasks: improve the system of sector management and funding; improve protection of infant and maternal health; supply health care institutions with qualified health workers; combat HIV/AIDS, malaria, tuberculosis

and other infectious diseases; and increase the role of private health care institutions in delivering health services.

Revised indicators package monitoring and evaluation matrix within the framework of the national health strategy 2010–2020

Revision of the national health strategy package of indicators (the main tool for tracking annual progress in implementation) was carried out in response to gaps in the existing package, including the large number of indicators, unclear and/or poorly defined indicators and data sources and irrelevance to national targets. The revised package draws on an internationally accepted logic model and includes impact, outcome and output indicators grouped by each key pillar of the national health strategy. Of the 99 indicators, 85 are collected from routine sources; the remaining 14 require additional surveys.

ANNEX 2. PROFILE OF CLINICAL TASKS OF FDS AND DPs

Table A2.1 presents the health problems for which family doctors (FDs), district physicians/therapists (DPs) and other practice staff reported to be first contact.

Table A2.2 details the medical–technical procedures and preventive services (conditions)

for which FDs, DPs and other practice staff, are involved in follow up and treatment.

Table A2.3 describes the type of medical procedures and preventive services provided by FDs and DPs.

Table A2.1. FD, DP roles in first contact with patients' health problems

FDs and DPs reporting to be the first contact in case of	FDs (N=330)		DPs (N=135)		Total (N = 470)	
	Number	% ^a	Number	% ^a	Number	% ^a
child with rash	220	66.7	95	70.4	320	68.1
child with severe cough	269	81.5	108	80.0	382	81.3
child aged 7 with enuresis	183	55.5	83	61.5	268	57.0
child aged 8 with hearing problem	137	41.5	71	52.6	210	44.7
woman aged 18 asking for oral contraception	155	47.0	52	38.5	210	44.7
woman aged 20 for confirmation of pregnancy	195	59.1	55	40.7	254	54.0
woman aged 35 with irregular menstruation	150	45.5	44	32.6	196	41.7
woman aged 50 with lump in her breast	115	34.8	42	31.1	159	33.8
woman aged 60 with polyuria	121	36.7	47	34.8	170	36.2
anxious man aged 45	112	33.9	48	35.6	162	34.5
man aged 28 with a first convulsion	118	35.8	55	40.7	175	37.2
physically abused child	129	39.1	57	42.2	188	40.0
couple with relationship problems	118	35.8	52	38.5	173	36.8
man with suicidal inclination	43	13.0	17	12.6	62	13.2
woman aged 35 with psychosocial problem related to work	100	30.3	37	27.4	140	29.8
man aged 32 with sexual problems	108	32.7	45	33.3	155	33.0
man aged 52 with alcohol addiction problems	73	22.1	35	25.9	110	23.4
man with symptoms of TB	187	56.7	82	60.7	273	58.1
Total score on first-contact care (maximum =4) ^b	2.39		2.37		2.39	

^aPercentages are calculated from the sum of FDs/DPs "(almost) always" and "usually" as first-contact responses.

^bResponses are weighed as follows: rare/never = 1; sometimes = 2; commonly = 3; (almost) always = 4.

Table A2.2. FDs' / DPs' involvement in treatment and follow up of diseases

Diseases	FD (N=330)		DP (N=135)		Total (N=470)	
	Number	% ^a	Number	% ^a	Number	% ^a
Hyperthyroidism	132	40.0	30	22.2	164	34.9
Chronic bronchitis	249	75.5	91	67.4	344	73.2
Hordeolum (stye)	178	53.9	62	45.9	241	51.3
Peptic ulcer	198	60.0	82	60.7	284	60.4
Herniated disc lesion	96	29.1	24	17.8	121	25.7
Acute cerebrovascular accident	96	29.1	40	29.6	138	29.4
Congestive heart failure	164	49.7	65	48.1	232	49.4
Pneumonia	253	76.7	98	72.6	356	75.7
Peritonsillar abscess	104	31.5	34	25.2	140	29.8
Ulcerative colitis	90	27.3	23	17.0	115	24.5
Salpingitis	104	31.5	32	23.7	138	29.4
Concussion of brain	86	26.1	24	17.8	112	23.8
Parkinson's disease	70	21.2	20	14.8	93	19.8
Uncomplicated diabetes (type II)	178	53.9	58	43.0	241	51.3
Rheumatoid arthritis	219	66.4	79	58.5	303	64.5
Depression	175	53.0	41	30.4	219	46.6
Myocardial infarction	179	54.2	59	43.7	241	51.3
Follow-up tuberculosis care	231	70.0	95	70.4	331	70.4
Total score on disease treatment (maximum =4) ^b	2.53		2.25		2.45	

^aPercentages are calculated from the sum of FDs/DPs "(almost) always" and "usually" involved in treatment.

^bResponses are weighed as follows: rare/never = 1; sometimes = 2; commonly = 3; (almost) always = 4.

Table A2.3. Type of medical procedures and preventive services provided by FDs, DPs or practice staff

Procedure usually provided by FD/DP or practice staff	FDs (N=330)		DPs (N=135)		Total (N=470)	
	Number	% ^a	Number	% ^a	Number	% ^a
Wedge resection of ingrown toenail	270	81.8	127	94.1	401	85.3
Removal of sebaceous cyst from hairy scalp	306	92.7	127	94.1	438	93.2
Wound suturing	260	78.8	121	89.6	385	81.9
Excision of warts	291	88.2	120	88.9	415	88.3
Intrauterine device insertion	260	78.8	111	82.2	375	79.8
Removal of rusty spot from cornea	307	93.0	128	94.8	438	93.2
Fundoscopy	266	80.6	123	91.1	394	83.8
Joint injection	278	84.2	124	91.9	407	86.6
Maxillary (sinus) puncture	305	92.4	123	91.1	433	92.1
Myringotomy of eardrum (paracentesis)	313	94.8	130	96.3	448	95.3
Applying plaster cast	296	89.7	127	94.1	428	91.1
Strapping an ankle	246	74.5	111	82.2	361	76.8
Cryotherapy (warts)	276	83.6	125	92.6	406	86.4
Setting up intravenous infusion	31	9.4	16	11.9	49	10.4
Immunizations for influenza or tetanus	12	3.6	17	12.6	29	6.2
Allergy vaccinations	37	11.2	21	15.6	59	12.6
Total score on medical procedures and prevention (maximum = 4) ^b	1.47		1.38		1.44	

^aPercentages are calculated from the sum of FDs'/DPs' responses "usually do it yourself" and "usually done by staff interns".

^bResponses are weighed as follows: usually done by a medical professional = 1; usually carried out by employees/interns = 2; usually done by myself = 3.

SUMMARY

The WHO Primary Care Evaluation Tool (PCET) aims to provide a structured approach to evaluation of service delivery, providing policy-makers and health care managers with evidence for improving reforms. It focuses on health systems functions, such as governance, financing and resource-generation, and the characteristics of a good primary care service delivery system, which include accessibility, comprehensiveness, coordination and continuity. The methodology assesses whether primary health care service delivery is supported by an adequate legal and normative framework, financing mechanisms, human resource strategies, supply of appropriate facilities, equipment and drugs, and effective leadership. This report provides an overview of findings from the use of PCET in Tajikistan, offering a structured overview of the strengths and weaknesses of the country's organization and provision of primary health care services – including the voices of the professionals and patients concerned – to interested policy-makers and stakeholders.