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Performance Evaluation of Narrow Specialists of Family Medicine Centers

(follow up research)

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Abbreviations

ODU	-	Outpatient diagnostics unit
MOEC	-	Medical and Occupational Expert Commission
FGP	-	Family Group Practice
IOFMC	-	Issyk-Kul Oblast Family Medicine Centre
CDU	-	Counseling and diagnostics unit
LPR	-	Labor participation rate
NLB	-	Normative and legal basis
GBT	-	General blood test
CUT	-	Clinical urine test
HI	-	Health institution
OFMC	-	Oblast Family Medicine Centre
OICH	-	Osh Interoblast Clinical Hospital
PHC	-	Primary Health Care
RMIC	-	Republican Medical and Information Centre
TH	-	Territorial Hospital
MHIF	-	Mandatory Health Insurance Fund
PF	-	Payroll Fund
FMC	-	Family Medicine Centre
CSU	-	Central Sterilization Unit

1. Introduction

In 2003-2004 the Ministry of Health initiated the establishment of a working group composed of representatives of the Main Department of Organization of Medical Assistance and Licensing of the Ministry of Health of the Kyrgyz Republic, MHIF, RMIC, Association of Hospitals, Association of FGPs, and Health Policy Analysis Project (WHO/DfID) with the aim of determining the place and role of narrow specialists in the system of delivery of medical services, and a study of the performance of narrow specialists was held at the level of FMCs and ODUs (outpatient diagnostics units of territorial hospitals). At that moment of time the both structures (FMCs and ODUs) were newly established and had narrow specialists. In two years of functioning of the aforementioned structures some problems and contradictions in relationships between FMCs and ODUs became obvious. The problems, which were comprehensively studied by the working group, include the following:

- irrational organization of work and irrational usage of the occupied premises (especially by ODUs);
- duplication of specializations, double jobholding, and positions' overlapping;
- low actual workload for narrow specialists at the rayon level;
- a high share of non-specialist consultations;
- insufficient qualifications of narrow specialists of FMCs;
- high share of self-referrals;
- poor coherence between the primary and the secondary level of medical assistance and others.

The recommendations developed in the course of the research were implemented partially.

Subsequently, Order of the Ministry of Health #390 as of 06.11.2007 made the ODUs redundant with the work of counseling and diagnostics units of oblast joined hospitals optimized and changes made to some of the existing functions. The impact of change on the specialized outpatient assistance was not evaluated.

It is noteworthy, that a part of activities envisaged in the Manas Taalimi National Program (2006-2010) in relation to the narrow specialists was not implemented due to various reasons; the need to implement these also requiring an additional evaluation.

Given the aforementioned, the Ministry of Health of the KR initiated a repeat research of this issue.

2. Goal and Objectives of the research

Goal:

Evaluate the trends in performance of narrow specialists rendering specialized medical assistance at the outpatient level.

Objectives:

- Evaluate change resulting from the reorganization of ODUs;
- Make a comparative assessment of the available narrow specialists in FMCs and of their workload;
- Seek opinions of heads and medical staff about the conditions of work for narrow specialists who provide specialized assistance to the population;
- Develop recommendations.

3. Methodology of the research

This research is a repeat one; therefore, it was decided to follow the main directions and methodology of the previous research in order to ensure the comparability of data and evaluation of changes. For the purposes of the research health institutions from the following oblasts and rayons were selected:

- Issyk-Kul Oblast (Town of Karakol, Tup rayon, Ak-Suu rayon, Jety-Oguz rayon);
- Osh Oblast (town of Osh, Kara-Suu rayon, Uzgen rayon, Aravan rayon); and
- Jalal-Abad Oblast (Suzak rayon).

The performance evaluation of narrow specialists was held on the basis of a number of quality and quantity indicators. The focus was on the changes in the staffing schedule of health institutions (the overall number of staff units, the number of occupied set salary rate positions (stavkas), and individuals); workload of the available specialists (per salary rate per day, per hour), and the conditions of their functioning. The templates for collecting information were tested out again and based on the need they were adapted to ensure most complete and comprehensive collection of additional information.

Moreover, heads of FMCs and THs, narrow specialists of FMCs and doctors of FGPs were subjected to semi-structured interviews; changes pertaining to the restructuring of ODUs were described, and data on salaries in THs and FMCs were collected.

4. Findings of the research

4.1. Reorganization of ODUs and CDUs

Order of the MH KR #390 as of 06.11.2007 made the ODUs at THs and city hospitals redundant and optimized the work of counseling and diagnostics units under Joined Oblast Hospitals. According to the heads of health institutions the main reasons for making this decision were the following: (1) exclude duplication among certain narrow specialists at the primary and secondary levels; (2) save funds through reducing staff numbers at ODUs; and (3) the need to deny the right of ODUs to issue hospitalization referrals that should lead to a reduced level of unjustified hospitalizations. It is noteworthy that the implementation of this Order at the rayon and oblast level was different in each region and demonstrated different results.

4.1.1. Changes at the level of rayon territorial hospitals

ODUs at THs at the rayon level in Issyk-Kul and Jalal-Abad Oblasts have been transformed into hospital admissions and diagnostics units (ADU). At present the ADU structure includes the following:

- 1) An admissions unit for the patients being hospitalized, with admissions doctors (more often paramedics or “feldschers”) and medical nurses;
- 2) Rooms for functional diagnostics: X-ray, ECG, endoscopy, ultra sound surveys, etc., and also a laboratory holding clinical, biochemical, immunological and other types of tests. As such, the staff of ADUs only includes the specialists of functional diagnostics that provide services for patients from both outpatient and inpatient institutions.

The situation in Osh oblast is somewhat different. At the rayon level TH the emergency care units were established within the project of the Asian Development Bank. These units, apart from the functional diagnostics, have a dressing room, medical procedures' room, small surgery room, anti-shock ward, traumatic room and a monitoring room. The staffing schedule includes additional positions of the head of unit and a senior medical nurse.

The main changes in the staffing schedule (Table 1) are, first of all, related to the reduction of doctor's positions that were initially occupied by narrow specialists (especially in the Issyk-Kul Oblast). In other oblasts the doctor's set salary rate positions available at ODUs (surgeon, neuropathologist, ophthalmologist, endocrinologist, etc.) were mostly given to the doctors from the unit of admissions and functional diagnostics. As regards the medium level medical staff then their numbers remained the same or even grew insignificantly (especially in Osh and Jalal-Abad Oblasts).

Table 1. The number of staff units, occupied set salary rate positions (stavkas), and individuals in ODUs / ADUs, 2003 and 2011

Oblast/Rayon		2003			2011		
		staff units	set salary rate positions	individuals	staff units	set salary rate position	individuals
Issyk-Kul Oblast							
Ak-Suu	Doctors	9	9	10	1,25	1,25	3
	Medical nurses	14,25	14,25	13	15	15	12
Jety-Oguz	Doctors	10,5	7,5	8	8	4	4
	Medical nurses	16	16	14	11,25	11	11
Tup	Doctors	-*	-	-	4	4	4
	Medical nurses	-	-	-	12,75	12,75	11
Jalal-Abad Oblast							
Suzak	Doctors	13,5	10,5	16	16	16	11
	Medical nurses	18	18	13	24	24	21
Osh Oblast							
Kara-Suu	Doctors	15,5	11,5	13	10	6	8
	Medical nurses	17	17,00	15	25,50	19,00	19
Aravan	Doctors	8,5	8,5	13	12	12	11
	Medical nurses	18	18	18	18,5	18,5	17
Uzgen	Doctors	12,5	12,5	11	8,25	5	5
	Medical nurses	27,00	27,00	28	22,00	22,00	23

Note: *data not available

One of the major reasons for eliminating the ODUs was to exclude duplication of activities among narrow specialists of FMCs and territorial hospitals. However, the performed reorganization did not lead to the complete disappearance of duplication.

Some patients still prefer turning to the doctors of inpatient institutions which sometimes lead to queues. According to the heads of health institutions it is related to various reasons such as lack of appropriate specialists or specialists with relevant qualifications at the FMC's level (most often obstetricians and gynecologists, cardiologists, surgeons, etc.), a big number of people in the rayon when the FMC doctors cannot cope with their workload, etc. Refusal to see a patient leads to filing complaints to higher authorities. Because of this the doctors from inpatient institutions continue seeing patients of outpatient institutions in their workplaces without keeping official records. Only one HI started a journal for registering patients from outpatient institutions as initiated by the head of this institution, however, all recordings were done after the end of the official business day. Patients of outpatient institutions do not make official co-payment as it used to be, and according to the heads of HIs, possibly the patients pay for the services provided by specialists directly. As such, there is a fact of under-registration of outpatients (there is no records of their diagnosis, prescriptions, and outputs) that is not helping to ensure coherency in the provision of medical assistance.

The territorial hospitals in Osh Oblast with functioning emergency medical assistance units do not experience the same situation as they envisage an official provision of services to the patients from outpatient institutions with filling out the relevant paperwork.

One has to notice, that in the past many ODUs included physiotherapeutic rooms. As a result of the MH KR Collegial meeting # 10-3 as of 24.06.2006 it was decided to transfer all physiotherapeutic rooms of ODUs/THs to the FMCs. However, at the moment the research in some physiotherapeutic rooms continued functioning some rayons, as part of newly created ADUs at territorial hospitals. The majority of heads believe that the physiotherapeutic rooms are extremely necessary for the inpatient institutions:

«...it is crucial to have a physiotherapeutic room in an inpatient institution ... imagine some hospital patients with neurological pathologies or after a surgery or having other complicated conditions causing limitations of their mobility ... they have to go to a FMC and queue up for some procedures together with outpatients? We organize procedures for such patients right here, including massage, etc. And outpatients may continue coming here and receive the required procedures as the physiotherapeutic room services everybody...»

(Interview with a head of TH)

Moreover, it was noted that not every FMC has the capacity to organize fully fledged physiotherapeutic rooms. There are examples when such physiotherapeutic rooms were closed at THs with the equipment though obsolete and old but functioning being simply put away into stockrooms.

4.1.2. Changes at the level of Oblast joined hospitals

The information about changes that took place in the staffing schedule and the list of working specialists in ADUs / CDUs in Issyk-Kul and Osh Oblasts is presented in Table 2 and Annexes 1 and 2.

Table 2. The number of staff units, occupied set salary rate positions, and individuals in ADUs and CDUs at the Oblast level, 2003 and 2011

Oblast/Rayon		2003			2011		
		staff units	occupied set salary rate positions	individuals	staff units	occupied set salary rate positions	individuals
Issyk-Kul Oblast joined hospital	Doctors	29,5	29,5	27	26	25	25
	Medical nurses	48,75	48,75	45	51,75	51,75	48
Osh Oblast joined hospital/IOCH	Doctors	49,25	46	64	49	49	71
	Medical nurses	75	73,25	55	71,75	68,50	53

Activities of ADUs in Issyk-Kul Oblast were changed the same way as they were at the rayon level. One can note an insignificant reduction in the overall staff numbers with narrow specialists being redistributed to give place for the admissions staff, the outpatient care being made redundant, and the capabilities of the para-clinical service being somewhat broadened (additional services of ultra sound surveys, echo, EEG, spirometry).

CDUs at the Osh Interoblast Clinical Hospital actively provide counseling and diagnostics services to outpatients. Review of the staffing schedule and the list of specialists demonstrates an optimization in the following areas:

- (i) New specialists were introduced, such as speech therapist, psychiatrist, dentist (0,25-0,5 set salary rate each, 1 individual in each specialty), therapist (3,25 set salary rates, 4 individuals), exercise physiologist (3 set salary rates, 2 individuals), and a masseur (7,75 set salary rates, 6 individuals);
- (ii) The number of such specialists as allergist (1,75 set salary rates, 3 individuals), cardiologist (0,75 set salary rates, 3 individuals), rheumatologist (0,75 set salary rates, 3 individuals);
- (iii) Many narrow specializations were jointed with an increase in the set salary rate and a number of individuals, for example therapist (3 set salary rates and 4 individuals) and surgeon (1,5 set salary rates and 5 individuals).

As such, the previous list of 32 specializations (27 narrow specialists and 5 para-clinical specialists) was reduced to 26 specializations (18 narrow specialists and 8 para-clinical specialists).

Table 3 presents the information about the workload of the remaining staff. Such specialists as cardiologist, rheumatologist, traumatologist, urologist, and a speech therapist seem to have a heavy workload (5,8 – 7,5 patients per hour). As compared to 2003 a hematologist's workload has slightly increased (from 2,1 to 3,9 patients per hour), same as for an adolescence doctor (from 1,6 to 2,2 patients per hour), and audiologist (from 0,5 to 1.0 patient per hour). The workload of other specialists seems to have remained the same or have even somewhat reduced.

As compared to 2003, the medical staff of CDUs in the Osh Interoblast Clinical Hospital has slightly renewed with a noted influx of younger specialists. As such, 12,9% of the CDUs' medical staff represent the doctors with less than 5 years of professional experience (compared to 0% as reported in 2003). Correspondingly, the average age of CDUs' doctors makes up 40 years of age (49 was reported in 2003). 51,4% of doctors took the specialization courses during recent five years (in 2003 it was 63-64%). The specialists of the pre-pension and pension age (older than 55, except radiologist) among CDU doctors comprised 12,9% (and 22,2% as reported in 2003).

Table 3. Workload of narrow specialists in CDU of the OICH*, 2003 and 2011

Workload of narrow specialists per one occupied set salary rate position per hour	2003		2011	
	per day	per hour	per day	per hour
Obstetrician and gynecologist	22,7	2,8	21,1	2,6
Hematologist	16,9	2,1	31,5	3,9
Gastroenterologist	33,1	4,1	-**	-
Adolescence doctor	12,9	1,6	17,3	2,2
Pediatric surgeon	6,4	0,8	-	-
Allergist	9,8	1,2	5,3	0,7
Andrologist	7,9	1,0	-	-
Detoxification and gravitation doctor	13,4	1,7	-	-
Cardiorheumatologist / cardiologist	33,2	4,1	60,2	7,5
Neurosurgeon	34,8	4,4	-	-
Nephrologist	24,9	3,1	-	-
Neuropathologist	38,0	4,7	21,7	2,7
Ophthalmologist	32,1	4,0	9,2	1,2
Otolaryngologist	32,3	4,0	33,6	4,2
Audiologist	4,2	0,5	8,2	1,0
Proctologist	10,8	1,3	-	-
Rheumatologist	12,9	1,6	49,3	6,2
Therapist (occupational examination, dispensarization of the OOH staff)	14,1	1,8	3,5	0,4
Traumatologist	11,6	1,4	46,7	5,8
Urologist	25,0	3,1	51,6	6,5
Pulmonologist	19,1	2,4	-	-
Surgeon	24,8	3,1	5,6	0,7
Endocrinologist	35,5	4,4	-	-
Thoracic and vascular surgeon	27,3	3,4	-	-
Maxillofacial surgeon	20,3	2,5	-	-
Occupational pathologist	4,2	0,5	-	-
Speech therapist	-	-	55,1	6,9

Примечание: * - in 2003 this structure was called ODU of the OOHJ;

** « - » - specialists missing from the list

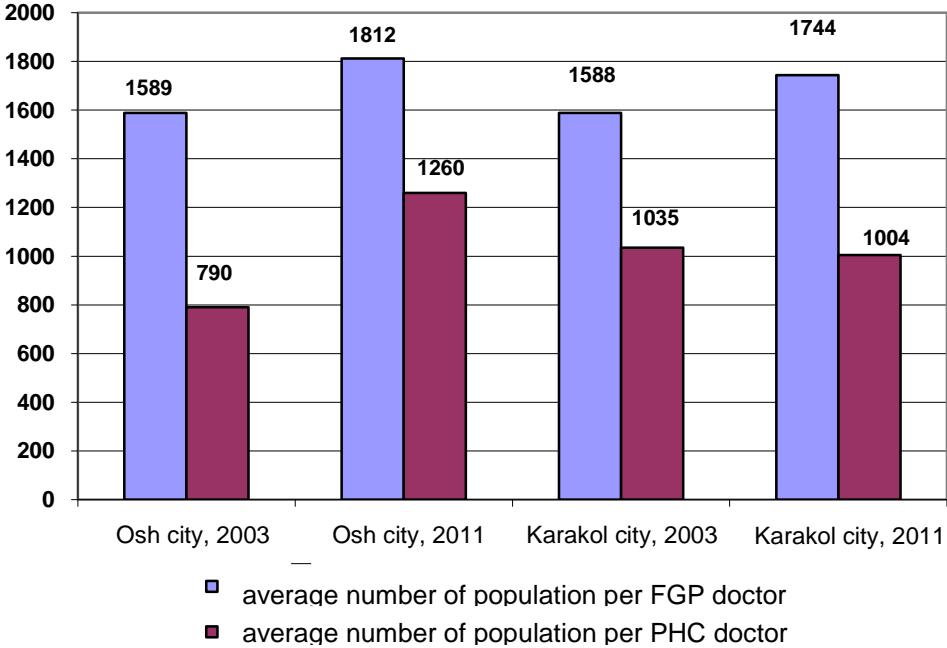
4.2. Activities of FMC narrow specialists

The following parameters were studied: the overall number of medical staff at the PHC level, staffing schedule, and the overall list of narrow specialists, their workload, and changes in the conditions of their operations.

4.2.1. The total number of doctors at the PHC level

Given that the FGPs and narrow specialists provide medical services to the population at the PHC level, then the research estimated the average number of population per one PHC doctor (FGP + narrow specialists). As demonstrated by the comparative analysis, there is a tendency of a growing number of people per one FGP, same is true for PHC doctors. As such, at the Oblast level (see Figure 1), namely in Osh Oblast FMC, one can observe an increase which still falls under the approved norm (from 1589 to 1812 per one FGP doctor, and from 790 to 1260 per one PHC doctor). Similar changes are noted in the Issyk-Kul Oblast FMC.

Fig.1. The number of population per PHC doctor (FGP + narrow specialists), data for Osh and Issyk-Kul Oblast FMCs, 2003 and 2011



The situation on the rayon level is drastically different. The FGP doctor/number of population ratio also saw an increase in comparison to 2003 with 2 – 3 and more times in excess of the norm. The information about the selected rayons in Osh and Jalal-Abad Oblasts is provided in Figure 2 and Table 4.

Fig.2. The number of population per one PHC doctor (FGP + narrow specialists) based on the surveyed rayons in Osh and Jalal-Abad Oblasts, 2011

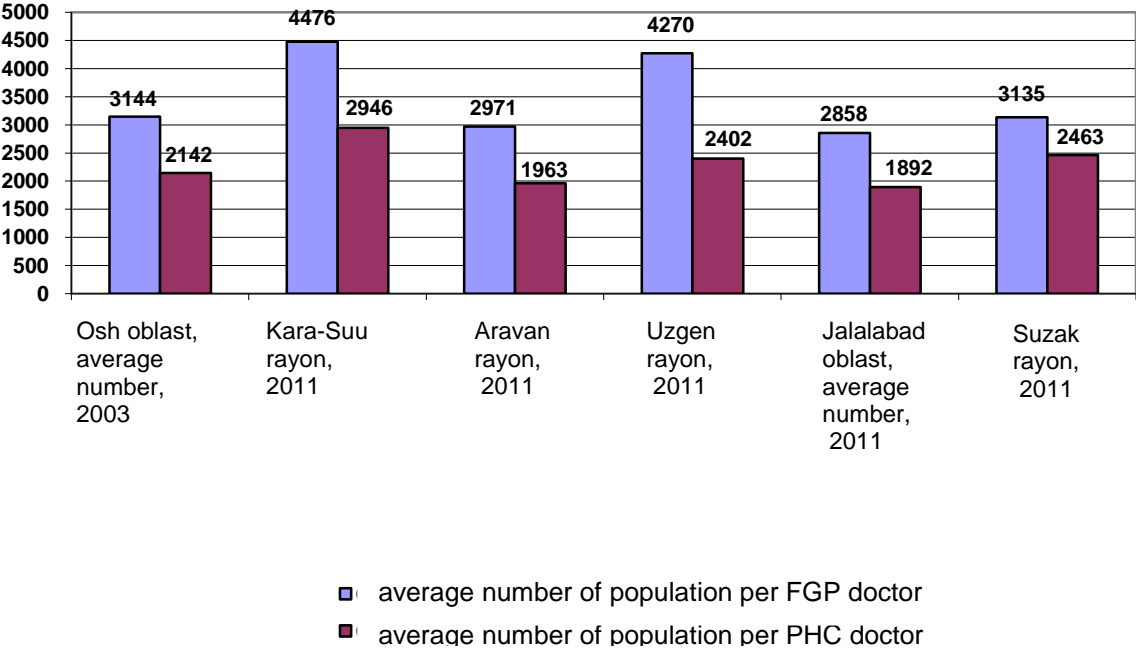


Table 4. FGP doctor/population ratio in the selected rayons in Osh and Jalal-Abad Oblasts, 2011

Rayon	Total number of FGP doctors	Total population	Population serviced by one FGP doctor					FGP without doctors
			Up to 2000	2000 – 4000	4001 - 6000	6001 - 8000	over8000	
Kara Suu	77	344666	0	32	33	9	3	3
Aravan	37	109925	18	12	4	2	1	0
Uzgen	27	115278	0	21	2	2	2	1
Suzak	51	165000	1	37	4	1	2	0

The best supply of FGP doctors is noted in Aravan rayon where 18 out of 37 FGP doctors have the number of the serviced population according to the norm. We shall note that in Kara Suu rayon 33 out of 77 FGP doctors have 4000-6000 serviced population each and 12 doctors have 6000-8000 and more each, while 3 FGPs have no doctors whatsoever. In other rayons, including the rayons of Jalal-Abad Oblast (Suzak) and Issyk-Kul Oblast, the majority of FGP doctors service from 2000 to 4000 persons each.

4.2.2. FMC changes at the rayon level

Staffing schedule

Table 5 contains information on the staffing schedule in rayon FMCs in 2003 and 2011. The majority of FMCs saw an increase in staff units intended for narrow specialists and, correspondingly, an increase in the occupied set salary rate positions, and the number of individuals. The exceptions are Suzak, Kara Suu, and Aravan rayons where the number of individual doctors reduced.

Table 5. Number of staff units, occupied set salary rate positions, and individuals in FMC of the rayon level, 2003 and 2011

Oblast/Rayon		2003			2011		
		staff units	occupied set salary rate positions	individuals	staff units	occupied set salary rate positions	individuals
Issyk-Kul Oblast							
Ak-Suu	Doctors	10,5	10,5	11	16,25	12,25	14
	Med. nurses	5,25	5,25	8	14,5	12,5	11
Jety-Oguz	Doctors	10,5	10,5	9	19	16,5	14
	Med. nurses	8,5	8,5	10	21,25	20	24
Tup	Doctors	-*	-	-	15,5	7,5	8
	Med. nurses	-	-	-	15	10,5	14
Jalal-Abad Oblast							
Suzak	Doctors	13,5	10,5	16	16	16	11
	Med. nurses	18	18	13	24	24	21
Osh Oblast							
Kara-Suu	Doctors	63	55,25	50	67,75	57,75	40
	Med. nurses	99,5	87,25	80	116,5	111,25	95
Aravan	Doctors	23	23	21	25	24,5	19
	Med. nurses	22,25	22,25	23	62,25	61,25	60
Uzgen	Doctors	16	16	16	25	22,75	21
	Med. nurses	44,25	44,25	39	32,25	31,75	28

Note: *data not available

The list of narrow specialists got somewhat reduced (e.g. in Kara-Suu from 17 profiles to 14 and in Uzgen – from 15 to 13) with an expansion in the list of doctors in laboratory and functional diagnostics (radiologist, ultra sound, endoscopy, etc.).

There is also a noted significant increase of staff units, occupied set salary rate positions, and individual medical nurses. E.g. Jety-Oguz, Kara-Suu, Aravan rayons saw an increase in individual medical nurses by two or more times (these are obstetrician nurses, nurses for preliminary examination, laboratory workers, etc.).

The average age of working doctors in various rayons comprised from 42 to 53 years of age with the average work experience from 15 to 29 years. There is a slight decrease of specialists who undertook specialization retraining courses over recent 5 years (e.g. in Ak-Suu rayon the percentage reduced from 63,2% to 42,9%). In some rayons the percentage of medical staff of pre-pension and pension age remains high (up to 29%). An inflow of young specialists is relatively higher in Osh and Jalal-Abad Oblasts as opposed to the Issyk-Kul Oblast.

Workload of narrow specialists

Aiming at determining the workload of each narrow specialist the data on the amount of visits were collected for the 1st and 2nd halves of 2010 and the 1st half of 2011. For the ease of comparative analysis the indicators were standardized with the specialists' workload per day and per hour being estimated as per the following formula:

Number of visits, counseling sessions/number of working days *the occupied set salary rate position

More detailed information on the workload of narrow specialists is presented in the example of Suzak rayon FMC (Table 6).

Table 6
Workload* of narrow specialists in FMC of Suzak rayon, 2003, 2010 and 1st half of 2011

Workload per the occupied set salary rate position per day, per hour	2003		1 st half of 2010		2 nd half of 2010		1 st half of 2011	
	per day	per hour	per day	per hour	per day	per hour	per day	per hour
Dermatologist and venereologist	50,4	6,3	72,9	9,1	54,2	6,8	31,1	3,9
Infectionist	32,7	4,1	-**	-	-	-	-	-
Cardiologist	7,2	0,9	37,9	4,7	25,7	3,2	48,9	6,1
Narcologist	22,3	2,8	26,5	3,3	18,1	2,3	29,3	3,7
Neuropathologist	32,5	4,1	68,1	8,5	64,9	8,1	89,6	11,2
Ophthalmologist	42	5,2	30,5	3,8	34,5	4,3	51,6	6,5
Oncologist	30,8	3,8	13,5	1,7	12,0	1,5	13,4	1,7
Otolaryngologist	33,3	4,2	29,2	3,7	37,9	4,7	43,6	5,4
Psychiatrist	19,3	2,4	54,8	6,9	32,2	4,0	51,1	6,4
Traumatologist	32,2	4	25,5	3,2	20,6	2,6	38,6	4,8
Urologist	9,6	1,2	23,2	2,9	13,6	1,7	16,3	2,0
Surgeon	26,2	3,3	14,7	1,8	16,4	2,0	8,8	1,1
Endocrinologist	28,8	3,6	18,5	2,3	2,3	0,3	2,5	0,3

Note: *workload including occupational examinations; **data were not provided

As compared to 2003 the workload per day and per hour grew for such specialists as cardiologist (3,2 – 6,1 patients per hour), narcologist (3,3 – 3,7 patients per hour), neuropathologist (8,1 – 11,2 patients per hour), psychiatrist (4,0 – 6,9 patients per hour), urologist (2,0 – 2,9 patients per hour). There is a satisfactory workload noted for ophthalmologists and surgeons (Annex 3, e.g. Osh Oblast).

Interviews with narrow specialists demonstrated that a bigger part of patients are making their visits bypassing an FGP doctor, or an FGP doctor (or even an FGP nurse) refers patients without preliminary examination.

“...when the reforms started we were told that FGP doctors will be servicing the patients themselves, while us, narrow specialists, would be mostly providing counseling and methodological assistance. However, now the FGPs are immediately referring their patients once they hear some relevant complaints from them. We end up doing all by ourselves: prescribe general blood tests, radiology...and carry out medical procedures, meaning that we, as it used to be in the past, provide polyclinic services to the patients... It takes 30 and more minutes per one patient leading to long queues... It would be desirable if the FGPs could refer patients to us holding at least the results of baseline examinations...” (an interview fragment)

Moreover, the narrow specialists noted a need to upgrade medical tools to enable all sorts of medical interventions.

In addition, it is noteworthy that same as in 2003, the prophylactic examinations comprise on average 30-40% of all visits. The share of prophylactic examinations in the overall structure of outpatient visits is different for different specializations (Table 7 and 8). Occupational medical examinations are held on the paid basis as per signed agreements with public catering organizations (cafeterias and restaurants), with retail trade workers and other professional teams. The received financial means are deposited on special accounts of FMC. Occupational medical examinations, together with clinical examinations, include general blood test, simple urine test, ECG, etc. Moreover, starting from September the FMC specialists carry out a gradual examination of adolescents across all villages. The Medical Commissions normally include a teen doctor, skin and venereology doctor, neuropathologist, psychiatrist, ophthalmologist, surgeon, dentist, and a family doctor at the village level. The narrow specialists also participate in medical examinations of military recruits (Table 7). In spring and autumn the specialists are working 10-12 days and during the dispensary days till 12.00 in the military enlistment office and see their patients in FMC in the afternoon.

In the course of the survey it was also noted that the quality of official record keeping, namely CIFs, somewhat reduced (not all the boxes filled out, not all treatment interventions mentioned, etc.). At the rayon level there were no data on the number of visits as referred by FGPs and broken down by the patient's insurance status.

Table 7. Structure of outpatient visits of FMC in Uzgen rayon

specialization	1 st half of 2010						
	total visits	outpatient visits	home visits	occupational examinations	medical examination of military recruits	total occupational examinations	% of occupational examinations in total visits
Dermatologist and venereologist	5982	4129	68	1785	-	1785	29,8
Dermatologist	5924	3453	-	1550	921	2471	41,7
Immunologist	4570	4570	-	-	-	-	-
Infectionist	2182	1487	-	695	-	695	31,9
Narcologist	2950	1703	-	1247	-	1247	42,3
Neuropathologist	3630	1774	-	935	921	1856	51,1
Ophthalmologist	12522	6727	-	4874	921	5795	46,3
Oncologist	922	818	-	104	-	104	11,3
Otolaryngologist	2140	1098	-	121	921	1042	48,7
Psychiatrist	1695	753	-	21	921	942	55,6
Rheumatologist	1524	1524	-	-	-	-	-
Urologist	3295	1879	24	1392	-	1392	42,2
Surgeon	3991	3114	-	877	-	877	22,0
Endocrinologist	7682	4798	-	2884	-	2884	37,5

Table 8. Structure of outpatient visits in FMC in Ak-Suu rayon

specialization	1 st half 2011				
	total visits	outpatients	occupational examinations	total occupational examinations	% of occupational examinations in total visits
Family planning doctor	1341	1262	79	79	5,9
Adolescence doctor	412	320	92	92	22,3
Dermatologist and venereologist	1401	661	740	740	52,8
Infectionist	1830	1229	601	601	32,8
Cardiologist	198	198	-	-	-
Narcologist	940	860	80	80	8,5
Neuropathologist	1990	1876	114	114	5,7
Ophthalmologist	425	299	126	126	29,6
Oncologist	771	234	537	537	69,6
Otolaryngologist	486	404	82	82	16,9
Psychiatrist	1300	646	654	654	50,3
Urologist	536	536	-	-	-
TB doctor	536	460	76	76	14,2
Surgeon	1467	878	589	589	40,1

Note: * Specialists of Ak-Suu rayon do not participate in medical examinations of military recruits and do not make home visits.

4.2.3. FMC changes at the oblast level

Staffing schedule

Table 9 contains information about the staffing schedule of oblast FMCs in Issyk-Kul and Osh Oblasts in 2003 and 2011.

Table 9. Number of staff units, occupied set salary rate positions, and individuals in FMCs of the oblast level, 2003 and 2011

Oblast/Rayon		2003			2011		
		staff units	occupied positions	individuals	staff units	occupied positions	individuals
Issyk-Kul Oblast FMC	Doctors	31,5	26,0	25	32	27,25	28
	Med. nurses	47,0	35,5	36	34,75	29	27
Osh Oblast FMC	Doctors	19,25	18,25	20	46	38	36
	Med. nurses	34,25	33,75	23	75,75	68	57

As demonstrated by these data, **the Oblast FMC in Issyk-Kul rayon** increased the number of doctors from 25 to 28 and, correspondingly, increased the number of occupied set salary rate positions and staff units. The overall list of specializations reduced from 17 to 12 (at the expense of obstetrician and gynecologist, immunologist, speech therapist, rheumatologist, and dentist), and the list of para-clinical doctors grew from 3 to 4 (because of the additional ultra sound doctor). The number of individuals was increased for such specializations as cardiologist and surgeon (3 more individuals in each specialization) and endocrinologist (2 more individuals). The average age of doctors if compared to 2003 increased from 44 to 50 years of age. 89,3% doctors undertook retraining in relation to the occupied position over recent 5 years, which is higher than in 2003 (64%). However, there is still no young specialists (with the work experience of less than 5 years) among the medical staff. As regards medium level medical staff, it was reduced in terms of staff units, set salary positions, and actual physical persons.

The Osh Oblast FMC experience a more considerable change where the number of staff units and individual doctors and nurses increased from 1,8 to 2,5 times. This is mostly due to the optimization of city FMCs when their number was reduced from 7 to 2. The overall list of specialists remained almost the same (15 specializations) with the number of individual doctors per each specialization being increased to 3-5 persons. Main characteristics of the employees in OOFMC in terms of age, etc. are practically the same as in the above mentioned IOJH.

Workload of narrow specialists

Tables 10 and 11 present information about two Oblast FMCs.

According to the information of the Issyk-Kul Oblast FMC the workload of such experts as cardiologist and endocrinologist increased to 2 patients per hour, cardiologist from 0,9 to 1,4 patients per hour and the biggest increase was registered for otolaryngologist and immunologist (up to 4,6 and 8 patients per hour), as compared to 2003. One has to note that prophylactic examinations by cardiologist and ophthalmologist comprised 36,7% and 34,2% correspondingly, by infectionist and neuropathologist it was 52,5% and 54,8 correspondingly, and more than 70% by dermatologist, narcologist, and psychiatrist, out of the total number of visits.

In Karakol the positions of school medical nurses responsible for vaccination and occupational medical examination of teachers were reinstated. To date, 8 secondary schools have

equipped offices of medical nurses where FMC employees are working. Some schools themselves envisage a salary position for medical workers (2 schools). It is planned to start similar medical offices in other schools as well. At the rayon level the schoolchildren continue to be services by a visiting FGP doctor or medical nurse.

Table 10. Workload of narrow specialists in the Issyk-Kul Oblast FMC, 2003 and 2011

Workload of narrow specialists per occupied set salary rate position per day, per hour	2003		2011	
	per day	per hour		per day
Dermatologist and venereologist	15,6	1,9	12,3	1,5
Immunologist	10,7	1,3	64,3	8,0
Infectionist	2,8	0,4	2,7	0,3
Cardiologist	8,2	1,0	17,1	2,1
Speech therapist	15,0	1,9	-	-
Narcologist	9,0	1,1	12,2	1,5
Neuropathologist	31,2	3,9	25,6	3,2
Ophthalmologist	38,1	4,8	31,3	3,9
Oncologist	7,1	0,9	11,5	1,4
Otolaryngologist	23,9	3,0	36,7	4,6
Psychiatrist	16,8	2,1	6,6	0,8
Rheumatologist	14,9	1,9	-	-
TB doctor	-	-	9,4	1,2
Surgeon	20,2	2,5	15,3	1,9
Endocrinologist	12,9	1,6	15,8	2,0

Based on Table 11, the Osh Oblast FMC experienced an increased workload only for an adolescence doctor. All other specialists' workloads are 1 and less patients per hour. A share of prophylactic visits in the overall structure of outpatient visits comprised 40,1% for adolescence doctor and cardiologist and from 54% to 65,3% for neuropathologist, ophthalmologist, and surgeon.

Table 11. Workload of narrow specialists in Osh OFMC, 2003 and 2010

Workload of narrow specialists per occupied set salary rate position per day, per hour	2003		2010	
	per day	per hour	per day	per hour
Adolescence doctor	6,0	0,8	24,4	3,1
Allergist	23,7	3,0	-	-
Speech therapist	11,9	1,5		
Infectionist	32,5	4,1	4,4	0,6
Cardiorheumatologist	58,1	7,3	-	-
Cardiologist	-	-	12,9	1,6
Neuropathologist	48,2	6,0	9,7	1,2
Ophthalmologist	44,0	5,5	8,4	1,1
Oncologist	-	-	2,5	0,3
Otolaryngologist	44,5	5,6	7,2	0,9
Psychotherapist	17,0	2,1	-	-
Psychiatrist	-	-	12,2	1,5
Surgeon	47,5	5,9	8,8	1,1
Endocrinologist	22,1	2,8	7,1	0,9

4.2.4. Increased salary for medical staff

In accordance with the adopted Regulations of the Government of the Kyrgyz Republic #13 as of January 19, 2011 "On payroll of the health sector employees" and #246 as of May 26, 2011 "On approving the Regulations on payroll of the health sector employees in the Kyrgyz Republic" there has been a significant salary increase across all categories of medical employees, first and foremost, for doctors and medical nurses.

Tables 12 and 13 present information about changes in the average monthly salary in the studied health institutions.

Table 12. Average monthly salary for medical staff of FMCs and THs/ADUs/CDUs in Issyk-Kul Oblast, 2010-2011, in som

Oblast/Rayon	medical staff	2009	2010	January - April, 2011	May – August, 2011
		Ak-Suu	FGP	4365	4860
	FMC narrow specialists	2571	3394	3757	9299
	ADU/TH	2722	2722	2722	1812,5
Jety-Oguz	FGP	7286	8502	9282	15705
	FMC narrow specialists	6046	6991	7102	15448
	ADU/TH	3666,7	4608,3	4370	11132,5
Tup	FGP	6910	6910	4175	10093
	FMC narrow specialists	3659	3659	3596	13031
	ADU/TH	3986	3644	3121	7816,6
IOFMC	FGP, doctors	4755	4765	4777	9180
	FGP, m/nurses	3735	3740	3728	8025
	FMC narrow specialists	3612	3624	3652	8257
	FMC m/nurses and narrow specialists	2855	2980	2990	6415
IOJH	CDU/OJH	2892	3080	2864	9789

Table 13. Average wage of medical staff of FMCs and ADUs/CDUs in Osh and Jalal-Abad Oblasts, 2010-2011, in som

Oblast/Rayon	medical staff	1 st half of 2010	2 nd half of 2010	1 st half of 2011	July-September, 2011
		Osh Oblast			
Kara-Suu	FGP	5700	5700	7300	11850
	FMC narrow specialists	3091	3091	6200	9750
	FMC m/nurses	3200	3200	4800	9100
	ADU/TH, doctors	3315	3532	6177	8610
	ADU/TH, m/n	2820	3260	4447	5368
Aravan	FGP	5888,1	5098,43	6702,93	-
	FMC narrow specialists	3395,97	3836,17	6377,17	-
	FMC m/nurses	2918,1	2984,2	3925,16	-
	ADU/TH, doctors	-	4270	6750	-
	ADU/TH, m/n	-	3200	6090	-

Uzgen	FGP	-	5182,2	-	7831,1
	FMC narrow specialists	-	3997,2	-	5703,8
	FMC M/n	-	-	-	-
	ADU/TH, doctors	-	4220,71	6971,19	-
	ADU/TH, m/n	-	2765,35	4524,51	-
OOFMC	FGP	5060	5060	5155	9106
	FMC narrow specialists	3098	3098	3119	8612
	FMC M/n	2613	2613	2971	7074
OICH	CDU/OICTH, doctors	2298,41	2298,41	6647,34	-
	CDU/OICTH, m/nurses	1808,85	1808,85	6034,82	-
Jalal-Abad Oblast					
Suzak	FGP	6175	6225	6595	11920
	FMC narrow specialists	4671	4693	5110	11753
	FMC m/nurses	4323	4375	5380	9706
	ADU/TH, doctors	2530,2	4971,0	3095,5	-
	ADU/TH, m/n	4243,0	8478,5	6771,6	-

Note: « - » - data not provided.

Analysis of the received data revealed the following:

- **A salary increase was considerable.** The average salary of FGPs in different rayons increased by 1,3 to 2,5 times; narrow specialists – by 1,4 to 3,6 raz; inpatient doctors – by 1,6 to 2,4 times, and the medium level medical staff – by 1,6 to 2,8 times. The financial specialists noted the convenience and a significant simplification of the new scheme for salary calculation (based on the base salary rate rather than on the rate schedule).
- **The majority of heads and doctors of health institutions expressed their content with the salary increase, however, they believe that it would not help attract and retain additional doctors at the local level.** This research was carried out in 4-6 months after the re-calculation of salaries. The heads of HIs observed the following over this period: (i) there has been a significant inflow of medium and junior medical staff to the health system; (ii) and the situation for the young doctors became simpler. In the past many of them had to hold a number of jobs in 2-3 places trying to get additional 0,25 - 0,5 set salary rates; today they seem to work at one place investing more time into their professional development; (iii) contrary to expectations there has not been noticed a significant external comeback of doctors (those who left the profession or immigrated).
- **A new scheme for calculating the salary does not envisage a priority stimulation of family medicine specialists.** Until 2011 there was a strict adherence to the principles of promoting family practice through providing a higher salary rate for FGPs. The remuneration for inpatient doctors was significantly lower with the lowest pay provided to the FMC narrow specialists, a tendency that was supposed to decrease their number at the PHC level (due to their retraining to become family doctors and transfer to the secondary level). These ratios are noted in 2009 and 2010 as compared to 2011 (Tables 12 and 13).

As a result of salary recalculations in line with the newly approved Regulations the previous ratios were changed, namely, the salary rate of FMC narrow specialists and

inpatient doctors became almost equal to that of family doctors (Jety-Oguz, Aravan, Suzak rayons) or even became higher (Tup rayon, IOJH). The cancellation of additional payments for a district coverage, family doctor certificate, and continuity of professional experience led to reduced incentives to work as a family doctor. For example, in one of the HIs three family doctors applied for unpaid vacations and left for Russia to work up some income.

- **New Payroll Regulations for medical workers of the Kyrgyz Republic contain a number of gaps requiring follow-up.** The first 4-6 months of working with new Regulations revealed some omissions, contradictions, and unclear aspects that the financial specialists and HI staff came across. The following, *inter alia*, was mentioned:

- The base salaries did not take into account the specificity and complexity of work, for example, ambulance staff is entitled to a 15% additional pay, however, it is not applied to dispatchers, etc.;
- The new salary scheme does not include additional payment for special conditions (TB rooms);

“...it is immediately obvious that health system professionals were not involved in drafting this document...” (a financial specialist, an interview extract);

- Specialists of the economic and accounting office do not have any additional payment envisaged for professional categories;
- Distribution of LPR for all employees happens without their individual involvement;
- There are no incentives for young doctors;
- Contradictions between the draft and the approved methodological payment guidelines;
- In some cases the salary of medical nurses exceeds that of doctors;
- etc.

5. Conclusions

The analysis of changes occurring as a result of **reorganization of ODUs to become ADUs at THs and the optimization of CDUs at OJHs** in 2007 according to Order #390 of the Ministry of Health, demonstrated the following:

- ADU personnel was reduced at the rayon level, especially in the Issyk-Kul Oblast, with the remaining staff units being redistributed to hospital admissions doctors and para-clinical specialists. Kara-Suu and Suzak rayons note some increase in the number of staff units and set salary positions occupied by individual medium medical staff while the number of individual doctors decreased;
- Upon termination of ODUs the counseling services for outpatients were officially stopped, however, it was impossible to completely eliminate duplication between the TH narrow specialists and FMCs. The fact that patients come to see hospital doctors could be explained by the following reasons: lack of appropriate or highly qualified specialists at the FMC level (most often obstetricians and gynecologists, cardiologists, surgeons, etc.), a big size of rayon population and a heavy workload for FMC specialists, etc. At the same time, the official record keeping of ADUs does not reflect visits, diagnosis, follow-ups, and outcomes of treatment for patients from the outpatient level. There is an under-registration of outpatient visits and it is not clear how the continuity of services is being ensured.

PHC medical staff: general tendencies

- FGP/PHC doctor/serviced population ratio in all surveyed Oblasts saw some growth. One of the highest ratios is noted in Kara-Suu and Uzgen rayons of Osh Oblast: 4476 and 4270 people per 1 FGP, and also in Issyk-Kul Oblast, e.g. in Ak-Suu rayon: 5350 people per FGP;
- Staffing with doctors and medical nurses at the PHC level in Osh and Jalal-Abad Oblasts is slightly better than in Issyk-Kul Oblast;
- Comparisons of data for 2003 and 2011 showed that the number of staff units, set salary positions, and individual narrow specialists, *especially their medical nurses*, has generally increased both at the rayon and oblast FMCs;
- *Issyk-Kul Oblast*: there is an insufficient number of narrow specialists at the rayon level (Tup rayon, Jety-Oguz rayon) where one doctor has to combine 2-3 related specializations while receiving patients (e.g. surgeon, oncologist, otolaryngologist) or there is a need to involve specialists from oblast health institutions;
- *Osh and Jalal-Abad Oblasts*: in Kara-Suu, Aravan, and Suzak rayons the number of individual doctors went down while the number of staff units and occupied set salary positions increased. Kara-Suu and Aravan rayons and Osh OFMC experienced a significant increase in the medium medical staff (from 1,8 to 2,5 times);
- The doctor/medical nurse ratio increased elsewhere except Issyk-Kul OFMC and FMC in Uzgen rayon;
- The share of narrow specialists who undertook specialist training for the occupied position over recent 5 years grew in Oblast FMCs (from 64% in 2003 to 89,3% in 2011) and reduced in rayon FMCs (on average from 63,2% in 2003 to 42,9% in 2011) based on the 2011 data;

- The average age of the working personnel at the rayon level FMCs and oblast level FMCs grew a little bit from 46 to 53 and from 44 to 50 correspondingly. However, there is no inflow of young doctors.

Changes in the overall list of specialists and their workload

- The general list of specializations in the surveyed rayon and oblast FMCs and CDUs of the Osh Interoblast Clinical Hospital got reduced now consisting of 11-17 specializations. However, the overall number of individuals was increased for such specializations as cardiologist, surgeon, neuropathologist, ophthalmologist, otolaryngologist, and rheumatologist (2 – 5 doctors more in each category);
- At the level of rayon FMC there are no such specialists as obstetrician and gynecologist, pediatrician, gastroenterologist, hematologist, oncologist and gynecologist, audiologist, family planning doctor, etc. (the ones that used to be in the list in 2003);
- Moreover, there is a noticeable increase in the number of laboratory doctors and doctors of functional diagnostics at the level of rayon and oblast FMC (ultra sound, endoscopy, radiology, etc.);
- The workload of narrow specialists in rayon and oblast FMCs for 2010-2011 as compared to 2003 has increased for such specialists as cardiologist, surgeon, neuropathologist, ophthalmologist, otolaryngologist, urologist (4 – 6,5 patients per hour) while other specialists' workload remains low (less than 2 patients per hour);
- According to the provided data a significant reduction of the workload was observed in Osh Oblast FMC, where almost all specialists have less than 1,5 patients per hour;
- According to 2010-2011 data the share of prophylactic examinations makes from 30% to 70% in the overall structure of outpatient visits of narrow specialists, same as in 2003;
- There is an optimized schedule for medical examinations of military recruits. Narrow specialists work in the following manner: 10-12 days every spring and autumn and also on dispensary days the specialists see patients until 12 o'clock at the military enlistment office and then see their patients in FMCs in the afternoon;
- According to the expressed opinions there still persists a high level of self referrals of patients from FGPs to narrow specialists at the FMC level.

Salary increase

- A significant salary increase that took place in the middle of 2011 allowed to increase salaries across all categories of medical workers: for family doctors by 1,3 to 2,5 times; narrow specialists – by 1,4 to 3,6 times; doctors from inpatient institutions – by 1,6 to 2,4 times, and for medium level medical staff – by 1,6 to 2,8 times;
- However, the new scheme for salary calculation made the salaries of family doctors, narrow FMC specialists, and hospital doctors almost equal, thus, having made the incentives for promoting the family practice redundant;
- After increasing salaries the HIs' heads note a dominating inflow of medium level medical staff;
- The majority of heads of health institutions expressed their content with the increase in salaries, however, they believe that it still would not be sufficient to attract additional specialists and retain them at the local level;

- During the first few months since the introduction of the new Payroll Regulations for medical employees in the Kyrgyz Republic financial specialists and doctors identified the need to clarify and improve them.

6. Recommendations

- Consider a possibility to introduce official record keeping for the patients receiving outpatient counseling services at the TH level;
- Given a low actual workload per one narrow specialist (less than 1,5 patients per hour) in the Osh Oblast FMC, it is necessary to optimize its staffing schedule (the total number of staff units, occupied set salary rate positions, and individuals);
- FMCs in Osh and Jalal-Abad Oblast seem to increasingly rely on the medium level medical staff (increased by 1,8 – 2,5 times). It is necessary to carry out a functional review of their activities and revise, if need be, their job descriptions and amend training programs;
- Increase coverage with training relevant to the occupied position (professional training and retraining) for narrow specialists from rayon FMCs;
- Continue with FGP training to ensure access to the most demanded PHC services, first and foremost, in relation to mother and child health, reduction in the number of self-referrals to narrow specialists from FMCs and inpatient institutions;
- Make clarifications and additions to the Payroll Regulations with the account of identified gaps and make a decision whether it is worthwhile to keep the principle of priority stimulations for family doctors.

Annex 1.

List of narrow specialists in CDU of the Osh Interblast Clinical Hospital,
2003 and 2011

	2003		2011	
	staff units	individuals	staff units	individuals
Narrow specialists				
Obstetrician and gynecologist	1,00	1	1,00	1
Hematologist (children)	0,25	1	-	-
Hematologist (adults)	0,50	1	0,50	1
Gastroenterologist	1,00	3	-	-
Adolescence doctor	1,00	1	0,75	1
Pediatric surgeon	0,50	1	-	-
Allergist	1,00	1	1,75	3
Andrologist	0,75	1	-	-
Detoxification and gravitation doctor	0,25	1	-	-
Cardiologist	0,75	1	0,75	3
Neurosurgeon	0,25	1	-	-
Nephrologist	0,50	1	-	-
Neuropathologist	1,00	2	1,25	4
Ophthalmologist	2,00	4	2,75	4
Otolaryngologist	0,75	2	1,00	2
Audiologist	1,00	1	1,00	2
Proctologist	0,50	2	-	-
Rheumatologist	1,25	1	0,75	3
Therapist	1,00	1	3,00	4
Traumatologist	0,50	2	0,50	2
Urologist	0,50	2	0,50	1
Pulmonologist	0,75	1	-	-
Surgeon	0,25	1	1,50	5
Endocrinologist	1,00	2	1,50	2
Thoracic and vascular surgeon	0,25	1	-	-
Maxillofacial surgeon	0,25	1	-	-
Occupational pathologist	0,25	1	-	-
Speech therapist	-	-	0,25	1
Psychiatrist	-	-	0,25	1
Dentist	-	-	0,50	1
Para-clinical service specialists				
Ultra sound doctor	3,75	4	2,25	4
Functional diagnostics doctor (ECG)	2,50	3	2,50	3
Laboratory doctor	13,75	9	6,50	6
Radiologist	6,75	7	1,50	1
Physiotherapist	-	-	3,25	4
Endoscopist	3,50	3	2,75	4
Exercise physiologist	-	-	3,00	2
Masseur	-	-	7,75	6
Total	49,25	64	49,00	71

ANNEX 2.

The list of narrow specialists in CDUs/ADUs in the Issyk-Kul Oblast, 2003 and 2011

	staffing unit	individuals	staffing units	individuals
Narrow specialists				
Allergist	1,00	1	-	-
Hematologist	1,00	1	-	-
Cardiologist	0,25	1	-	-
Neuropathologist	0,25	1	-	-
Ophthalmologist	0,25	1	-	-
Otolaryngologist	0,25	1	-	-
Endocrinologist	1,00	1	-	-
Hospital admissions doctor	9,50	6	9,00	5
Para-clinical specialists				
Ultra sound doctor	1,00	1	1,50	4
Doctor – functionalist (ECG)	1,00	1	1,00	1
Laboratory doctor	11,00	9	11,00	9
Radiologist	2,00	2	2,00	2
Endoscopist	1,00	1	-	-
Spirometry doctor	-	-	0,50	1
Echo doctor	-	-	0,50	1
EEG doctor	-	-	0,50	2
Total	29,50	27	26	25

ANNEX 3. Workload of narrow specialists in rayon FMCs in Osh Oblast (number of patients per hour)

#	specialists' workload per hour	Aravan			Kara- Suu			Uzgen		
		1 st half year 2010	2 nd half year 2010	1 st half year 2011	1 st half year 2010	2 nd half year 2010	1 st half year 2011	1 st half year 2010	2 nd half year e 2010	1 st half year e 2011
		per hour	per hour	per hour	per hour	per hour	per hour	per hour	per hour	per hour
1	Dermatologist and venereologist	-	-	-	1,54	1,8	1,66	2,08	2,06	1,7
2	Immunologist	-	-	-	-	-	-	6,34	6,34	7,38
3	Infectionist	1,36	0,6	0	0,84	0,84	0,82	1,52	1,64	0,6
4	Cardiologist	2,48	3	2,16	1,7	1,76	1,74	-	-	-
5	Narcologist	2,96	3,04	6,24	1,6	1,26	1,72	2,04	1,92	1,28
6	Neuropathologist	6,44	5,3	8,64	1,36	1,68	1,48	2,52	2,54	1,98
7	Ophthalmologist	2,04	1,96	5,76	1,46	1,56	1,52	13,04	12,74	5,92
8	Oncologist	1,24	1,84	4,24	0,26	0,34	0,44	0,64	0,56	0,6
9	Otolaryngologist	1,68	1,96	3,48	2,08	2,32	2,2	1,48	1,52	2,2
10	Psychiatrist	4,32	1,28	8,8	2,66	2,98	2,82	1,76	1,62	2,14
11	Traumatologist	3,14	1,36	4,1	1,54	1,08	1,4	-	-	-
12	Urologist	2,1	0,94	0,54	1,38	1,7	1,46	3,44	3,2	2
13	Surgeon	8,86	1,46	1,34	3,6	3,74	3,68	4,16	4,06	3,46
14	Endocrinologist	-	-	-	1,24	1,42	1,32	4,0	1,94	2,52