HEALTH POLICY ANALYSIS CENTER

Rapid assessment of the FMCs' capacity to be clinical sites for postgraduate medical education in Bishkek and Osh

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List of abbreviations

GP	General Practitioner
FGP	Family Group Practice
CS	Clinical Site
KSMA	Kyrgyz State Medical Academy
KSMIRCME	Kyrgyz State Medical Institute of Retraining and Continuing Medical Education
CR	Clinical Resident
CS	Clinical Supervisor
MoH	Ministry of Health of the Kyrgyz Republic
RDs	Regulatory Documents
HO	Health Organization
OshSU	Osh State University
PGME	Postgraduate Medical Education
PHC	Primary Health Care
HRO	Hospital-replacing organizations
TB	Tuberculosis
US	Ultrasonography
ECG	Electrocardiography
FMC	Family Medicine Center
SB	Southern Branch

1. Introduction

In accordance with the National Den Sooluk Health Care Reform Program for 2012-2018, the Strategy for Development of Postgraduate and Continuing Medical Education in the Kyrgyz Republic for 2014-2020 was adopted. The Program reflects key development areas, changes and steps to streamline and improve the quality of postgraduate and continuing medical education.

In accordance with the postgraduate and continuing medical education reforms a number of transformations have been carried out at both pregraduate and postgraduate levels of medical education. Most of the activities have been carried out with the support of Swiss Embassy in the Kyrgyz Republic and the assistance of experts from the Medical Faculty of University of Geneva and the Geneva University Hospitals.

As part of the medical education reforms, state educational standards have been revised, and the main emphasis is placed on the specifics of the general practitioners (GPs) training. The curricula and teaching methods are revised. The first graduation of general practitioners within the frames of the new curricula implementation at pregraduate level was in June, 2018.

According to the new Regulation on postgraduate medical education all graduates must complete one or two-year residency in general practice at clinical sites, depending on the chosen specialty.

In this regard, it is important to decentralize the postgraduate medical education at the regional and district levels. This should entail the expansion of opportunities of residents for general practice training.

To assess the capacity of regional clinical sites for postgraduate medical education in General Practitioner specialty with an adequate access to practical training and patients a number of assessments were carried out with an aim to explore the opportunities of these health organizations to be clinical sites.

At present, the capacity of FMCs in Bishkek and Osh in terms of providing postgraduate education at the primary health care level remains unexplored.

The specific features of FMCs in Bishkek and Osh are that these organizations do not use the family principle, they see patients as a group of family doctors, which consists of three health specialists: a therapist, a pediatrician and an obstetrician-gynecologist.

Therefore, this assessment will be aimed at exploring the opportunities of these FMCs for postgraduate training and making the list of those FMCs in Bishkek and Osh which have the appropriate conditions for postgraduate training in “General practitioner” specialty.

2. Purpose and objectives

2.1. Purpose:

Explore and assess the opportunities of FMCs in Bishkek and Osh in terms of providing postgraduate training in General Practitioner specialty with ensured appropriate clinical training and access to practice.

2.2. Objectives:

1. Collect data in FMCs of Bishkek and Osh on key indicators (number of visits to FGPs, narrow specialists, number of doctors of 4 specialties (therapist, gynecologist, pediatrician and surgeon) and assess their capacity and opportunities for rotation.
2. Assess health organizations based on the research tool in order to ensure the necessary requirements to the training process and a clinical site (equipment, level of doctors to be supervisors, ensured workload per one resident as 12 patients etc.).
3. Make the list of health organizations that meet the minimum necessary requirements for clinical sites.
4. Determine the potential number of residents to be accepted by FMCs of Bishkek and Osh with provision of the required conditions for clinical residency in General Practice specialty based on the curriculum.

3. Methodology

The assessment was based on the analysis of statistics obtained in FMCs:

- Total number of visits and visits by FGP doctor – therapist, pediatrician and obstetrician-gynecologist;
- Total number of FGP doctors - therapists, pediatricians, obstetrician-gynecologists (staffing positions based on staffing table, occupied staffing positions, physical persons);
- Doctors by category (Highest Category, Category I, II, without category) to evaluate their HR capacity;
- Available basic diagnostic equipment and laboratory tests.

As part of this assessment, all FMCs of Bishkek and Osh were visited to collect data and obtain statistics, data on available equipment and the capacity of doctors etc.

In all FMCs, additional interviews with managers were carried out to get clarifying information on the capacity of clinical sites including the potential number of residents to be accepted, training conditions, infrastructure, opportunities to provide salaries, etc.

3.1. Criteria to assess a clinical site

In order to assess primary health care organizations of Bishkek and Osh as clinical sites the same criteria were used as in the assessment of clinical sites at the PHC level in regions. The criterion of available subsidized housing for residents was not taken into consideration.

In accordance with the developed Catalogue of GP competencies at the postgraduate level during 2-year clinical residency residents should obtain practical skills in diagnosing and treating an extensive list of diseases.

To achieve this objective, it is necessary to ensure *proper quality of the training process*. Thus, the minimum necessary requirements to the training process and a clinical site have been determined (Table 3.1.).

Table 3.1. Requirements to the training process and a clinical site at the PHC level

#	**Criteria**	**Requirements/FMC**
1	**Clinical resident (CR)/patient ratio**	**1/12 patients per day**
	Number of visits per one doctor of FGP and Clinicodiagnostic Department (CDD) per month/year	**320/3840 (minimum workload per 1 CR)**
2	**Clinical Supervisor (CS), characteristics**	Available Highest Category and Category I, (age ***under*** 63 years old)
3	**CS/CR Ratio**	1:4
4	**Available functioning diagnostic equipment**	- X-ray, ECG, ultrasound, (Endoscopy is desirable)
5	**Available functioning laboratory**	Clinical, biochemical, (serological and bacteriological - desirable)
6	**Available conditions for clinical residents**	-Premises/resource center; -NLA (normative legal acts)/training materials; -Available permanent Internet; -Telemedicine (desirable)
7	**Available salary for CRs**	Yes
8	**Available additional payment for CSs**	Yes

The criteria for the training process include provision of the optimal workload for each resident (reception of 12 patients during outpatient visits in FMC[1]), as well as the access to laboratory-diagnostic examinations, training premises and materials.

The capabilities of clinical supervisors were considered for doctors of four specialties: FGP doctors - therapist, pediatrician and obstetrician-gynecologist, and a doctor of narrow specialty - a surgeon.

Also, an essential prerequisite is provision of salaries both for clinical residents and extra payment for clinical supervision by doctors in health organizations.

[1] According to the approved Order of the KR MoH, FGP doctor has 6-hour working day of which 4 hours are provided for outpatient visits and 2 hours – for doctor's home visits.

3.2. Definition of a category of a clinical site – FMCs of Bishkek and Osh for postgraduate training in General Practitioner Specialty.

Categories of clinical sites – FMCs of Bishkek and Osh – for General Practitioner specialty are defined in accordance with general curriculum on postgraduate training in this specialty at the PHC level (in the office of a GP/FM/specialist of FMC/GPC/FGP or an outpatient-diagnostic department of oblast/city/territorial hospital (2nd year of training).

Depending on the existing capacity and the profiles of outpatient level, clinical sites of PHC level can be classified into three categories: A, B, C.

Table 3.2. Categories of outpatient clinical sites for General Practitioner Specialty

Outpatient level profiles	Categories		
	A	B	C
Outpatient family medicine-based reception of patients	-	+	+
Outpatient dermatovenerology	+	+	-
Outpatient ophthalmology	+	+	-
Outpatient oncology	+	-	-
Outpatient ENT-diseases	+	+	-
Outpatient psychiatry	+	-	-
Outpatient management of communicable diseases	+	-	-
Outpatient management of tuberculosis	+	+	+
Laboratory tests	+	+	-
X-ray diagnostics	+	+	-
US diagnostics	+	+	-
ECG diagnostics	+	+	+
Endoscopic diagnostics	+	-	-
Medical statistics and health care organization	+	+	-
Medical-sanitary expertise	+	+	-
Ambulance and emergency care	-	+	-
Specialists who can be clinical supervisors	+	+	+
Resources to support the training process	+	+	+

3.4. Approaches to calculation of the estimated number of CRs for FMCs of Bishkek and Osh

The estimated number of residents was calculated considering the number of outpatient visits to FGP doctors (therapist, pediatrician, obstetrician-gynecologist) and taking into account the minimum workload per 1 clinical resident, 320 visits per month or 3840 visits per year.

- **Number of visits in a FMC**

Total number of outpatient visits per year by 4 specialties	/	*Standard per 1 CR (minimum workload per year)*	=	*Maximum number of CRs which could be taken by a FMC with ensured adequate workload*

- **Number of potential clinical supervisors**

Total number of physical persons – FGP doctors	_	*Number of doctors having Category II or non-category, beyond the age of 63 years*	=	*Potential number of clinical supervisors*	X	*4 (standard per 1 clinical supervisor)*	=	*Maximum number of CRs which could be taken by a FMC with ensured proper supervision*

Of two figures obtained on the number of CRs, the minimum number which could be accepted by a HO has been chosen. In addition, views of FMC managers were explored with regard to the following:

- availability of paid positions for CRs in FMCs;
- the number of CRs FMCs are ready to take.

4. The assessment findings

4.1. Characteristics of clinical sites

According to the General Practitioner curriculum within two years clinical residents should do practical training and during the second year of their training they should do training at the level of PHC (most common diseases). In this respect, the activities of 19 FMCs of Bishkek city, 1 central FMC and 11 FMC branches of Osh city were studied.

Currently, 19 FMCs operate in Bishkek, they involve 99 family group practices (FGP). In Bishkek, the official number of enrolled population receiving regularly primary health care and outpatient specialized care was 1,055,772 people as of January 1, 2018.

Prior to 2015, coordination and financing of FMCs was provided using the local budget funds by Bishkek city Health Department. Based on the KR Government Resolution #577 dated August 14, 2015 "On the transfer of health organizations financed from the local budget to the financing from the republican budget through the Ministry of Health of the Kyrgyz Republic and the Mandatory Health Insurance Fund under the Government of the Kyrgyz Republic", in July 2015 all Bishkek FMCs were transferred to funding from the republican budget. Presently, coordination and control of FMCs' medical activities are carried out by the Ministry of Health of the Kyrgyz Republic as an authorized state agency in health sector.

At present, orders of the Kyrgyz Ministry of Health ## 589,590, 591, 592 as of 13.08.2018 have approved the Provisions of United Centers to merge legally independent FMCs. As a result of reorganization (merger) of 19 existing FMCs, 4 united FMCs will be formed in the context of territorial location. This will help to eliminate duplicate functions of administrative, financial and technical personnel. These changes relate only to employees of administrative sector (managers, accountants, procurement specialists, medical statisticians etc.) of FMCs. The FGP structure will remain unchanged.

Prior to 2015, 12 legally independent FMCs operated in Osh. A part of them were classified as city organizations, and another part of them were administered by oblast FMC. In 2015, all FMCs were merged into one central FMC of Osh city and 11 FMC branches were formed involving 42 FGPs, which serve 324,785 enrolled population.

The analysis results showed that the minimum necessary requirements applied to clinical sites are *fully or partially* met by all FMCs in Bishkek and Osh: 19 FMCs in Bishkek and 1 central FMC with 11 branches in Osh (Table 4.1.).

In Bishkek, some FMCs have quite large numbers of enrolled population: 109848 - in FMC#1, 89000 – in FMC#14 and 81206 - in FMC#12.

In all FMCs, staff numbers are significantly greater than the actual numbers of employed personnel. For instance, staff numbers of the whole personnel in FMC#19 of Bishkek is 4,087.85 positions, 3,296 people physically work, i.e. vacancies are 20%. A similar situation is observed in Osh FMC.

Not all FMCs have the appropriate equipment and are staffed by FGP doctors. Thus, for example, FMCs #12 and #14 with rather large numbers of enrolled population have a significant lack of doctors; about 45 positions of FGP doctors remain unoccupied in these two FMCs.

It should be noted that in Bishkek and Osh cities, FGP doctors do not carry out family medicine-based reception, they work as a group of family doctors which consists of 3 doctors: a therapist, a pediatrician and a gynecologist.

Based on data on the capacity and physical infrastructure of FMCs categories of clinical sites – FMCs of Bishkek and Osh – have been defined.

The category of a clinical site is defined in accordance with general curriculum of postgraduate training in General Practitioner specialty at the outpatient level. According to this postgraduate training curriculum, FMC/GPC/FGP or outpatient-diagnostic departments of oblast/city/territorial hospital may be considered as clinical sites. To determine the category of a clinical site, the availability of outpatient level profiles, laboratory and diagnostic tests, conditions for the educational process and human resources to implement clinical supervision were considered.

In accordance with these criteria 6 FMCs of Bishkek may be classified as Category **A** (FMC##1,6,7,8,9,15), six FMCs of Bishkek could be classified as Category **B** (FMC ##2,4,5,10,12,14), as well as three FMCs of Osh city (central FMC, FMC branches #8 and #10), 7 FMCs of Bishkek (FMC##3,11,13,16,17,18,19) and 9 FMCs of Osh (FMC branches ## 1,2,3,4,5,6,7,9,11) may be classified as Category **C**.

Table 4.1. Number of clinical sites for postgraduate training at the PHC level, Bishkek and Osh.

Cities	FMC		Number of clinical sites by category		
	Total	Of them meet the requirements	A	B	C
Bishkek	19	19	6	6	7
Osh (with branches)	12	12	-	3	9
In total	**31**	**31**	**6**	**9**	**16**

Summarized data on key criteria for clinical sites and categories by FMC are shown in Annexes 1,3,5,7.

4.1.1. Outpatient visits to FGP doctors and availability of outpatient profiles

According to the reported data of FMCs (2017) most of them have a fairly high level of visits to FGP doctors per year, and almost all of them can take residents for practical training (Annex 1).

About 70% of FMCs in Bishkek have day care and hospital-replacing departments by 4 profiles – therapy, pediatrics, gynecology and surgery. The largest number of hospitalized in day care inpatient departments is observed by therapeutic profile - about 18,000 hospitalizations per year in total for all FMCs in Bishkek.

In Osh, hospital-replacing departments are not well developed in FMCs.

All FMCs of Bishkek and Osh cites have a standard structure: family group practices consisting of a therapist, a pediatrician and a gynecologist; and a medical-consultative department (MCD) to deliver outpatient-diagnostic services and which include all narrow profile specialists, such as cardiologist, urologist, endocrinologist, dermatovenereologist, infectious disease specialist, ENT specialist, ophthalmologist and neuropathologist etc.

The level of visits to narrow specialists is also high, however, in the calculation of the potential number of clinical residents that may be accepted by FMCs, only visits to FGP doctors were taken into account. It should be noted that involvement of residents in the work of medical-consultative departments is an additional opportunity for them to obtain the required practical skills.

FGP doctors in both cities do not receive a mix of patients, they receive patients separately: pediatricians see children, therapists see adults, women with pregnancy and gynecological diseases are managed by gynecologists.

During interviews with managers of FMCs in Osh it was noted that there are no doctors - TB specialists - who manage TB patients, there are only nurses who hand over the anti-TB drugs. Management of these patients is ensured by Osh City TB Dispensary.

4.1.2. Basic diagnostic and laboratory equipment

Most of the FMCs located in Bishkek and Osh have the minimum list of basic diagnostic equipment (US, ECG, X-ray apparatus) necessary to perform functions of a clinical site.

There are FMCs partially equipped with basic equipment. For example, six FMCs of Bishkek and nine FMC branches of Osh have no X-ray apparatus. Patients are referred to neighboring FMCs for examination.

In some FMCs there is no US apparatus, and patients are typically referred to private diagnostic centers and clinical for diagnostics.

Four FMC branches in Osh have no equipment for ECG diagnostics.

All FMCs have equipment to carry out clinical and biochemical laboratory tests. In some FMCs classified as Category A the list of tests is being expanded owing to serological, immunological and cultural studies.

None of FMCs in Bishkek and Osh has endoscopic diagnostic equipment (gastroscopes, colposcopes, etc.).

4.1.3. Training premises and available permanent Internet

Available equipped resource centers and permanent Internet provide opportunities for distance learning and the use of telemedicine for consultation.

Internet is available in the most of FMCs including some FGPs. However, during interviews with managers of HOs it was noted that despite available Internet these FMCs do not use the distance learning.

Most of the managers mentioned restrictions with availability of classrooms due to the lack of free space and computer equipment.

4.1.4. Salary to residents and clinical supervisors

During interviews, most of the FMC managers stated that they were ready to accept residents for training, but without paying salaries.

As mentioned above, all FMCs have a difference between staff standards and the staff actually working. Most of the FMCs have unoccupied or vacant medical positions.

For example, there are totally 81,25 unoccupied medical positions in FMCs of Bishkek, of them 58,5 are unoccupied medical positions of FGP doctors. In FMCs of Osh city there are totally

99,25 unoccupied medical positions, of them 11 are unoccupied positions of FGP doctors. Consequently, this can be considered as an opportunity to provide salaries for residents. On the other hand, it should be kept in mind that unused payroll funds are typically not redistributed to the existing staff personnel.

During interviews most of the managers mentioned lacking opportunities to provide salaries to residents. On the one hand, their concerns are related to the fact that there are no regulatory documents which entitle them to provide salaries to residents; on the other hand to what extent salaries restrict or increase the responsibility of a resident in terms of patient management, particularly in case of various incidents affecting the responsibility of a doctor.

In addition, managers of Bishkek FMCs noted that competences of FMCs never involved clinical supervision of residents. Most often, the departments of educational organizations were responsible for their supervision. Therefore, they have no the experience of paying clinical supervisors. It was also stated that they are not aware of the available regulatory documents that can provide for payment to doctors for clinical supervision.

In Osh FMCs most of the managers (director, deputy director) are part-timers of educational organizations (OshSU, KSMIRCME) and get salaries for supervision of residents and students. Practitioners are not involved in paying for clinical supervision.

4.2. Estimated number of clinical supervisors and clinical residents

4.2.1. Clinical supervisors

As part of the assessment, the capacity of doctors to be clinical supervisors was considered for FGP doctors by 4 specialties (three of them are FGP doctors: therapist, pediatrician, obstetrician-gynecologist and a narrow specialist – surgeon).

Doctors with Highest Category and Category I were considered as clinical supervisors. Age restrictions were not considered, because the average age of doctors in these institutions didn't exceed 63 years.

Considering that one clinical supervisor can supervise 4 clinical residents, the majority of FMCs in Bishkek and Osh have sufficient opportunities to supervise postgraduate education.

On the whole, according to the estimated data 492 doctors of 4 specialties (therapist, pediatrician, gynecologist and surgeon) can perform this role (Table 4.2).

Table 4.2. Estimated number of FMC doctors who are able to be clinical supervisors, Bishkek and Osh

FMC	Doctors, in total	Doctors by 4 specialties who are capable to be clinical supervisors
FMCs of Bishkek	1152	421
FMCs of Osh	377	71
TOTAL	**1529**	**492**

The assessment showed that some FMCs experience a significant shortage of FGP doctors, for example, FMC ##4,12,14 in Bishkek. At the same time, there is a sufficient capacity for clinical supervision in Bishkek. About 36% of doctors by 4 specialties in these FMCs have the appropriate qualification and may be clinical supervisors for residents.

The situation in Osh FMCs is different. In general, only about 18% of doctors have the appropriate qualification and may be clinical supervisors.

In some FMCs of Osh (central FMC, FMC branches ##5,9,11) there are very few doctors with appropriate qualifications (from 2 to 4) who can be supervisors for residents. In this regard, despite the high opportunities to accept residents based on the level of visits, the capacity of these organizations is significantly reduced due to limitations on the number of doctors who meet the selected criteria for clinical supervision (Annex 6).

The interviews also identified the need for conducting thorough explanatory work at the level of FMCs in both cities about the goals and objectives of ongoing higher medical education reforms at the postgraduate level, about the advantages and orientation of the primary health care at general practice.

In addition, the support is required in terms of providing training for potential clinical supervisors in the basics of pedagogics and topics on the postgraduate training curriculum in General Practitioner specialty.

It is also necessary to pay attention to the need of regulating the relationship between FMCs in these cities and the educational institutions, that will help to increase mutual responsibility for the training process quality.

4.2.2. Clinical residents

Based on the selected criterion for FGP doctors - 320 visits per month per doctor (or 3840 visits per year) and the estimated number of potential doctors who can be clinical supervisors, the estimated number of clinical residents that can be accepted by each FMC at the outpatient level was obtained (Annexes 4,8).

According to the estimated data and based on the above mentioned criteria all FMCs of Bishkek and Osh may take approximately 701 residents in total, of them 596 residents may be accepted by Bishkek FMCs and 105 residents – by Osh central FMC and its branches (Table 4.3.).

Table 4.3. Estimated number of clinical residents that can be accepted by FMCs of Bishkek and Osh.

FMC	Estimated number of CRs		Number of CRs based on interviews with managers	
	Estimated number of CRs based on two criteria	Available capacity of FMCs based on unoccupied medical positions	Number of CRs the HOs are ready to take	Number of CRs who can be paid salary
FMCs of Bishkek	596	81	147	3
FMCs of Osh	105	99	28	11
TOTAL	**701**	**180**	**175**	**14**

During the interviews managers of HOs mentioned smaller number of clinical residents as compared to the estimated data. This is related to the limited possibilities to provide salaries for CRs. Based on the information from interviews with managers, Bishkek FMCs are ready to take 147 residents, of them the most number of residents (50 people) was stated by Director of FMC#8. However, only Director of FMC#12 noted that he will be able to pay salaries to 3 residents. The rest managers of Bishkek FMCs mentioned that they could not provide salaries to residents, whereas most of the FMCs have vacant medical positions including unoccupied positions of FGP doctor positions.

Totally, FMCs of two cities have 180 unoccupied medical positions. These positions could be used to pay clinical residents.

5. Conclusions and recommendations

This assessment was aimed to define the list of FMCs in Bishkek and Osh, which have the adequate capacity to perform the role of a clinical site as well as to identify the estimated number of clinical supervisors and residents for each FMC.

To that end, the research tool of the Geneva University (the statistics on performance of HOs and the information on infrastructure of HOs) and the minimum necessary criteria for the training process and a clinical site previously used to assess the capacity of clinical sites in regions were applied.

All FMCs of Bishkek and Osh (31 FMCs and FMC branches) are fully or partially meet the selected criteria for an outpatient clinical site and have the opportunities to provide postgraduate education in General Practitioner specialty.

The selected criteria take into account such parameters as the number of visits, equipment, training premises, etc.

The capacities of these FMCs vary, but in general all of them are able to ensure the required workload for residents and have the minimum list of diagnostic and laboratory equipment.

In Bishkek, most of the FMCs have a fairly large number of enrolled population and, subsequently, a high number of visits. The list of diseases and/or conditions with which patients seek health care in all FMCs of both cities is very broad taking into account narrow profiles.

Depending on the capacity of FMCs as clinical sites, 6 FMCs of Bishkek are classified as Category **A**, when the basic postgraduate curriculum in General Practitioner specialty could be completed except for family medicine-based reception of patients. 9 FMCs in both cities are classified as Category **B** and 16 FMCs are classified as Category **C**. It should be mentioned that FMCs of Categories **B and C** in Bishkek and Osh do not include also the requirement of family/mixed reception of patients.

In this aspect, the lack of family reception in FMCs of Bishkek and Osh are the key limiting factor for provision of the postgraduate training for residents in general practice.

In this regard, organization of the training process should consider regular rotation of residents by specialties of FGP doctors (therapy, pediatrics, gynecology), as well as by other outpatient narrow profiles. This will enable residents to get the maximum benefit from the general practice.

In addition, it should be mentioned that within the frames of restructuring FMCs in Bishkek and Osh and salary increases for family doctors based on their results, initiated at the Kyrgyz Government level it is envisaged to train FGP doctors of these cities based on the short-term Family Medicine program and gradually transit to mixed/family reception.

In all FMCs of both cities staff numbers are significantly higher as compared to actually employed personnel approximately by 20%. This makes it possible to consider vacant positions to pay residents. In other words, most of the FMCs in both cities have internal reserves to provide payment to residents at the expense of unoccupied medical positions. However, many managers do not support the implementation of postgraduate training at the level of FMC. Therefore, payment to residents is another limiting factor for the scale-up of postgraduate education at the primary level.

In addition, to fully ensure the educational process, the provision of resource training centers with an access to permanent Internet and distance learning is problematic. The telemedicine opportunities to carry out consultations are also not developed and used in these cities. Nevertheless, most of the managers mentioned that if there were residents, they could create these conditions using their internal funds.

Currently, in FMCs of Bishkek and Osh there are residents who take postgraduate training in various specialties. In Bishkek, most typically, control over the training organization is carried out by heads and assistants of educational organization subdepartments. Management of FMCs and doctors are virtually not involved into the training process control and do not affect the regulation of the number of residents.

In Osh FMCs where residents of OshSU and the SB KSMIRCME receive training, regulation and control of the postgraduate training are provided by managers (director, deputy director) of FMCs who are part-timers of educational organizations by specialty.

It is important to note that all managers of FMCs highlighted the problem of a large flow of pregraduate students from different educational organizations.

It should be also noted that the majority of FMC managers, particularly in Bishkek, due to lack of awareness, still misunderstand the upcoming changes related to postgraduate education and strengthening the role of general practitioners at the primary health care level. This factor may be also one of the barriers that can impede the appropriate organization of postgraduate education and the promotion of the General Practice specialty.

Recommendations

- In order to organize the postgraduate training in General Practitioner specialty in FMCs of Bishkek and Osh, the activities of which are still not oriented at family/mixed reception, it is needed to envisage the compulsory rotation within the organization by key specialties as well as to consider the possibility of sending residents to regional FMCs where doctors see patients based on the real family medicine based principles.

- It is necessary to develop mechanisms which will envisage involvement of practitioners with appropriate qualification in the process of clinical supervision of residents in accordance with standards when 1 clinical supervisor can supervise 4 residents.

- To increase the responsibility of health organizations and practitioners for the outcomes of clinical training it is necessary to solve the issue of payment to clinical supervisors and clinical residents. Within the frames of being implemented the system of result-based payment to health professionals clinical supervision may be considered as one of the results for which doctors will receive additional payment.

- It is needed to envisage training of Bishkek and Osh FMC doctors who can be clinical supervisors on the postgraduate training curriculum in General Practitioner specialty as well as psychology and pedagogics issues.

- It is needed to develop approaches to organization of the permanent postgraduate training process monitoring within the HO as well as conduction of an independent evaluation of residents' knowledge and practical skills.

- It is required to actively involve managers and practitioners of Bishkek and Osh FMCs into the process of reforming postgraduate education and to raise awareness of the benefits the General Practitioner specialty.

ANNEXES

ANNEX 1. Characteristics of FMCs in Bishkek, 2017

Bishkek	Number of enrolled population	Number of FGPs	Number of visits to FGP doctors			Number of discharged patients by profile, 2017, hospital-replacing departments (HRD)			
			therapist	pediatrician	gynecologist	Therapy	Pediatrics	Gynecology	Surgery
1	2	3	4	5	5	7	8	9	10
FMC #1	109848	12	74713	97177	64275	2368	-	-	339
FMC #2	75439	10	52588	54515	39042	727	-	-	-
FMC #3	78080	10	74705	65156	42561	-	-	-	-
FMC #4	42257	4	49366	32220	16767	-	-	-	-
FMC #5	77100	6	38362	54634	23965	1016	-	686	-
FMC #6	59759	4	56174	65571	24937	479	-	-	108
FMC #7	49178	6	62461	27569	22941	592	-	-	-
FMC #8	61175	5	48607	61952	23079	887	-	-	-
FMC #9	67773	6	62466	67061	30360	2469	1962	198	-
FMC #10	25925	2	13079	21773	4858	-	-	-	-
FMC #11	26829	3	20903	32114	11994	-	-	-	-
FMC #12	81206	5	71204	83144	46368	1054	-	45	101
FMC #13	47426	3	26628	25429	19634	373	-	-	-
FMC #14	89000	6	81091	103771	59175	2500	-	-	-
FMC #15	44545	4	16835	40688	9115	-	-	-	-
FMC #16	25455	3	22014	13439	8980	-	-	-	-
FMC #17	27390	2	22594	28322	6609	114	-	-	-
FMC #18	25078	4	23721	22001	11545	3834	-	-	-
FMC #19	42309	4	36223	47322	21841	1473			
TOTAL	**1055772**	**99**	**853734**	**943858**	**488046**	**17886**	**1962**	**929**	**548**

ANNEX 2. Human Resources of FMCs, Bishkek, 2017

Bishkek	Number of FMC doctors, total			Number of medical unoccupied positions, Total in FMC	Number of FGP doctors			Number of unoccupied FGP doctor positions (the potential to pay salary)	Number of doctors with Highest Category and Category I (therapist, pediatrician, gynecologist, surgeon)
	Staffing table	Occupied	Phys persons		Staffing table	Occupied	Phys persons		
1	2	3	4	5	6	7	8	9	10
FMC #1	183,75	183,75	132	0	75	75	69	0	45
FMC #2	109,25	109,25	76	0	65,25	65,25	45	0	29
FMC #3	118,75	118,75	75	0	78,5	78,5	46	0	30
FMC #4	70,75	63,0	67	7,75	39	31,5	25	7,5	25
FMC #5	96,5	96,5	75	0	58,75	58,75	44	0	27
FMC #6	93,25	93,25	81	0	42	42	34	0	26
FMC #7	84,5	84,5	63	0	52	52	29	0	22
FMC #8	89,25	89,25	75	0	44,5	44,5	31	0	24
FMC #9	105,25	105,25	66	0	58,25	58,25	34	0	29
FMC #10	36,5	36,5	21	0	18	18	12	0	8
FMC #11	43	40	42	3	20	18	15	3	13
FMC #12	118,5	86	65	32,5	73,0	51,50	37	21,5	28
FMC #13	69,25	69,25	42	0	37,25	37,25	20	0	18
FMC #14	119,0	83,5	59	35,5	72,25	47,75	31	24,5	21
FMC #15	72,0	72,0	60	0	29	29	24	0	21
FMC #16	40,25	40,25	31	0	21,5	21,5	18	0	17
FMC #17	36,5	34,0	22	2,5	22,75	20,75	12	2	10
FMC #18	46,0	46,0	39	0	24,5	24,5	20	0	18
FMC #19	76,0	76,0	61	0	41,25	41,25	34	0	10
TOTAL	**1608,25**	**1527**	**1152**	**81,25**	**872,75**	**815,25**	**580**	**58,5**	**421**

ANNEX 3. Categories of Bishkek FMCs - clinical sites for postgraduate training in General Practitioner specialty.

Bishkek	CATEGORY (A,B,C)	Available outpatient profiles							Laboratory diagnostics		Available functioning basic equipment			Available classroom/resource center	Available Internet
		Family/mixed reception	Dermatovenereology	Ophthalmology	ENT-diseases	Psychiatry	Infectious diseases	TB management	biochemical	clinical	ECG	X-ray	Ultrasound		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
FMC #1	A	no	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
FMC #2	B	no	yes	yes	yes	yes	no	yes	yes	yes	yes	yes	yes	yes	yes
FMC #3	C	no	no	yes	yes	no	no	no	yes	yes	yes	no	yes	no	yes
FMC #4	B	no	yes	yes	yes	no	no	yes	yes	yes	yes	yes	yes	yes	yes
FMC #5	B	no	yes	yes	yes	no	no	no	yes	yes	yes	yes	yes	yes	yes
FMC #6	A	no	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	no
FMC #7	A	no	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	no
FMC #8	A	no	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
FMC #9	A	no	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
FMC #10	B	no	yes	yes	yes	yes	no	no	yes	yes	yes	yes	no	yes	yes
FMC #11	C	no	yes	yes	yes	yes	yes	no	yes	yes	yes	no	no	yes	no
FMC #12	B	no	yes	yes	yes	yes	no	no	yes	yes	yes	yes	yes	yes	no
FMC #13	C	no	yes	yes	yes	yes	no	no	yes	yes	yes	yes	no	yes	no
FMC #14	B	no	yes	yes	yes	yes	no	no	yes	yes	yes	yes	no	no	yes
FMC #15	A	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	no	no
FMC #16	C	no	yes	yes	yes	yes	no	yes	yes	yes	yes	no	yes	yes	yes
FMC #17	C	no	no	yes	yes	yes	yes	yes	yes	yes	yes	no	yes	no	yes
FMC #18	C	no	yes	yes	yes	yes	no	yes	yes	yes	yes	no	yes	no	yes
FMC #19	C	no	yes	yes	yes	yes	yes	yes	yes	yes	yes	no	no	yes	yes

ANNEX 4. Estimated number of clinical residents, Bishkek FMCs

Bishkek	Estimated number of CRs			Availability of residents, 2018		Number of residents based on the survey of managers	
	Number of CRs based on the number of visits	Number of CRs based on the number of CSs (maximum)	Estimated number of residents based on two criteria	Number of residents	Medical University/ Specialty	Number of residents the HOs are ready to take	Number of residents who could be paid salaries
1	2	3	4		5	6	7
FMC #1	62	180	**62**	7	KSMIRCME, KSMA, KRSU/FM , infectious diseases, psychiatry, general therapy, neurology, endocrinology	24	0
FMC #2	38	116	**38**	-	-	10	0
FMC #3	48	120	**48**	-	-	4	0
FMC #4	26	100	**26**	11	KSMA/GP	16	0
FMC #5	30	108	**30**	-	-	4	0
FMC #6	38	104	**38**	23	KRSU, KSMA/Pediatrics, Therapy	0	0
FMC #7	29	88	**29**	5	KSMA/ gastroenterology, endocrinology, nephrology, oncology, urology	0	0

FMC #8	35	96	**35**	30	KSMA/Family Medicine Chair	50	0
FMC #9	42	116	**42**	-	-	5	0
FMC #10	10	32	**10**	1	KSMA, endocrinology (employed)	5	0
FMC #11	17	52	**17**	1	KSMA/ neurology	6	0
FMC #12	52	112	**52**	3	KSMA/Pediatrics, Therapy	3	3
FMC #13	19	72	**19**	30	KSMA, KRSU/Pediatrics	3	0
FMC #14	64	84	**64**	3	KSMA/Therapy	3	0
FMC #15	17	84	**17**	-	-	0	0
FMC #16	12	68	**12**	-	-	3	0
FMC #17	15	40	**15**	-	-	4	0
FMC #18	15	72	**15**	-	-	5	0
FMC #19	27	40	**27**	2	KSMA/general medicine (Chair of FM)	2	0
TOTAL	**596**	**1684**	**596**	**117**		**147**	**3**

ANNEX 5. Characteristics of Osh FMCs, 2017

Osh	Number of enrolled population	Number of FGPs	Number of visits to FGP doctors (therapist, pediatrician, gynecologist)	Number of discharged patients by profile, 2017, hospital-replacing departments (HRD)			
				Therapy	Pediatrics	Gynecology	Surgery
1	2	3	4	5	6	7	8
Central FMC	22676	3	10517	-	-	-	-
FMC branch #1	20480	3	28313	-	-	-	-
FMC branch #2	33551	4	61292	-	-	-	-
FMC branch #3	26785	3	34214	-	-	-	-
FMC branch #4	22397	3	45917	-	-	-	-
FMC branch #5	20438	3	56807	-	-	-	-
FMC branch #6	23701	3	34089	-	-	-	-
FMC branch #7	28713	4	44248	-	-	-	-
FMC branch #8	21082	4	25567	-	-	-	-
FMC branch #9	31372	4	31408	-	-	-	-
FMC branch #10	46235	5	33700	-	-	-	-
FMC branch #11	27355	3	59317	-	-	-	-
TOTAL	**324785**	**42**	**465389**	-	-	-	-

ANNEX 6. Human Resources of Osh FMCs, 2017

Osh	Number of FMC doctors, total			Number of medical unoccupied positions, total in a FMC (the potential to pay salaries)	Number of FGP doctors			Number of unoccupied FGP doctor positions (the potential to pay salaries)	Number of doctors with Highest Category and Category I (therapist, pediatrician, gynecologist and surgeon)
	Staffing table	Occupied	Physical persons		Staffing table	Occupied	Physic persons		
1	2	3	4	5	6	7	8	9	10
Central FMC	75,75	54,75	50	21	14,0	12,25	11	1,75	4
FMC branch #1	30,5	24,25	20	6,25	13,0	12,5	11	0,5	8
FMC branch #2	39,5	32,0	27	7,5	22,5	19,75	18	2,75	7
FMC branch #3	31,0	24,25	20	6,75	14,0	14,0	12	0	9
FMC branch #4	42,0	33,0	33	9	14,0	13,75	12	0,25	8
FMC branch #5	29,0	22,75	23	6,25	13,0	12,25	12	0,75	2
FMC branch #6	28,0	18,5	19	9,5	13,0	10,5	10	2,5	5
FMC branch #7	39,75	39,75	37	0	20,5	20,5	17	0	5
FMC branch #8	44,75	41,25	42	3,5	16,0	16,0	15	0	10
FMC branch #9	28,0	23,75	23	4,25	13,5	13,5	13	0	4
FMC branch #10	91,0	68,5	60	22,5	10	8,25	10	1,75	7
FMC branch #11	30,5	27,75	23	2,75	15,5	14,75	13	0,75	2
TOTAL	**509,75**	**410,5**	**377**	**99,25**	**179**	**168**	**154**	**11**	**71**

ANNEX 7. Categories of Osh FMCs – clinical sites – for postgraduate training in General Practitioner specialty

Osh	CATEGORY (A,B,C)	Available outpatient profiles							Laboratory diagnostics		Available functioning basic equipment			Available classroom	Available Internet
		Family/mixed reception	Dermatovenereology	Ophthalmology	ENT-diseases	Psychiatry	Infectious diseases	TB managemnet	Biochemical	Clinical	ECG	X-ray	Ultrasound		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Central FMC	B	no	yes	yes	yes	yes	yes	no	yes	yes	yes	yes	yes	yes	yes
FMC branch #1	C	no	no	yes	yes	no	no	no	no	yes	yes	no	no	no	yes
FMC branch #2	C	no	no	yes	yes	no	no	no	yes	yes	yes	no	yes	no	yes
FMC branch #3	C	no	no	yes	yes	no	no	no	yes	yes	no	no	yes	no	yes
FMC branch #4	C	no	no	yes	yes	no	yes	no	yes	yes	no	no	no	no	yes
FMC branch #5	C	no	no	yes	yes	no	no	no	no	yes	yes	no	yes	no	yes
FMC branch #6	C	no	no	yes	yes	no	yes	no	yes	yes	no	no	yes	no	yes
FMC branch #7	C	no	no	yes	yes	yes	no	no	yes	yes	yes	no	no	no	no
FMC branch #8	B	no	yes	yes	yes	yes	no	no	yes	yes	yes	yes	yes	no	no
FMC branch #9	C	no	no	yes	yes	no	yes	no	no	yes	no	no	yes	no	yes
FMC branch #10	B	no	no	yes	yes	no	yes	no	yes	yes	yes	yes	yes	no	no
FMC branch #11	C	no	no	yes	yes	no	yes	no	no	yes	no	no	yes	no	yes

ANNEX 8. Estimated number of clinical residents, Osh FMCs

Osh	Estimated number of CRs			Availability of residents		Number of CRs based on interviews with managers	
	Number of CRs based on the number of visits	Number of CRs based on the number of CSs (maximum)	Estimated number of CRs based on two criteria	Number of residents	Medical University/ Specialty	Number of CRs the HOs are ready to take	Number of CRs who could be paid salaries
1	2			4	5	6	7
Central FMC	3	16	**3**	9	OshSU, KSMIRCME/therapy, obstetrics, dermatology	5	1
FMC branch #1	7	32	**7**	1	SB KSMIRCME/Family Medicine	1	1
FMC branch #2	16	28	**16**	2	OshSU, KSMIRCME/ obstetrics, GP	5	1
FMC branch #3	9	36	**9**	2	OshSU/endocrinology, SB KSMIRCME/Family Medicine	1	1
FMC branch #4	12	32	**12**	1	SB KSMIRCME/Family Medicine	1	1
FMC branch #5	15	8	**8**	0	-	1	1
FMC branch #6	9	20	**9**	0	-	1	1
FMC branch #7	11	20	**11**	1	OshSU/obstetrics	1	1
FMC branch #8	6	40	**6**	3	OshSU, neuropathology, cardiology, SB KSMIRCME/Family Medicine	5	1
FMC branch #9	8	16	**8**	0	-	1	1

FMC branch #10	8	28	**8**	2	SB KSMIRCME / General Pediatrics	5	1
FMC branch #11	15	8	**8**	4	SB KSMIRCME/Family Medicine	1	1
TOTAL	**119**	**71**	**105**	**25**		**28**	**11**