MANAS HEALTH POLICY ANALYSIS PROJECT

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SITUATION ANALYSIS ON HUMAN RESOURCES IN THE HEALTH SECTOR OF THE KYRGYZ REPUBLIC

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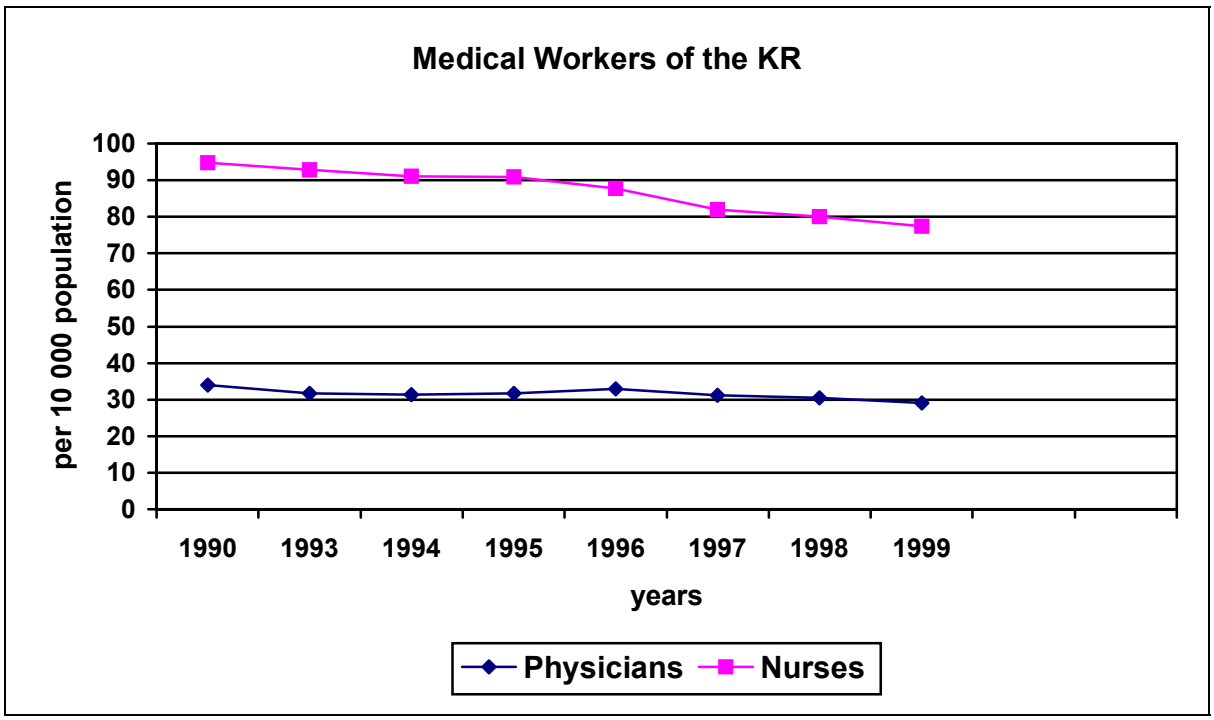
Situational Analysis on Human Resources in the KR

One of the important places in the health sector belongs to the issues on staff policy that has the following trends:

I. Planning
II. Management
III. Education

I. Taking into account the reforms being implemented (restructuring the network of health facilities, rationalization of inpatient hospitals, etc.) consideration of staff issues requires new approach.

According to data provided by the Republican Health Information Center under MOH during the last 10 years the number of doctors with basic specialization and the number of nurses decreased under the policy implemented by MOH (Graph 1).



Graph 1

Total number of physicians in 1990 was 34,0 per 10 000 population and in 1999 the intensive rate was 29,2. For nurses similar indicators totaled 94,7 and 77,4 per 10 000 population respectively (Table 1).

Table 1

Medical Workers of the KR (1990-1999)

Year	Number of physicians of all specializations, including dentists		Number of physicians providing practical care/help		Number of nurses		Including those providing practical care/help	
	Absolute numbers	Per 10000	Absolute numbers	Per 10000	Absolute numbers	Per 10000	Absolute numbers	Per 10000
1990	15043	34,0	-	-	40884	94,7	-	-
1993	14050	31,7	10352	23,3	41116	92,8	-	-
1994	13975	31,3	10531	23,6	40503	91,0	-	-
1995	14377	31,7	9453	20,6	41042	90,9	33149	73,4
1996	14963	32,9	9632	21,2	39881	87,7	32078	70,6
1997	14354	31,2	9380	20,3	37780	82,0	30026	65,2
1998	14252	30,5	10241	21,9	37354	80,0	30151	64,6
1999	14113	29,1	11124	23,2	37416	77,4	30214	62,4

Despite this the number of practicing physicians remains at the same level (1990 – 23,3, 1999 – 23,2). The lowest rates of population supply with physicians was recorded in 1995-97 as an implication of adverse social economical situation in the beginning of 90-ties, and decline of medical profession prestige and resignation of a number of physicians from health sector. Increase in rates starting from 1998 (from 20,3 in 1997 up to 23,2 in 1999), on one hand, indicates the stability of general situation in the republic and, on the other hand, indicates absence of actual staff reduction of medical professions serving the network of medical prophylactic facilities.

As for the nurses, over the period from 1990 to 1999 a persistent reduction of both total number of nurses and those providing practical help/care was recorded. (Table 1).

To optimize human resources planning process MOH KR adopted a resolution to establish National Database on personified accounting of medical workers. Computerized database already has data on medical workers of medical prophylactic facilities of the republic. It is planned to collect data on medical workers of resort, administrative (MOH, MHIF, etc.), educational (Medical academy, medical colleges/schools) facilities and other authorities (Ministry of Internal Affairs, Ministry of National Security, etc.).

Currently in the Kyrgyz Republic health care is provided by about 12.5 thousands of physicians and about 35.5 thousands of nurses (Table 2).

Table 2

Number of Physicians and Nurses in Medical Prophylactic Facilities of the KR (May 2000)

Region	***Physicians***	***Nurses***
Bishkek	4003	5005
Chui	1645	4638
Naryn	601	2378
Issyk-Kul	1071	2939
Talas	486	1702

Jalal-Abad	1505	6674
Osh	2264	8865
Batken	642	3201
Total	**12217**	**35402**

II. Analysis of data from Health Information Center and newly established National database revealed the following:

- By supply of physicians in calculation per 100 000 population Kyrgyzstan (291,0) surpasses such well-developed countries as Canada (229,0), USA (279,0), and Great Britain (180,0).
- In different regions of the republic there is an overflow of medical workers of some specializations and lack of other specializations.
- There is also an unequal distribution of medical workers along a number of dimensions: geographical (concentration of medical workers in Bishkek and other cities) and age-specific (young specialists in the cities and predominantly middle aged and retirement aged specialists in oblasts and remote regions) (Tables 3, 4).

Table 3

Supply of Physicians by Regions, KR

Region	***Per 100 000 population***
Bishkek	320
Chui	217
Naryn	243
Issyk-Kul	249
Talas	230
Jalal-Abad	182
Osh	183

Table 4

Age-specific Distribution of Physicians by Regions, KR (in %)

Region	***Age 20-29***	***Age 30-39***	***Age 40-49***	***Age 50-54***	***Age 55-59***	***Age 60 and higher***
Bishkek	16,1	40,3	22,7	8,3	4,3	8,3
Chui	7,4	36,4	31,3	10,9	5,8	8,0
Naryn	4,7	31,1	33,4	13,5	4,5	12,8
Issyk-Kul	5,7	32,6	32,5	15,7	6,9	6,7
Talas	5,1	34,8	35,0	7,4	8,8	8,8
Jalal-Abad	6,9	33,4	39,7	11,5	3,5	5,0
Osh	7,5	38,0	35,8	11,0	3,2	4,4
Batken	6,2	34,9	38,3	11,4	3,9	5,3

Analysis of age-specific distribution of physicians by regions showed that in Bishkek 56.4% of physicians are under 40 which represents a significant problem to calculate the overflow of medical workers and forthcoming restructuring of medical prophylactic facilities network of Bishkek city.

Quite an alarming situation is arising in the regions, especially in Naryn oblast where 17.3% of physicians are in retirement age and 13.5% are in close to retirement age (Table 4).

Hence within the next five years 30.8% of physicians in Naryn oblast will leave the health system. In Jalal-Abad oblast the number of physicians in retirement and close to retirement age makes up 20%, in Osh oblast it is 18.6% and in Batken oblast it is 20.6%.

According to data from the National database for the beginning of 2001 there are 1167 working/practicing physicians-pensioners over the republic. Their distribution is introduced in Table 5.

Table 5

Distribution of Working/Practicing Physicians of Retirement Age by Regions

Region	***Number of People***
Bishkek	461
Chui	194
Naryn	93
Issyk-Kul	118
Talas	58
Jalal-Abad	87
Osh	116
Batken	40
Total	***1167***

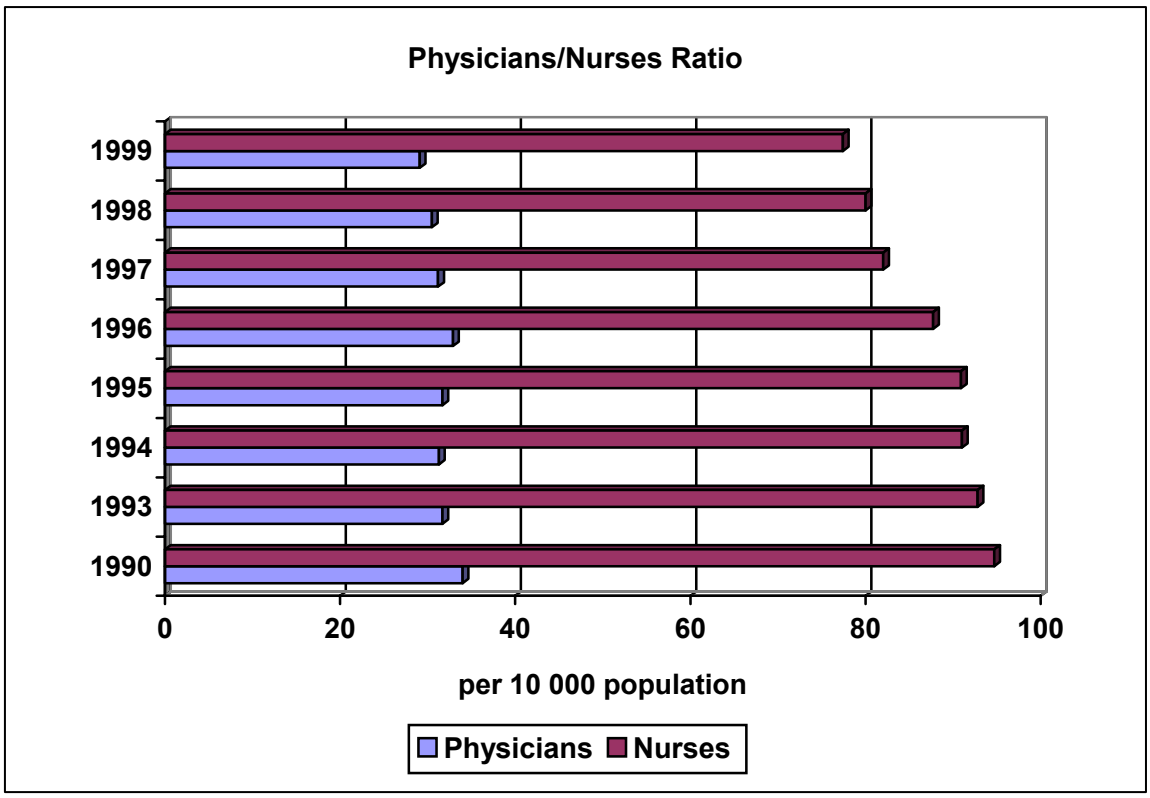
Preliminary projection showed that the number of potential medical vacancies for the next 3 years averages approximately 150 per year (Table 6).

Table 6

Region	***2002***	***2003***	***2004***
Bishkek	33	42	63
Chui	11	35	30
Naryn	6	14	10
Issyk-Kul	12	13	30
Talas	10	5	14
Jalal-Abad	10	10	21
Osh	14	13	26
Batken	7	6	5
Total	***103***	***138***	***199***

At the same time out of all the KSMA graduates of 1998 55.9% were employed in Bishkek city and a very small number in such oblasts as Batken (6.0%), Naryn (2.7%), and Talas (1.1%). In connection with this it is important to work over the employment (hiring) issues, introduce the contract and/or competitive basis, etc.

- Physicians/nurses ratio for 1990 was – 1/2.8 (physicians – 340, nurses – 947 per 100 000 population). In 1999 there was a tendency of decrease in this ratio over the republic – 1/2.7 (Graph 2). Among well-developed European countries (United Kingdom – 1/3.5, Canada – 1/3.5, USA – 1/3.5) this ratio averages 1/3.6 and in Finland it is 1/7.2.



Graph 2

Data from newly established database on personified accounting of medical workers revealed unequal physicians/nurses ratio in different regions of the republic (Table 7).

Table 7

Physicians/Nurses Ratio According to 1999 – 2000 Data

Region	***Physicians***	***Nurses***
Bishkek	1	1,3
Issyk-Kul	1	2,7
Chui	1	2,8
Talas	1	3,5
Osh	1	3,9
Naryn	1	4,0

Jalal-Abad	1	4,4
Batken	1	5,0
Over the Republic	1	2,9

From this table it is possible to make a conclusion that in such oblasts as Naryn, Jalal-Abad and Batken a part of physicians functions are performed by nurses and in Bishkek and Issyk-Kul oblast, considering lack of nurses, in some cases physicians have to perform nurses duties. Considering the appearance of family nurses and nurses with higher education (undergraduate) it is important to review functional responsibilities of physicians and nurses aiming at, first of all, rational use of medical workers and, secondly, to identify explicitly the needs for medical workers in the regions.

Data from the National Database on the qualification of medical workers is represented in Table 8.

Table 8

Highest	First	Second	Without category
12,9%	18,6%	5,2%	63,3%

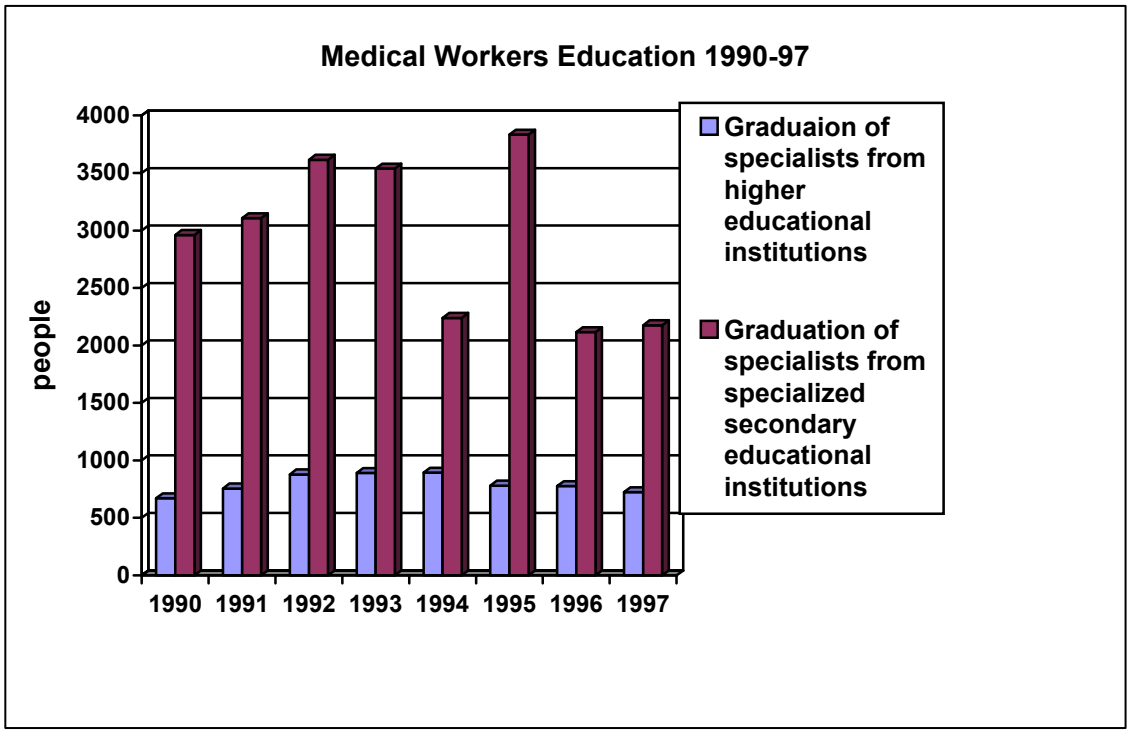
Physicians with qualification categories mainly work in Bishkek, Chui oblast and Osh. In other regions especially among the physicians of FGPs and SUBs medical workers without any qualification categories are prevailing (63,3% over the republic).

III.General situation of medical workers education/training in the republic during the last 10 years was developing in the following way. (Table 9, Graph 3).

Table 9

Medical Workers Education/Training (1990 – 1997)

Graduation of Specialists	1990	1991	1992	1993	1994	1995	1996	1997
1.Higher Educational Institutions	670	756	878	891	894	780	777	723
2.Specialized Secondary Educational Institutions	2960	3107	3615	3538	2240	3834	2115	2175



Graph 3

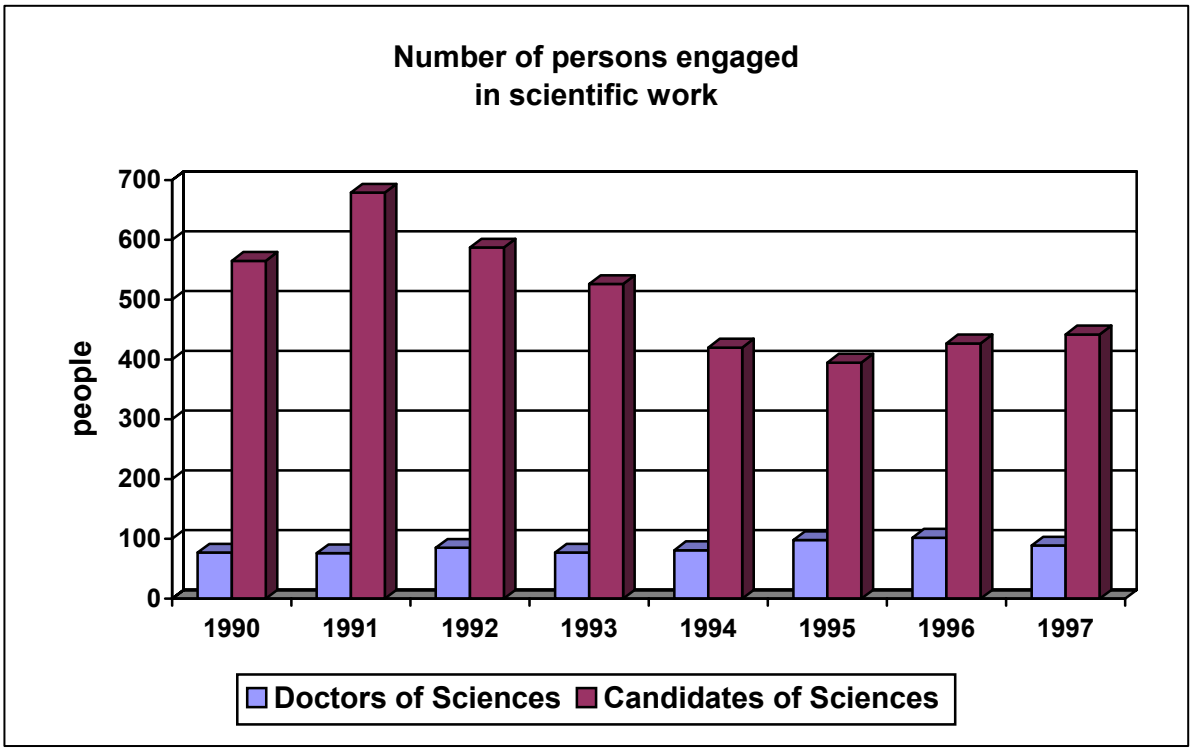
Maximal number of medical doctors graduates was noted in 1992-94. Later this level decreased, but during the last years education of doctors is greater in size than it was in 1990 (graduation of 1990 was 670 people, graduation of 1997 – 723). Thus, considering current excess of physicians in the country, employment issues and further withdrawal of young doctors from health sector, the number of educated physicians has to be controlled by the MOH. At present it is rather difficult to control the number of intrants (students, entering the Universities), first of all, because of the lack of clear picture of needs in physicians of various specializations in terms of health infrastructure restructuring and new forms of financing; secondly, more than 50% of freshmen study on contract base (pay their tuition) and planning mechanisms of this are not yet worked out.

Education of nurses in quantity relation was uneven (Graph3). Maximal number of graduates was in 1995 (3834 people) but set volume of education/preparation of nurses in 1996-97 was significantly lower than in the beginning of 90ties.

Number of researchers and scientists-pedagogues during these years remains more or less on the level (Table 10). Lowest rates were in 1994-95, which relates to the temporary withdrawal of specialists from the health sector. For example, the number of PhDs (candidate of science) working in health sphere decreased from 679 to 395 for the period from 1991 to 1995, but from 1996 there is a tendency of increase in number. Number of Doctors of Sciences is more stable (Graph 4).

Table 10

	1990	1991	1992	1993	1994	1995	1996	1997
1.Number of researchers, scientists-pedagogues and specialists	1198	1277	1201	1270	848	1108	1144	1189
2.Engaged in scientific work, out of them:								
- Doctors of Sciences	77	76	85	77	81	98	102	89
- Candidates of Science	565	679	587	526	420	395	427	442



Graph 4

Survey of the 5th-year-students of the General Medicine Faculty, budget based, (50 people out of 331) revealed low rating of family medicine. 90% of respondents said that they did not have a clear idea about the activity of a family doctor, 26% consider family medicine to be less prestigious, "second rate", 12% expressed their presumptions that the family medicine would not find practical application in Kyrgyzstan. 88% of respondents orient themselves for more particular speciality in the future (anesthetist, ophthalmologist, urologist, etc.). 50% of students are planning to work in Bishkek after graduation, 10% - in private health facilities, 12% - abroad, 4% in the regions of the republic, and the rest 24% do not have the answer to this question. 84% of respondents consider the introduction of paid

post-graduate education/clinical internship to be a big problem for them because of which a lot of them have changed their initial choice of profession/specialization.

Concerning the issue of health education cost in the KR it is possible to mention the following. Amount required for valid education of one student in one year totals approximately 12 000 Soms (Table 11).

Table 11

Calculation of Education Cost

	Proposed budget for 2001 (thousand Soms)	Approved budget for 2000 (thousand Soms)
Budget resources, total:	**27731,4**	**10913,6**
Salary	5854,4	5800,0
Assignments to Social Fund	1814,9	1914,0
Business trips expenditures within the country	63,7	-
Equipment procurement	2352,0	-
Food	121,1	-
Payments for water, gas, electricity	4344,2	669,6
Transport	160,0	15,0
Other	1306,8	15,0
Capital repairs	8100,0	-
Stipend	3614,3	2500,0
Average annual number of students, studying on budget base, total, out of them:	**2298**	**2453**
Students	1765	1924
Clinical interns	490	491
Post-graduate students and persons studying for doctor's degree	43	38
Cost of education for 1 person	**12068,62**	**4449,08**

However, actual allocated budget makes up 4449,08 thousands Soms a year. That is why, as it is shown in the Table 10, expenditures for all the articles are reduced, business trips, equipment procurement, food and capital repairs are not funded.

As for the contract studies (paid) here education of one student total 21 thousand Soms a year (Table 12).

Table 12

Cost of One Year of Study in Contract Department (Paid Education)

Articles of expenditures	Amount (in Soms)
Salary	8050
Assignments to Social Fund (31%)	2495
Business trips expenditures within the country	63
Business trips expenditures abroad	138
Equipment procurement	2583
Other purchasing and services	1915
Payment for water, gas, electricity	3235,3
Rent and maintenance of transport	97
Assignments to science development fund	203
Capital repairs	2598
Tax for highways use	164
Tax for liquidation of emergency situations	308
Local tax	40
Total:	**21086**

Study of educational activity of medical schools discovered a high percentage of screening of students studying both in budget and contract base in all faculties. Thus, during the last 6 years 2204 students were sent down from the Kyrgyz State Medical Academy, out of them 1350 from budget base and 854 from contract base. In 1999 percentage of screening was 11,2% (342 students out of 2886). Osh State University sent down 275 students or 19% of the number of students entered the first year of university during these years. Similar data is on Kyrgyz-Russian Slavic University - 32 students out of 289 entered (11,1%). Among the reasons of screening the main reasons are poor progress in studies, insufficient work on professional orientation of entrants and, as a consequence, lack of interest in studies.

Within the last year KSMA sent down 106 students, who studied on the budget base (Table 13). Correspondingly, governmental loss for the year totaled 1 million 611 thousand Soms.

Table 13

Data on Sent-Down Students from 01.10.99 to 19.09.2000

Specialization	1 year	2 year	3 year	4 year	5 year	6 year	Total:
General medicine	10	9	16	16	18	10	79
Pediatrics	1	1	-	1	-	3	6
Stomatology	-	1	-	-	1	-	2
Health prophylaxis	3	5	3	1	1	-	13
Higher nurses education-4	1	1	-	-	-	-	2
Higher nurses education-5	2	2	-	-	-	-	4
Total:	17	19	19	18	20	13	106
Governmental spendings (thousands soms)	**75,65**	**169,1**	**253,65**	**320,4**	**445,0**	**347,1**	**1610,9**

Analysis of employment based on the newly established database showed that out of 707 graduates of 1998 graduation (budget base - 679 people, contract base – 28, not considering foreigners) only 186 people were employed by the medical prophylactic facilities (Table 14):

Table 14

Employment of 1998 Graduates by Oblasts, KR

Region	People	%
Bishkek	104	55,9
Osh	19	10,2
Issyk-Kul	17	9,1
Chui	14	7,5
Jalal-Abad	14	7,5
Batken	11	6,0
Naryn	5	2,7
Talas	2	1,1
Total	**186**	**100**

MOH does not have reliable information on the rest 521 graduates. Currently the data collection on employment for the last 3 years is implemented. Final results have not been summarized yet.

Some graduates supposedly get employed by other agencies, smaller part goes to private health sector. It is certain, that the heads of private facilities prefer more qualified/professional specialists that already have operational experience rather than graduates. For today, there are 75 private health facilities and 167 privately operating doctors/physicians (Table 15). Licensing and accreditation commission does not have data on graduates from these facilities.

Table 15

Private Health Sector of the KR

Oblast	Non-governmental/private health facilities	Privately operating medical workers
Bishkek	53	104
Chui	2	19
Talas	3	1
Issyk-Kul	3	15
Osh	12	17
Jalal-Abad	2	10
Naryn	-	1
Total	**75**	**167**

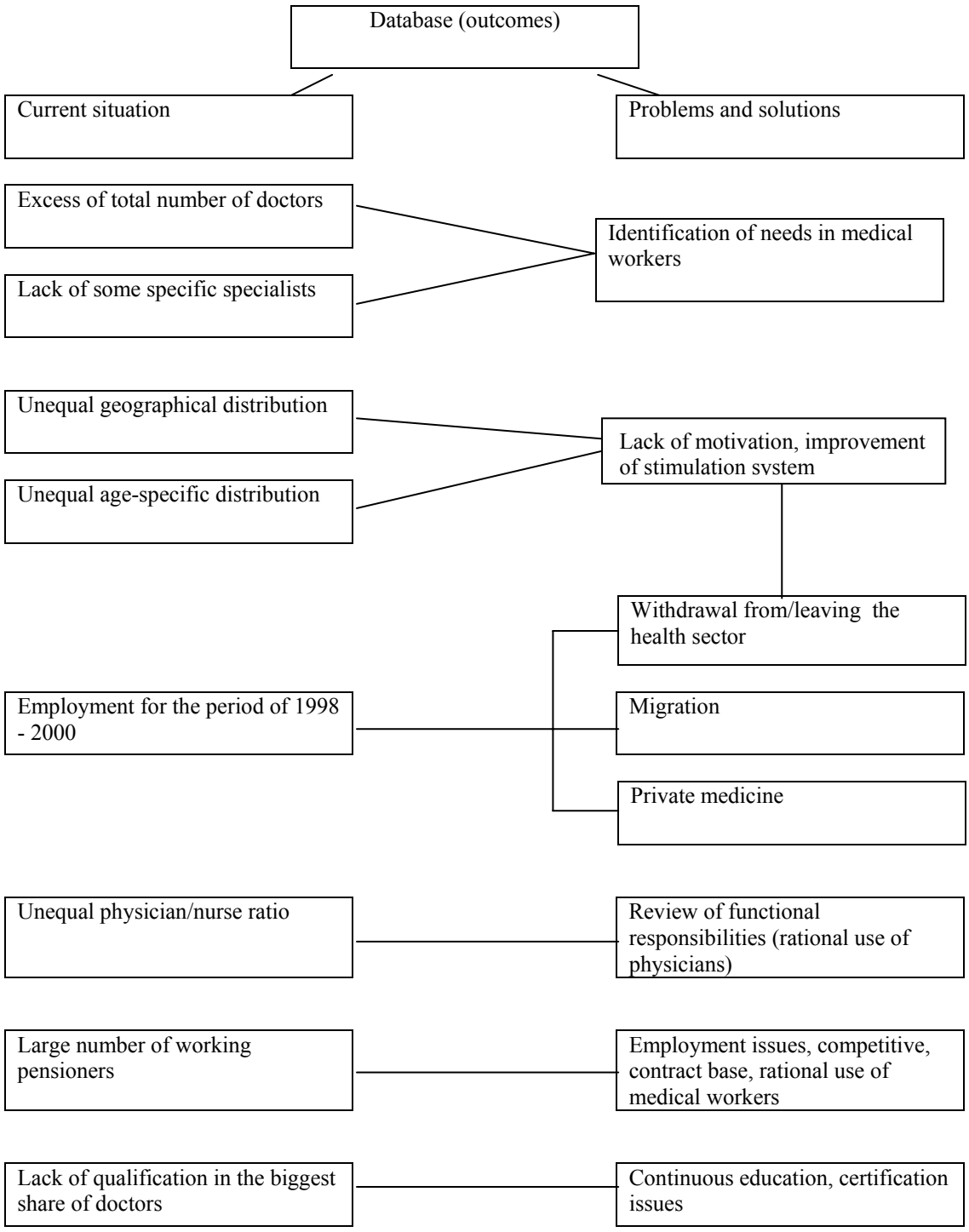
The rest of graduates leave the health sector forever or migrate outside the republic (Health Information Center of MOH does not have data about them) due to lack of incentives and motivation for further professional growth.

Considering that for the education of 1 student for 8 years (6 years at school and 2 years of clinical internship) the budget spendings make up approximately 35.6 thousand Soms (based on substantively allocated budget for 2000 – 4450 Soms) and contract spendings make up 178.5 thousand Soms it is clear that governmental spendings and personal spendings of students in this situation are enormous and inefficient.

General current situation on medical workers, problems and solutions are reflected in the Scheme 1.

Scheme 1

Personnel Potential in the Health Sector: Problems and Solutions



Primary tasks are:

- Review of functional assignments and functional responsibilities of physicians and nurses in accordance with their category;
- Development of new methodology for identification of the need in physicians of various profiles and nurses;
- Determine the extent of necessary staff reduction subject to implemented restructuring of health facilities and reduction of number of beds;
- Projection of needs in medical workers for 5 years;
- Introduction of governmental request for education/preparation of medical workers (MOH participation in licensing and accreditation of educational institutions, Research Institutes, National Centers; annual determination of entrants admission plan (physicians, nurses) and required number of specialists of various profiles);
- Certification of graduates and working personnel;
- Active execution of continuous education of medical workers, design of short-term programs on retraining of persons subject to staff reduction or those who failed certification;
- Increase the prestige of family medicine (explanatory work, possible time-lines prolongation of education on specific specializations);
- Employment and redistribution of medical workers, improvement of stimulation system. To improve current situation MOH made a decision on mandatory 3-year-long labor-rent of budget departments graduates at the place of distribution. *From the experience of other countries*: as mechanisms facilitating more equal staff distribution they increase salaries in the rural arias, support in improvement of living conditions, support in payments for utilities, provision of various benefits (for vacation/rest, treatment, for family members, etc.);
- Specification of career growth of medical workers;
- Determination of policy concerning working pensioners.