



**USAID**  
FROM THE AMERICAN PEOPLE

TECHNICAL REPORT:

## **Family Medicine in Kyrgyzstan:**

### **The First Nine Years**

**1996 - 2005**

**May, 2005**

**Bishkek, Kyrgyzstan**



**ЗдравПлюс / ZdravPlus**

**ENSURING ACCESS TO  
QUALITY HEALTH CARE  
IN CENTRAL ASIA**

This publication was produced for review by the United States Agency for International Development. It was prepared by Paul Fonken, MD FAAFP, STLI/ZdravPlus FM Consultant; Katherine Brouhard, ZdravPlus Regional Project Editor; Prof. Telogen Chubakov, Rector - KSMIRCE; Prof. Burul Djuzenova, Head of the FM Department - KSMIRCE; Guljahan Pirnazarova, Director of the FM Nursing Center - KSMIRCE; and STLI/ZdravPlus Consultants David Burns, MD; Tom Chew, MD; Beryl Fricke, RN; David Fricke, MD; Charles Hardison, MD; and Barton Smith, MD for the ZdravPlus Project

TECHNICAL REPORT:

**Family Medicine in Kyrgyzstan:**

**The First Nine Years**

**1996 - 2005**

**May, 2005**

**Bishkek, Kyrgyzstan**



The views of the author(s) expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

# Table of Contents

<b>I. Acknowledgements</b> .....	<b>1</b>
<b>II. Abstract</b> .....	<b>2</b>
<b>III. Executive Summary</b> .....	<b>3</b>
<b>IV. Acronyms and Abbreviations</b> .....	<b>4</b>
<b>V. Introduction</b> .....	<b>5</b>
A. The Soviet Health Care System.....	5
B. The Reforms: Project Manas .....	6
C. Roles of Manas Partners .....	7
D. Family Medicine’s Role in Project Manas .....	8
<b>VI. Phase I (Short-term FM Training Programs)</b> .....	<b>11</b>
A. Training of Trainers .....	11
B. Retraining Program .....	13
<b>VII. Phase II (Long-term FM Training Programs)</b> .....	<b>15</b>
A. Family Medicine Residency Program .....	15
B. Continuing Medical Education (CME) .....	17
C. Quality Improvement System (QIS).....	20
<b>VIII. Results</b> .....	<b>21</b>
A. Overview of Recent Monitoring Studies .....	21
B. Improved Continuity and Comprehensiveness of Primary Care .....	22
C. Improved Quality of Care and Cost Effectiveness .....	23
D. Attitudes Toward the Manas Reform Project .....	25
E. Related Results from Other Components of the Manas Project.....	26
<b>IX. Conclusion</b> .....	<b>27</b>
A. Summary of Successes .....	27
B. Keys to Success - Lessons Learned and Barriers Overcome.....	27
C. Remaining Challenges to Overcome .....	28
D. Next Steps .....	29

## I. Acknowledgements

Like Kyrgyzstan's health care reform process itself, the production of this report has been a team effort. All the stakeholders in the "Manas" Health Reform Project have provided information. ZdravPlus and the primary authors would like to express our gratitude to all the following organizations and their team members who have contributed to this report and to the success of Project "Manas".

Prof. Telogen Chubakov, Rector of the Kyrgyz State Medical Institute for Retaining and Continuous Education

Prof. Burul Djuzenova, Head of the Family Medicine Department of the Kyrgyz State Medical Institute for Retaining and Continuous Education

Guljahan Pirnazarova, Director of the Family Medicine Nursing Center - Kyrgyz State Medical Institute for Retaining and Continuous Education

Lola Umetova, Head of Fuchika Clinic

Acel Chikirova – Continuing Medical Education Coordinator for the Family Medicine Department of the Kyrgyz State Medical Institute for Retaining and Continuous Education

Ainagul Isakova, Director of the Family Group Practice Association

Mukhabat Abdyraimova, Nursing Director for the Family Group Practice Association

Galiya Nanaeva, Assistant Professor of the Department for Ambulatory Therapy of the Kyrgyz State Medical Academy

Rifat Atun, Director of the Center for Health Management, Imperial College London

Melita Jacob – United Kingdom Department for International Development

Joe Kutzin - World Health Organization

Tobias Schuth - Swiss Red Cross

Michael O. Favorov – United States Centers for Disease Control Central Asia Office Director

Damira Bibosunova - United States Agency for International Development

Mitalip Mametov – Kyrgyzstan Minister of Health

Nurbek Isakov - Head of Human Resources for the Ministry of Health

Gulijit Aliev - Deputy Minister of Health

Ainura Ibraimova – Deputy Minister of Health

Ludmila Shteinke – Deputy Minister of Health

## II. Abstract

In response to the dramatic socioeconomic changes triggered by its independence from the former Soviet Union, Kyrgyzstan embarked on an ambitious national health reform process in 1996. The ZdravPlus Project, along with a number of international agencies, has been assisting the Kyrgyz government as they have succeeded in making their health care system more efficient, while at the same time improving both quality and convenience. This success has been dependent on simultaneous reforms involving all sectors of the health care system. This report focuses on the one key aspect of the reform process: the strengthening of the primary care system through the introduction of family medicine. Over the past nine years, family medicine has developed from an unknown medical specialty into the foundation of the primary health care system throughout Kyrgyzstan. This dramatic growth resulted from a combination of both short and long term training programs, which by the end of 2005 will result in the retraining of almost all the country's primary care doctors (about 2,700) and about 85 percent of the country's primary care nurses (about 3,800 out of a total of 4,500), graduation of 331 new residency-trained family physicians, and the establishment of new continuing medical education and quality improvement systems for primary care. It will take many more years to fully establish family medicine in Kyrgyzstan and to reap its full benefits, but already FM is contributing toward improved continuity and comprehensiveness of primary care and better quality of care at less cost.

ZdravPlus (officially the Central Asia Quality Health Project) is funded by the US Agency for International Development (USAID) to support the governments of the five Central Asian republics in their health reform agendas. It works to improve the quality and efficiency of health services, with a special emphasis on strengthening primary health care. The ZdravPlus project began in June 2000, and was preceded by the ZdravReform Project. Work on the introduction and implementation of Family Medicine in Kyrgyzstan began under ZdravReform and continued under ZdravPlus. For purposes of simplicity, both projects are referred to as ZdravPlus in this document.

### III. Executive Summary

Like many former Soviet Republics, Kyrgyzstan has implemented health care reforms aimed at making their health care system less costly and more effective, by decreasing unnecessary expenditures at the secondary and tertiary care levels and using part of the savings to strengthen primary care. Kyrgyzstan is relatively unique, however, in that it has accomplished comprehensive health reforms on a national basis, not just in limited pilot areas. The introduction of family medicine (FM) is one component of the overall health care reform process, which provides a good example of the national scope of these reforms. This report provides an overview of how family medicine has been established nationally over the past eight years, and how it contributes to the broader reform process, called “Project Manas”.

The Ministry of Health (MOH) chose to make FM the foundation of the primary care system because the principles of FM are consistent with the goals of its health care reform program: to improve the continuity, comprehensiveness, coordination, and cost effectiveness of primary health care. They wanted to replace the Soviet-style system, which is often seen as highly compartmentalized, bureaucratic and impersonal, with a more efficient system that also included incentives to improve both quality and patient satisfaction. This, of course, is an extremely complex and lengthy task, but over the first nine years of the process the Manas reform team has made significant progress on a national basis. During this time, the Kyrgyz State Medical Institute for Retraining and Continuing Education (KSMIRCE) has provided four-months of retraining for almost all of the country’s 2,700 primary care doctors and two months of retraining for about 85 percent of Kyrgyzstan’s 4,500 primary care nurses. This retraining introduced the key principles of FM, and equipped these health care providers to independently care for a greater portion of the medical needs of entire families. The KSMIRCE and the Kyrgyz State Medical Academy (KSMA) also established a new national two-year postgraduate training program (residency) in FM. Finally, the KSMIRCE and the Family Group Practice Association (FGPA) created new systems of continuing medical education and continuous quality improvement to enable the primary care providers to continue to improve and expand their skills.

This transition to Family Medicine depends not only on education support, but also on many other aspects of the reforms: legal and policy changes, financial reforms, changes in the health care delivery system, and education of the population. Fortunately, all these areas are gradually being addressed collaboratively by the Manas team, consisting of many international organizations and most of Kyrgyzstan’s health-related agencies. Many challenges remain, but given the solid foundation laid by Project Manas, there is hope that the improvements in the overall system will continue and that family medicine will continue to play a key role in the process.

## IV. Acronyms and Abbreviations

ADB – Asian Development Bank

AIHA – American International Health Alliance

AMCREI – Association of Medical Clinical and Research Education Institutions

CBDE – Computer Based Distance Education

CME – Continuous Medical Education

DFID – Department for International Development – United Kingdom

DOTS – Directly Observed Treatment Short Course

FGPA – Family Group Practice Association

FM – Family Medicine

FMTTC – Family Medicine Training Center

FMRP – Family Medicine Residency Program

FGP – Family Group Practice

IKO – Issyk-Kul Oblast

IMCI – Integrated Management of Childhood Illness

KSMIRCE – Kyrgyz State Medical Institute for Retraining and Continuous Education

KSMA – Kyrgyz State Medical Academy

MOH – Ministry of Health

NFMRP – National Family Medicine Residency Program

OSCE – Observed Structured Clinical Exam

PAL – Practical Approach to Lung Health

QIS – Quality Improvement System

STI – Sexually Transmitted Infection

STLI – Scientific Technology and Language Institute

TOT – Training of Trainers

USAID – United States Agency for International Development

WB – World Bank

WHO – World Health Organization

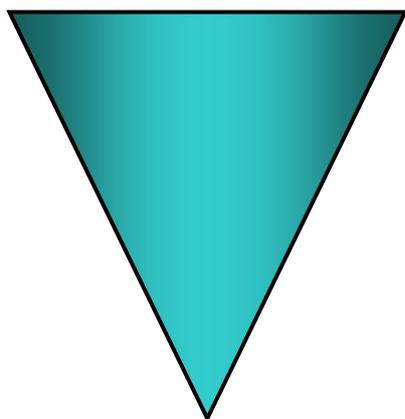
## V. Introduction

### A. The Soviet Health Care System

Under the Soviet system, health care was “free” to the population and relatively accessible. However, the system was also highly compartmentalized, fragmented and bureaucratic, with an overabundance of subspecialists and very little continuity or coordination of care. The budgetary systems, which allocated funds based on the amount of resources used, promoted referrals to subspecialists and hospitals, where the average length of stay was 15 days. To complicate matters, financing and administration was divided into five totally separate levels (village, city, rayon, oblast and republican), resulting in considerable duplication. There were few incentives for improving quality of care, and access to medical literature, especially to non-Soviet literature, was very restricted. Over 90 percent of the health care resources were focused on secondary and tertiary care. The small primary care sector served primarily as a medical triage service, directing patients to subspecialists, who generally worked in separate specialty clinics and hospitals.

Partly because of the low status of primary care, the best physicians became subspecialists, while the least qualified doctors entered careers as outpatient pediatricians, internists or gynecologist. In addition to the socio-economic disincentives that discouraged new physicians from entering primary care, the education system also directed medical students away from broad-based primary care. From the beginning of medical school, students had to choose whether they would take care of adults or children, since there are separate pediatric and adult medical institutes. The curriculum was divided between subspecialty departments with little integration and no problem-based learning. Clinical skills training was inadequate, particularly in the primary care setting, because the Soviet education system emphasized training large quantities of medical students primarily using lectures. Procedural skills training was reserved for the postgraduate residency training of narrow specialists, whereas residencies for pediatricians, internists and gynecologists seldom taught clinical procedures, which are considered basic in most medical systems.

#### **90% of Resources to Inpatient Care Excess Capacity in Health Delivery System**



**10% of Resources to Primary and  
Outpatient Specialty Care**

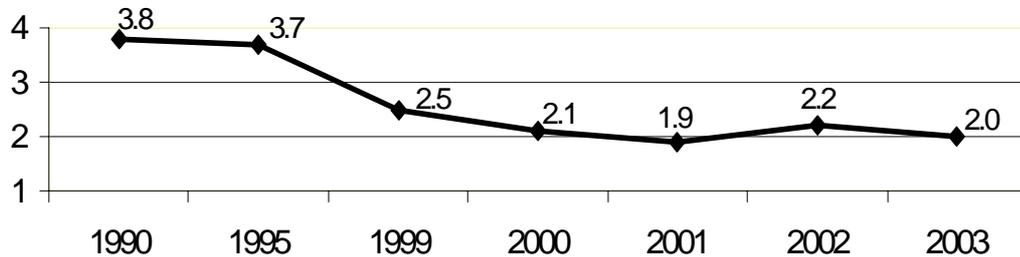
This Soviet-style health care system is often symbolized as an inverted pyramid; an underdeveloped and underutilized primary care sector with inadequately trained doctors, precariously balancing the costly, facility and specialist-heavy secondary and tertiary sectors. Under the Soviet System 85 percent of patients were routinely referred to specialists; in most western systems this percentage is 10-15.

The break up of Soviet Union precipitated a crisis in the Kyrgyz health care system. With sudden absence of Soviet funding starting in 1991, Kyrgyzstan’s economy faltered. Government funding for health care plummeted, making the Soviet-style health

care system financially unsustainable. The entire health care system was threatened.

## Health Expenditures (% of GDP)

Mandatory Health Insurance Fund of Kyrgyzstan



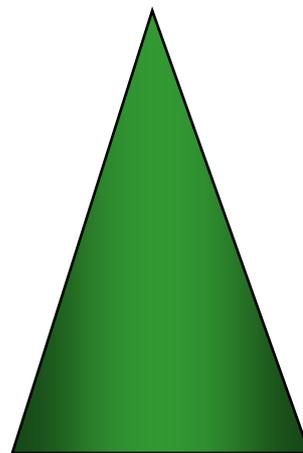
### B. The Reforms: Project Manas

In 1995, in order to prevent a collapse of the health care system, the Kyrgyz Ministry of Health began to design a profound, broad-based reform program, in conjunction with multiple international health care organizations. They created an eight-year comprehensive health care reform project named after the hero of their epic national poem 'Manas'. The ultimate goal of the health care reforms was to invert the pyramid and to scale it down. This meant a larger base devoted to primary health care with a focus on providing high quality care, health promotion, and disease prevention.

This is obviously much easier said than implemented. The entire health care system had to be restructured. This huge undertaking included re-working the health care financing system, restructuring all the primary care practices, retraining primary care physicians and nurses to broaden and deepen their knowledge and skills, establishing new postgraduate training programs in family medicine, educating the population regarding their rights and responsibilities in the new health care system, and making dramatic changes in the legal and health policy framework that regulates the system. Clearly many of these changes required major paradigm shifts, which were often resisted initially.

Fortunately, the Kyrgyz government, recognizing their dire situation, committed early on to the process of national health care reform, and they have remained a leader in health care reform among the former Soviet Republics. This ongoing high-level commitment from the government, augmented by excellent donor cooperation, has resulted in considerable success. Although this report focuses only on one

**The Goal:**  
**Smaller More Efficient Health Delivery System**  
**50% of Resources to Inpatient Care**



**50% of Resources to Primary and  
Outpatient Specialty Care**

aspect of this reform, the introduction and successful establishment of FM depended on simultaneous progress in all the other areas of health care reform.

The primary health care restructuring component of the Manas Project was based on the premise that introducing family medicine (FM) as the basic primary care specialty would result in lower costs and better quality, continuity and coordination of health care. Since family doctors are able to care for most of the basic health needs of all family members, they can dramatically decrease the rates of referral to subspecialist and hospitals. Now, eight years later, most of the country's 2,700 primary care doctors are modified family physicians called Family Group Practice (FGP) doctors. They are indeed practicing medicine more efficiently, and patients are appreciating the improved convenience and coordination of care. Partly as a result of this, the number of hospital beds has been cut in half nationally, compared to during the Soviet era, and the percentage of governmental health care spending going toward primary care more than doubled. This report explains how the partners involved in the Manas Project were able to reach this point.

#### *The Single-Payer System Role in Improving Efficiency*

Prior to the reforms, primary care physicians were encouraged to refer high numbers of patients to the hospital. This has changed in Kyrgyzstan as they have been implementing a "single-payer" system since 2001. This new financial system includes a single health purchaser, pooling of funds, new provider payment systems, restructuring the health delivery system, new health information and accounting systems, an outpatient drug benefit, and a Guaranteed Benefits Package with formal co-payments. Former gynecologists, pediatricians and internists are now organized into small multi-specialty groups called family group practices (FGPs). They now receive their funding from one governmental source, and the amount varies according to the number of people who choose to enroll in their FGP. Formerly, health workers had little incentive to improve patient care, since salaries were all standardized, and patients could not choose their doctor. In contrast, the new capitated system, in which funding for the FGP depends on the number of people who choose to enroll, creates financial incentives for the FGP doctors to attract more patients and to keep them healthy.

The Single Payer System also promotes efficiency and quality at the secondary and tertiary levels of the health system. It helped to decrease the redundancy of administrative structures, personnel, facilities, and services. It has led to significant rationalization in fixed costs for buildings, salaries, etc. and a proportionately greater investment in direct patient care. The WHO/DFID Policy Analysis Project, with whom ZdravPlus collaborates, recently documented a good example. Assessing changes in utility costs from 2000-2004, their study showed a net decrease in health care facility utility costs of 10% over the four years. Even more importantly, it showed that if restructuring and efficiency increases had not occurred, utilities would have increased on average by 44% over the four years and by 57% in 2004, severely impacting allocation of health funding to direct patient care.

Finally, the Single Payer System has allowed savings at the secondary and tertiary health care level to be shifted to the primary care level. As this new system was expanded nationally, the percentage of government health care funding going toward primary care has increased from 10% in 2001 to 23% in 2003.

### **C. Roles of Manas Partners**

Inter-agency cooperation has been one of the biggest keys to the success of Project Manas. The MOH has facilitated both formal and informal coordination among key donors, particularly USAID (the ZdravPlus project), the World Bank, the British Department for International Development (DFID), the Swiss Red Cross and the Asian Development Bank. The family medicine training component provides a good example of this. The overall concept of how to introduce family medicine was developed in 1996, with the technical assistance of ZdravPlus. After the other Manas partners approved the concept, ZdravPlus and the World Bank prepared a step-by-step implementation plan, which was accepted by the MOH. This same process was repeated in 2000, to plan the second half of the Manas Project, which was supported by ZdravPlus and the World Bank's Health II project.

These key partners also agreed to split the expenses of FM training. In general, ZdravPlus has funded the expenses for preparing and sustaining local FM teachers. This has included much of the costs for establishing, equipping and operating a network of seven oblast-level FM training centers (FMTCs) and four other clinical training bases in Bishkek. The World Bank has paid for most of the expenses of the doctors and nurses who have been trained in the various courses offered at these centers. They have also helped to provide some of the furniture and equipment for the FMTC and all of the FGPs. The MOH has provided the facilities for the FMTC, on a rent-free, utility-free basis.

#### STLI's Physician and Nurse Consultants

In 1996, Kyrgyzstan had no family doctors. In response to a request from the MOH, a humanitarian NGO, STLI, began supplying expatriate physician and nursing consultants. STLI (Scientific Technology and Language Institute) joined forces with the World Bank and ZdravPlus in 1997, and has continued on as part of the ZdravPlus team since it began in 2000. STLI has provided five American doctors and two American nurses as long-term on-site consultants for most of the past nine years, as well as many additional short-term physicians and nurse from a variety of countries.

## D. Family Medicine's Role in Project Manas

### 1. Primary Care Restructuring: Family Group Practices

The first step taken towards the establishment of Family Medicine was the introduction of Family Group Practices (FGPs). This involved converting separate pediatric and adult polyclinics into mixed polyclinics staffed by small multi-specialty groups (FGPs) consisting of a total of 3-10 doctors representing the three basic primary care specialties (pediatrics, gynecology, and internal medicine), plus their nurses and other support staff. Forming FGPs accomplished a number of important objectives: (1) Entire families began obtaining most of their outpatient health care from the staff of one small multi-specialty group; (2) Doctors from the three different primary care specialties began to informally cross-train each other as they consulted each other regarding patients outside their former specialty; (3) Coordination and efficiency of patient's care improved as referrals to facilities outside the FGP decreased and more of the patient's needs were addressed within their own FGP, where the FGP staff was familiar with them and had easy access to their medical records; (4) Management at the primary care level became more decentralized; and (5) New incentives for improving patient satisfaction have been introduced, these are based on allowing patients to choose between FGPs and the single payer system.

### 2. Expanding the Scope of Primary Care

Another essential step toward improving efficiency and convenience was to shift the provision of many basic health services from subspecialists, working in vertically designed specialty clinics and hospitals, to FGP doctors and nurses. Now, the FGP staff is allowed and encouraged to independently diagnose and treat patients with a much broader scope of illnesses. Formerly, they were required to make multiple subspecialty referrals for cases as simple as routine medical exams for kindergarteners, routine prenatal care, driver's license clearance, depression, sexually transmitted infections, diarrhea, or common ear infections.

#### *Shifting Sexually Transmitted Infection Care from Subspecialists to FGP Doctors*

Previously, the care of patients with STI's was restricted exclusively to STI subspecialists, who worked in a system of specialized STI clinics and hospitals. Using pilot projects in the cities of Tokmok and Jalal-Abad, ZdravPlus documented that FGP doctors could care for patients with three common STI syndromes at less cost but with equal quality and better patient satisfaction. As a result of this successful pilot project, this new approach to basic STI care is gradually being implemented nationally\*.

\* More information on the STI Pilot can be found in the "STI Pilot Report", by Burns D. at [www.zplus.kz](http://www.zplus.kz)

### 3. To Retrain or Replace?

As the Manas Program was being planned, one of the early questions was whether a large cadre of new family doctors should be created quickly by retraining “district doctors” (general internists/therapists, pediatricians and gynecologists), or whether these narrowly focused primary care doctors should be gradually replaced over 20-30 years by broadly skilled, residency-trained family doctors as the next generation graduated from medical schools. Given the complexities of introducing family medicine, it would have been nice to gradually introduce the specialty using medical schools and residencies, allowing for measured change both in medical practice and the social acceptance of family medicine over a 20+ year time period. While seemingly basic, the provision of primary care (which mainly includes treating patient for the 10-20 most common health problems, preventing common illnesses and promoting a healthy lifestyle) is not a simple process. FM is a complex and very new concept in the former Soviet Republics, and it was not initially well understood or trusted by the population or medical community. How can one physician treat a toddler with a cold, guide his mother through pre-natal care, and knowledgeably give the father a physical exam?

However, Kyrgyzstan did not have the time or the resources for such a plodding process. The economic and health care crisis necessitated radical and immediate change in order to avoid a total



collapse of the system. The MOH chose to plunge ahead with retraining primary care pediatricians, gynecologists, and internists, while at the same time, establishing long-term family medicine training programs for doctors at the undergraduate and post-graduate level. Shortly after starting the retraining for doctors, they realized that in order to truly reform primary care, they would also need to provide retraining for nurses as well. Within a year, they developed training programs for family medicine nursing that mirrored the doctors' programs.

## FAMILY MEDICINE NURSING

In the process of preparing for and initiating the first Training of Trainers (TOT) program for physicians in 1997, 11 nurses were brought in to prepare and then help run the new training clinic at the FM training center in Bishkek. The STLI consultants saw immediately that the clinic would not run smoothly and that the physicians would not be able to fully utilize their training in FM, if the nurses were not also better trained.

Under the Soviet system, the job of nurses was more like that of a secretary and housekeeper, and not a caring professional. They sat in as the doctors saw patients and took notes; it was also their duty to fill out paperwork and clean the facility. This is contrary to the more up-to-date holistic concept of nursing, that nurses should provide care to the patients, help them to understand and carry out the doctor's prescribed treatment, as well as assist the physician in taking their initial assessment of the patient, and teach preventive health care.

Thus, these nurses quickly became involved in an 'on the job' training with lectures and clinical sessions of their own, given by an STLI nursing specialist, while at the same time assisting those physicians going through their TOT course. Nine nurse trainers graduated from this first, impromptu, clinic nurse training program. The KSMICME and MOH subsequently asked the STLI consultants to start a formal program for training nurse teachers in "Family Nursing."

The one-year curriculum for nurse trainers, intended to bring nurses up to internationally accepted standards, integrated principles of family medicine and the fundamentals of nursing as a modern skilled profession - caring for the patient, family, and community in all the dimensions of life (the holistic approach). It also took into consideration the specific needs of Kyrgyzstan. The curriculum started at a very basic level and emphasized the more prevalent diseases, such as tuberculosis, anemia, and diarrhea, as well as stressing evidence-based care and nursing fundamentals. The clinical modules integrated basic subjects, such as the nursing process, patient assessment, pathophysiology, nutrition, pharmacology, health promotion, and patient teaching, with the clinical care given so as to promote better patient care.

The official TOT program in nursing continued from 1998 until 2004, graduating 82 teachers of family nursing, most of whom are now providing retraining, continuing nursing education, and quality improvement training to nurses throughout Kyrgyzstan through the KSMIRCE's oblast-level FM training centers. In addition, eight TOT graduates are working in Kazakhstan, eight in Tajikistan, and three in Uzbekistan. The TOT graduates working for the KSMIRCE are also helping to improve pre-service nursing training by providing further training to selected faculty members from the nursing schools of Kyrgyzstan. Together with the STLI nursing consultants, they have also produced two nursing textbooks in Russian and will release a third next year.

The programs to retrain nurses and then provide them with ongoing education have been much appreciated by the nurses, many of whom have been without refresher training for over ten years. Unfortunately, often they are not able to fully apply what they are learning because of barriers within the system. Doctors still are having a hard time accepting that nurses can do more than take notes and clean floors. This attitude has been a barrier to the development of nursing care worldwide, and in Kyrgyzstan it is by far the main problem. To change it represents a fundamental change in culture and will take a long time. Similarly, outdated governmental nursing regulations are changing slowly, and much remains to be done to allow the nurses to perform all the new skills they are learning. These constraints, along with the society's low view of nurses are just a few of the issues that the nurse trainers have been addressing as the nurse training programs have managed to move forward.



#### 4. Family Medicine Training Programs

The Manas Project has relied on five different types of training programs to establish the new specialty of FM nationally: the two short-term programs started in 1997 and the three long-term programs began in 2001:

Phase I (short-term programs)

- a. Training of Trainers (TOT) – Between 1996 and 2004, 63 doctor trainers and 64 nurse trainers from Kyrgyzstan completed a one-year TOT curriculum in Bishkek. In addition, 21 doctors and 18 nurses from surrounding republics have completed the course.
- b. Retraining of FGP Doctors and Nurses – Between 1997 and 2005, 2,725 FGP doctors will have completed a four-month retraining curriculum and 3,890 FGP nurses will have completed a two-month retraining curriculum. This program will end in December, 2005.

Phase II (long-term programs, which started in 2001)

- a. FM Residency Program (FMRP) – 84 new family physicians graduated from the joint national two-year postgraduate training program that began in Bishkek in 2001 and recently expanded to Osh. The three years prior to that, 230 new family doctors graduated from prototype FM residencies.
- b. Continuing Medical Education (CME) for graduates of all programs above. This currently involves about two-thirds of the FGP doctors and about one-half of the FGP nurses nationally.
- c. An FGP-level quality improvement system (QIS) that provides an ongoing mechanism for internally identifying and addressing barriers to improving the quality of health care. Currently, about one-third of the country's FGPs are using this process.

## VI. Phase I (Short-term FM Training Programs)

### A. Training of Trainers

**The Beginnings:** The introduction of Family Medicine began in the fall of 1996 with creation of a year-long training of trainers course in FM at the first FM Training Center in the Issyk-Kul Oblast. In March of 1997, the country's continuing medical education center (currently the Kyrgyz State Medical Institute for Retraining and Continuing Education - KSMIRCE) opened a second TOT program in Bishkek, which then became the national and regional hub for ongoing TOT courses. From the start, this effort benefited from the close cooperation between the KSMIRCE, the ZdravPlus Program, the World Bank, the MOH, and STLI. All agreed on the long-term goal of sustainability, and therefore decided that the initial focus should be on training local trainers and that the

#### *Family Medicine Training Centers*

In order to facilitate the trainings of trainers and retraining of FGP doctors and nurses, family medicine training centers (FMTCs) were established. The first opened in Issyk-Kul Oblast in 1996, then a national center followed in Bishkek in 1997. By 2002, all seven oblasts had an FMTC staffed by graduates of the doctors' and nurses' TOT programs. The FMTCs were established at existing polyclinics, which gave the trainers, and their trainees, regular access to patients for the clinical aspect of their training.

Creation of the FMTCs as a new structure demonstrated Kyrgyzstan's commitment to the reforms and created a mechanism by which new medical information and updated practices could be continually disseminated throughout the country. These centers were created as affiliates of the Kyrgyz State Medical Institute for Retraining and Continuing Education (KSMIRCE) with the support of ZdravPlus and the MOH.

KSMIRCE should provide the institutional home for the program.

**Selection of Trainees:** After advertising the new TOT program, a joint commission involving all the above stakeholders used a competitive selection process to choose 10 doctors from Bishkek as the first class. These new trainers were relatively young internists, pediatricians, and gynecologists. Those who were from KSMA and the KSMIRCE had some teaching experience and advanced scientific degrees, which allowed them to give formal lectures once they completed their TOT course. In contrast, those recruited from polyclinics tended to have stronger clinical backgrounds, but less teaching experience and no advanced scientific degrees. This became a problem after their graduation, since the country's academic system initially limited their teaching to clinical settings and small group seminars, and did not allow them to give lectures. The problem was largely resolved as all the trainers became certified to teach various internationally recognized short courses such as WHO's courses on Integrated Management of Childhood Illnesses (IMCI), Healthy Lifestyles, Tuberculosis Directly Observed Treatment Short Course (DOTS), Practical Approach to Lung Health (PAL), and others.



**Access to Patients:** In the first TOT class in Bishkek, three practicing physicians (a pediatrician, an internist, and a gynecologist) were recruited from the polyclinic where the FM training center (FMTC) was located. This provided the FMTC's teaching clinic with a patient base for clinical training. This was the only way to obtain access to a stable patient population, since at the time, all the city's population was assigned geographically to pediatricians, internists and gynecologists working in polyclinics. Unfortunately, attempts since then to allow FMTC trainers to have their own patient population have been largely unsuccessful. This puts the trainers at risk for losing their clinical skills over time. The interim solution has been to incorporate FGP doctors and their patients into the FMTC's, then to "borrow" the FGP doctors' patients for teaching purposes.

**Clinical Curriculum:** The foreign FM consultants realized early on that the clinical portions of the TOT courses would be most important. Regardless of their background, all the TOT course participants lacked training and experience in many of the basic clinical skills that family doctors and nurses use regularly. For instance, before the TOT course, none of the trainees were able to perform otoscopy, ophthalmoscopy, suturing, or a screening neurologic exam. In the Soviet system clinical skills such as these were reserved for subspecialists. Therefore, the TOT curriculum for doctors included a half-day of direct patient care every day. The expatriate consultants mentored trainees as they cared for a broad spectrum of patients, including both sexes and all ages. This one-on-one practical teaching was essential in order to transform the trainees' approach to clinical reasoning and to convince them that it really is possible for family physicians to care for more than 80 percent of the health care needs of entire families. It allowed them to begin to experience the joys and challenges of having a long-term therapeutic relationship with a multiple patients from the same families. Most of this clinical experience was on an outpatient basis at the FMTC clinic, but occasionally the trainees went to hospitals for one or two days to specialty departments. The TOT participants used regular clinical case conferences to share lessons learned or solve lingering questions from their clinical encounters.

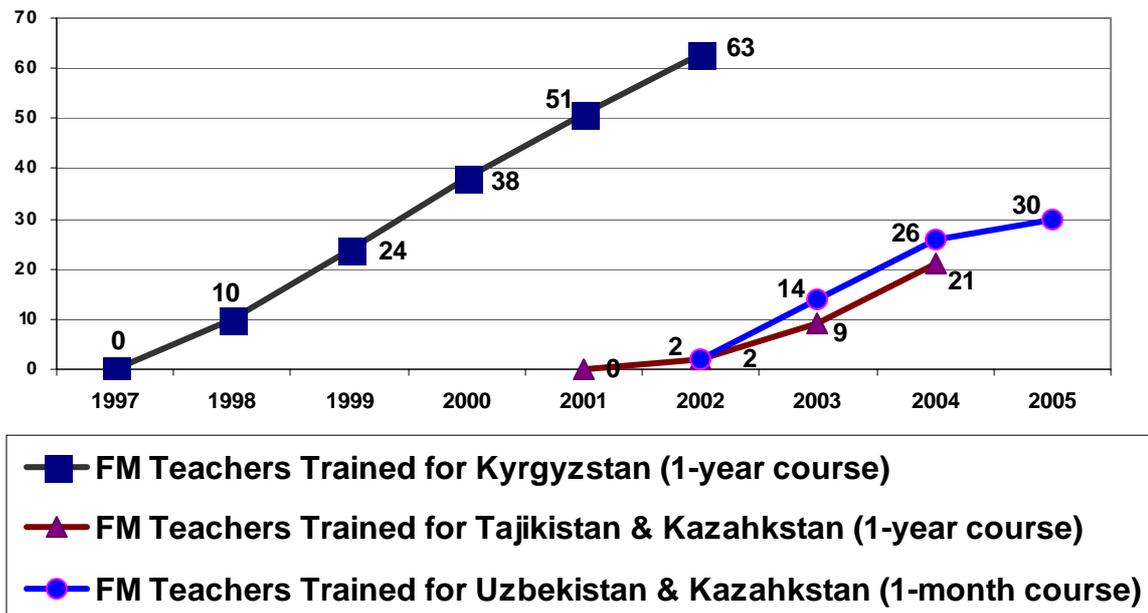
**Didactic Curriculum and Exams:** The TOT curriculum expanded upon this clinical training by providing one lecture and one practical seminar every day. The topics were organized syndromically into 37 different clinically relevant modules such as back pain, chest pain, headache, cough, depression, anxiety, family planning, and healthy lifestyles. This reinforced a more holistic approach.

If trainees did not pass the written test at the end of each module, they participated in more training until they could demonstrate competency. They also had to pass comprehensive mid-term and final exams. Starting in about 2000, their clinical skills and reasoning abilities were evaluated periodically using OSCE's (Observed, Structured Clinical Exams).

**Distribution of New Trainers:** Each year, this TOT program was repeated for a class of about 12 doctors and 15 nurses. Initially, most of the trainees were from Bishkek, including ten doctors from the newly formed FM Department at the KSMA, and 11 physicians who stayed at the KSMIRCE's new FM Department. Similarly, many of the first nursing TOT graduates stayed on to become the faculty members for the program. Over time, more physicians and nurses were recruited from other oblasts then sent back to their home oblasts after graduation to help set up oblast-level FMTCs. By 2002, all seven oblast FMTCs were fully staffed by FM TOT graduates. ZdravPlus provided salaries for these teachers, which helped greatly with recruitment and retention.

**Transition to a Regional TOT Program:** From 2002-2005 this TOT program transitioned into a regional TOT program for doctors and nurses from Tajikistan, Kazakhstan and Uzbekistan, with 21 doctors and 18 nurses from these surrounding three republics finishing the one-year course. The KSMI also created a briefer one-month clinical clerkship at the FMTC to provide supplementary clinical training to FM doctor trainers from Uzbekistan and Kazakhstan who had already completed a largely didactic FM TOT program sponsored by the British Department For International Development (DFID). So far, 30 physicians have participated in these clerkships.

**Graduates from Bishkek's TOT Program for Doctors**



The nurses TOT program had very similar numbers of graduates from Kyrgyzstan and surrounding republics.

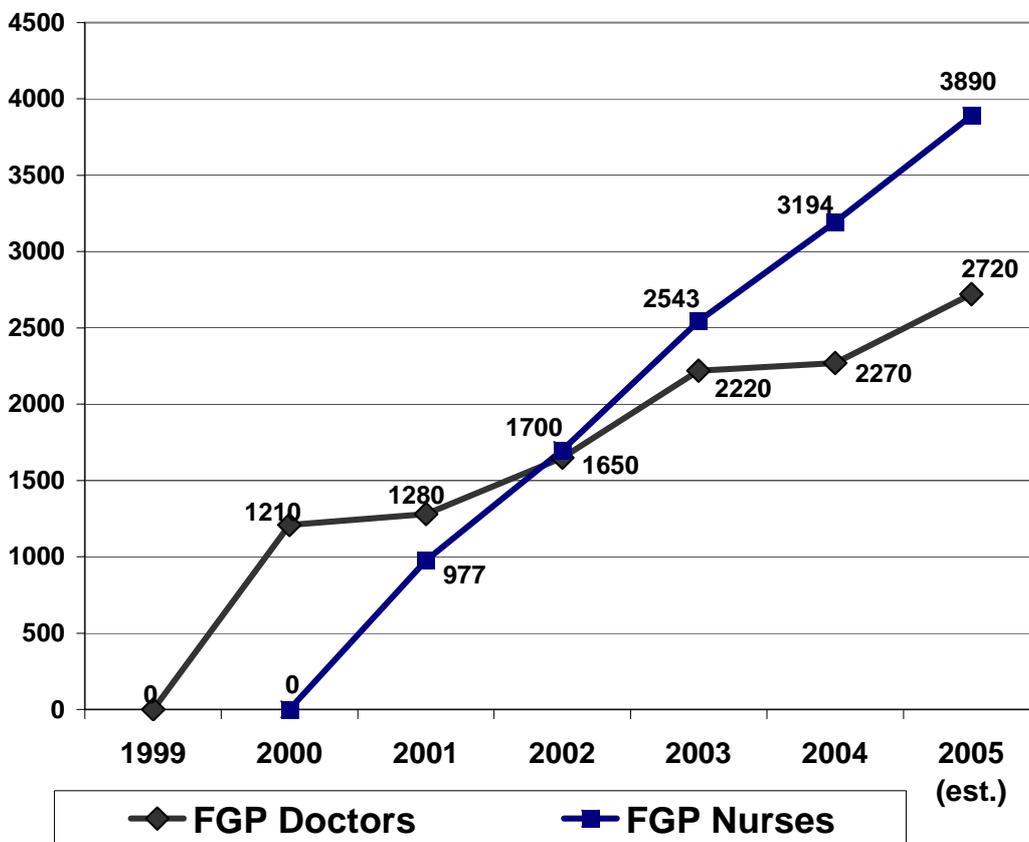
## B. Retraining Program

**Structure and Curriculum:** Shortly after the TOT course began, the KSMIRCE also initiated the retraining of pediatricians, gynecologists, and internists to become FGP physicians. This involves a set of training modules which take four-months to complete but are spread out over a one to two-year period. The curriculum is divided in two phases. The first three months (phase I) is organized by

specialty and organ system and primarily involves lectures, workshops, and visits to hospitals and clinics. This first phase is typically divided into either three or six-week blocks, so that the physicians are never away from their practice for too long. Phase II, a one month block, takes a more interactive integrated approach and mostly covers the various WHO modules mentioned earlier.

**Evolution of the Retraining Program:** Initially, various specialists from the KSMIRCE and the STLI consultants provided this training. As more FM trainers graduated from the TOT course, though, they gradually assumed responsibility for the retraining, which occurred in KSMIRCE's seven FMTCs. In 2002, both the doctors' and nurses' curricula were updated. By Dec. 2005, a total of 2,725 FGP doctors and 3,890 FGP nurses will finish the course. This represents essentially all the FGP doctors and about 85 percent of the FGP nurses in the country. This retraining has been well received, particularly by those working in rural areas, where doctors were already often treating patients from all age groups, but without the proper training.

**Graduates from the Retraining Programs in Kyrgyzstan**



**Issues/Barriers:** Unfortunately, the FGP physicians retrained in Bishkek are still administratively and legally classified as pediatricians, internists, or gynecologists. Elsewhere in the country, they are formally recognized as family doctors and are paid according to new rates specific to family doctors, which are higher than those for pediatricians, internists and gynecologists. In Bishkek the legal barrier to making this classification shift was finally overcome in the fall of 2004. However this new policy has still not been implemented. The delay in the legal and policy reforms in Bishkek has had serious consequences. Most of the FGP doctors in Bishkek completed their retraining over four years ago, but they have not been allowed to or encouraged to actually practice as family physicians. Now, they have forgotten much of what they learned outside of their former specialty area, so they are reluctant to work as family doctors.

A new continuing medical education (CME) system for urban FGP doctors is being started this year to begin filling this gap created by the delay in the legal and policy reforms. In reality, this CME for urban FGP providers will probably not be adequate to help them become true family doctors. The transition to FM in Bishkek may ultimately depend on gradually replacing FGP doctors with graduates from the FM residency program over a 10-20 year period.

## VII. Phase II (Long-term FM Training Programs)

**Transitioning of Training Programs:** The training of trainers and the retraining programs were intensive temporary interventions used to relatively quickly begin addressing Kyrgyzstan's health care crisis. Now, with the TOT Program ended and the FGP Retraining Program nearing completion, the KSMIRCE is shifting its focus toward its long-term sustainable FM programs: the FM Residency Program (FMRP), the Continuous Medical Education (CME) program, and an FGP-level Quality Improvement System (QIS). The FMRP, which is operated by the KSMIRCE and KSMA jointly, will provide an ongoing supply of family physicians. The CME program will help maintain and expand the knowledge and skills of all the family doctors and nurses. The QIS helps to provide a relatively simple inexpensive method for the staff of FGPs to gradually improve the quality of care that they provide. Undergraduate education for doctor and nurses has improved the least, but will be addressed in part during the next phase of the reforms.

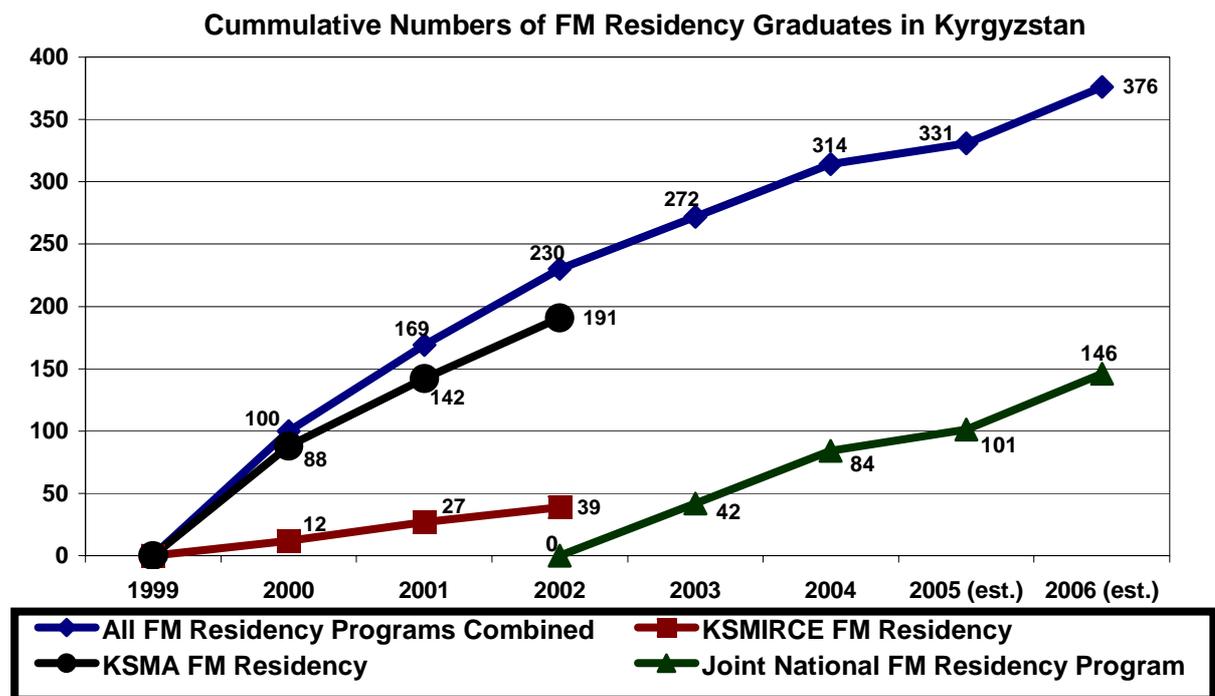
### A. Family Medicine Residency Program

In response to the momentum created by Project Manas, both the KSMA and the KSMIRCE created departments of FM and started separate FM residency programs in 1998. Even while most of the ten new FM faculty members from the KSMA FM Department were still involved in KSMIRCE's one-year FM TOT program, the KSMA enthusiastically routed over 100 of its graduates into their new two-year FM residency. Unfortunately, this rush of enthusiasm resulted in a poorly designed program that was overwhelmed by the large quantity of residents. Because the FM trainers were still being trained, most of the residency involved specialty rotations in hospitals. Within a year, many of the first class of residents dropped out. The KSMA continued the program, with fewer residents each year. The KSMIRCE also began a FM residency in 1998, graduating 12 residents in July of 2000, 15 more in 2001, and 12 in 2002.

In 2001 the KSMA and KSMIRCE created a new joint National FM Residency Program (NFMRP) with the help of ZdravPlus, American International Health Alliance (AIHA), and STLI. They created a new NGO (the Association of Medical Clinical and Research Educational Institutions - AMCREI) as a mechanism to allow the KSMIRCE and the KSMA to jointly administer this program. AMCREI received and administered a grant from ZdravPlus designed to help establish the new program. This two-year postgraduate FM program involved 50 residents per year and included some key new improvements in the curriculum. For the first year and a half, the residents spend two half-days per week seeing patients in one of five family medicine teaching clinics in Bishkek. There, graduates of the FM TOT program supervise them. During their last six months, the residents spend most of their time at these clinical sites, and also spend two weeks working at a rural FGP. Throughout their residency, the trainees also attend a weekly lecture series. These longitudinal clinical and didactic aspects of the curriculum are supplemented by a variety of block rotations in various other clinics and hospitals, where the residents are exposed to all the basic specialties.

In order to attract new medical school graduates into the NFMRP, AMCREI paid the residents a stipend of \$5 per month, offered to send the best resident on a study tour in the United States, and promoted the international link with STLI and the AIHA partners (Univ. of Nevada – Reno and Univ. of South Florida). For each of the first two years, 56-59 residents were selected competitively

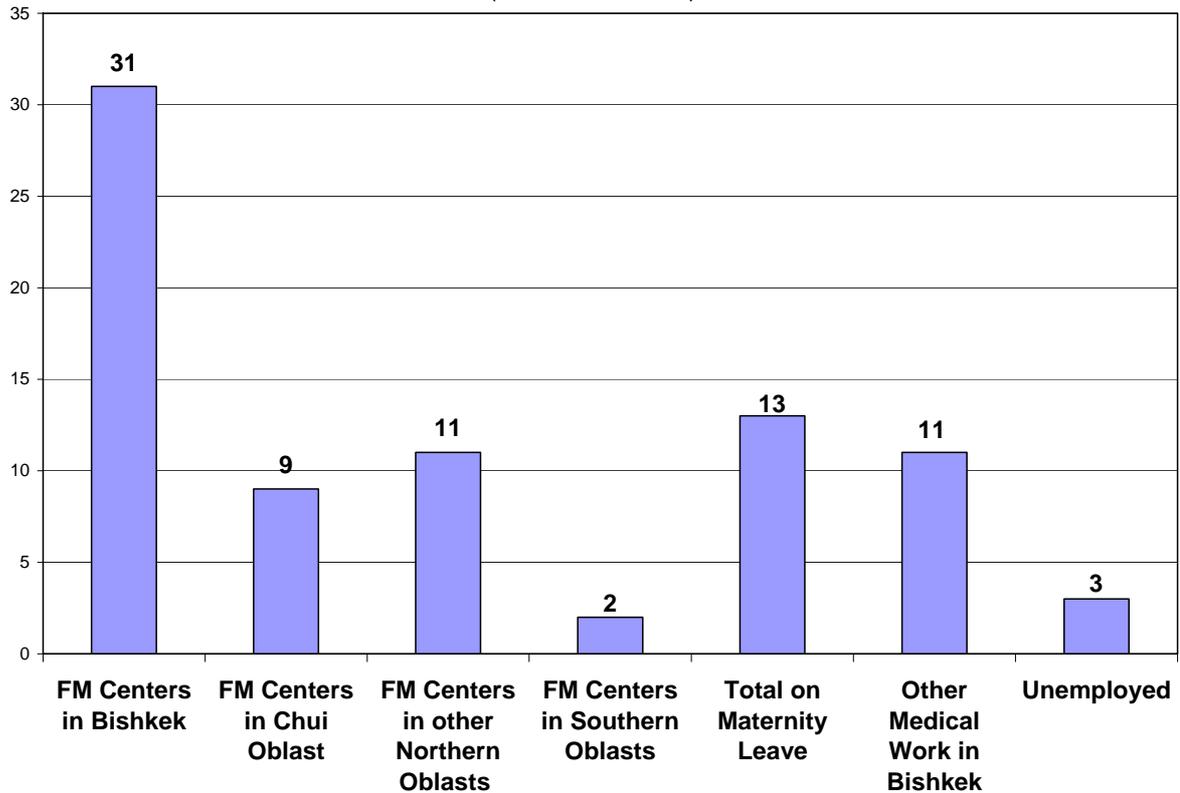
from a relatively large group of interested medical school graduates, but for the two years after that, the applicant pool in Bishkek diminished. The reasons for this declining interest are uncertain, but may relate to the ending of the AIHA partnership, the lack of acceptance of FM by the Bishkek City Health Department, the uncertainty regarding the future of FM, and the low salaries and high workload for family doctors. In 2003 and again in 2004, 42 new family doctors graduated annually from this NFMRP. While the class of 2005 is much smaller (17), the class of 2006 currently includes 45 residents, with 24 of these being in the new southern branch of the NFMRP, which started in Osh in September 2004.



**Issues/Barriers:** According to recent data from the World Bank, Kyrgyzstan will need 100-125 new family doctors annually in order to maintain adequate staffing of FGPs.<sup>i</sup> This is assuming that these new physicians will be distributed appropriately between the North and the South and between urban and rural sites. Distribution is already a problem, with the density of physicians in Bishkek being twice the national average. A recent survey of the first two graduating classes from the National FMRP showed that half were working in Bishkek, about one-fourth were working in other smaller towns in the north, 16 percent were on maternity leave, two were switching specialties (to gynecology), and three were unemployed (see the following graph). In contrast, about 30 percent of all recent medical school graduates in other specialties are typically unemployed. Unfortunately, only two out of the 84 graduates have gone to work in the southern half of the country. Opening a branch residency in 2004 in the southern capital of Osh should resolve this maldistribution, since half of the current first year residents are studying in Osh.

Eventually, more FM residents will need to be trained, but care must be taken to avoid compromising the quality of the training by expanding the quantity of trainees too quickly. At this point, an insufficient number of new medical school graduates are interested in FM, and the quality of these incoming residents is poor. These issues will be difficult to address, since they require improving the quality of undergraduate generalist education, improving the FM residency program, and, most importantly, making the specialty of FM more attractive by improving the salaries and working conditions of family doctors.

## Current Worksites of the 2003-4 FM Residency Graduates (as of March 2005)



### B. Continuing Medical Education (CME)

**The Need for CME:** During the initial retraining course, FGP doctors and nurses learn the principles of family medicine and the essential aspects of most common medical issues. However, this is only the first step toward becoming a confident, competent family doctor or nurse. In order to continue building up their confidence and skills, these new FGP doctors and nurses require daily experience outside their former specialty, easy access to quality reference materials while seeing patients, and regular continuing medical education.

In most regions of the country, the first requirement (daily clinical experience with a broad spectrum of patients) is met by the interdisciplinary structure of the FGPs and by the new legal and policy framework that encourages FGP doctors to care for a mixed patient population. Unfortunately, in Bishkek, the legal and policy changes lagged behind, so FGP doctors still primarily care for patients within the bounds of their former specialty.



The second requirement, easy access to reference materials, has improved a little, but much more can be done. In the 90's FGP doctors had almost no up-to-date reference materials. Now, they have easy access to the 50+ new clinical protocols that pertain to primary care. During their retraining, most of the FGP doctors also received a book on essential clinical skills for family physicians written by the FM Department of the KSMIRCE. This year the World Bank is going to print a copy of a new

“Quick Reference Guide” for every FGP doctor and every feldsher clinic. This book, written by the ZdravPlus (STLI) doctors and reviewed by the local faculty members, provides a brief summary of essential information for 80 common or important medical conditions.

The problem of reference material is even greater for FGP nurses, since relatively few nursing texts have been translated into Russian or Kyrgyz, and the Russian nursing texts that do exist reflect a style of nursing that does not fit well with the goals of the health reform process. In order to address this problem, the staff of the KSMIRCE FM nursing program reorganized the teaching materials from their nursing TOT course, expanding it into a book in Russian called “The Fundamentals of Nursing”. ZdravPlus printed 2,700 copies of this 580-page book, which the KSMIRCE distributed to all the country’s FGPs and nursing schools. They hope to update this book during the next year, and eventually they also hope to translate it into Kyrgyz. Early in 2006, the Center for FM Nursing at the KSMIRCE plans to complete a medical-surgical nursing text with the help of ZdravPlus. In addition, the KSMIRCE nurses recently finished a 300-page book that summarizes the two-month FGP nursing retraining course, and the World Bank plans on printing that for all the nation’s FGP nurses who finished the course.

The third requirement for ongoing professional development for FGP doctors and nurses is a good continuing medical education (CME) system. The traditional Soviet-style CME system in Kyrgyzstan was based on doctors and nurses traveling to Bishkek or Osh once every five years to sit through a month of lectures. After the collapse of the Soviet Union, most doctors and nurses outside of Bishkek and Osh could not afford to travel to such training, so many have not had any up-dates in their medical education for over 10-15 years.

**CME Pilot:** To address this problem, the KSMIRCE and the FGPA launched a new CME program for FGP physicians the Issyk-Kul Oblast in March of 2001, using ZdravPlus funding. Besides providing modules on topics either not covered in the retraining or which need to be updated and re-emphasized, the CME system also serves as a rout by which new national health policies, clinical practice guidelines and international programs can be introduced and implemented.

**CME System Structure:** The new system provides more frequent and pertinent medical updates through regional seminars in the oblasts, on-site clinical workshops at FGPs, and individual study modules. The program is designed to be modular, flexible, and tailored to meet the needs of FGP doctors, nurses and feldchers. The system is based on CME cycles, which currently are one-year-long for doctors and feldchers and one and a half years for nurses. During each cycle, every FGP doctor and nurse attends a five-day regional seminar within their oblast, and they also benefit from a two-day site visit to their FGP or to a neighboring FGP by oblast-level FM

*Feldcher CME*

Also, this year, with the help from the World Bank and ZdravPlus/STLI, the KSMIRCE is expanding the CME system to include the country’s 800 feldchers who work in rural clinics and the 400 feldchers who work for ambulance services. Initially during the Manas Program, the future of feldchers was unclear. Later, they were encouraged to participate in the two-month nurses’ retraining program, however only about one-fourth of them did, because it was difficult for many of them to leave their rural clinics for such a long period of time. Many of them serve as the only local health provider for their rural population.

In order to adjust to this limited availability of rural feldchers, the current plan is to skip the retraining step for the remaining feldchers and to jump directly to an ongoing CME system. Assuming adequate ongoing funding, this new feldcher CME system will provide annual access for each feldcher to a two-week seminar in their region, a two-day site visit by a KSMIRCE feldcher trainer, and individual study materials. During 2005, this new CME system will be used to complete IMCI training nationally for all the feldchers who work in rural clinics and to complete national training using a two-week pre-hospital emergency medicine overview course for the ambulance feldchers.

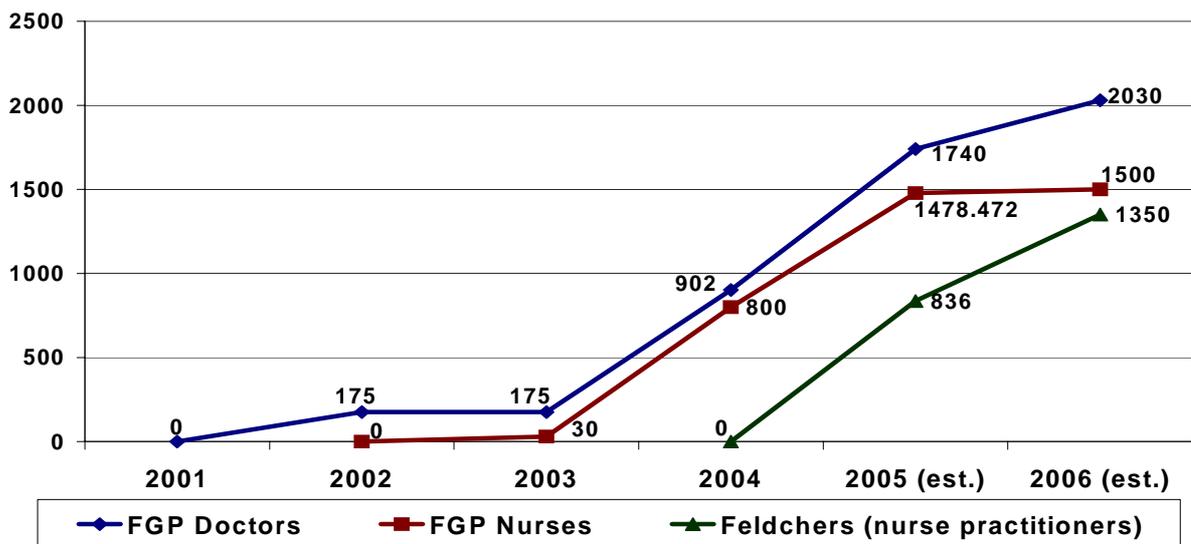
To accomplish this, the KSMIRCE recently offered a six-week course to prepare 10 ambulance feldchers as oblast-level trainers. Currently, they are also running a six-month TOT course to prepare 14 rural clinic feldchers as oblast-level CME trainers.

trainers. The topics for these seminars and site-visits are repeated during the entire CME cycle, so that all the doctors and nurses in that oblast study the same topics for that cycle. Individual study topics are more flexible. A credit-hour system will eventually be used to track the amount of CME accomplished by every participant. Eventually, this data will probably be used as one of the criteria for determining each FGP doctor's professional standing. This will help motivate physicians to participate in the CME system, since their salaries are influenced to some extent by their professional category.

**Interest in CME:** Even though such formal CME requirements have yet to be established, FGP doctors and nurses have shown great interest in participating in the CME program. In Issyk-Kul Oblast, over 95 percent of the FGP doctors have participated annually for the past three years.

**CME System Expansion:** After a successful CME cycle for doctors in Issyk-Kul, the system was extended to include some FGP nurses in that oblast. In 2004, with the help of ZdravPlus and the World Bank, it was expanded to all oblasts, involving about one-third of the country's FGP doctors and nurses. Further expansion is planned for 2005-6 so that over two-thirds of the FGP doctors and almost half of the FGP nurses will be involved.

**Primary Care Provider Participation  
in the New CME System by Year**



**Issues and Barriers:** A number of barriers remain to effective implementation and institutionalizing the CME system. The expense of transportation is a significant issue. Kyrgyzstan is 80 percent mountainous and 65 percent of the population is rural, thus transport to regional seminars can be expensive relative to their average monthly salaries (\$35/month for FGP doctors and \$25/month for FGP nurses). Even though the regional seminars are held in two or three different sites in each oblast, travel costs would still be a big barrier if ZdravPlus and the World Bank were not subsidizing this expense. Fortunately, it is likely that this financial support will continue for four to five more years, and that it will be supplemented by additional donors wanting to use the CME system to expand various pilot-proven vertical health programs nationally. However, it is very important for the CME system to be sustainable by 2010.

Potential options for sustainability include: A gradual shift toward computer-based distance education (CBDE), which would dramatically reduce transport costs; having the doctors and nurses cover some of their own CME costs, assuming their salaries improve significantly in the future; increasing

government funding for CME; and continuing to receive support from donor agencies that use the CME system to roll-out their vertical health programs. Hopefully, a combination of these solutions will develop. It would be preferable to continue to avoid using pharmaceutical company funding for CME, because of the great potential for biasing the CME content. The ZdravPlus project is planning to help develop capacity within the KSMIRCE and KSMA to create and adapt materials for CBDE. In 2007-8, they plan to field test the new CBDE approach. In addition, ZdravPlus plans on helping

#### *Integrating Vertical Health Programs into National FM Training Programs*

One of the successful characteristics of the FM training programs in Kyrgyzstan has been their tendency to integrate internationally recognized vertical health programs into institutionalized national training programs. Typically, this involved international organizations preparing the KSMIRCE FM trainers to be able to provide ongoing training in the KSMIRCE's various national FM training programs. Many WHO programs were integrated into the four-month retraining curriculum for doctors, including IMCI, Healthy Lifestyles, Tuberculosis DOTS, and a course on rational drug use. USAID's SEATS project contributed a course on reproductive health. Other vertical programs were integrated through the KSMIRCE's CME system. ZdravPlus helped to implement WHO's program for syndromic management for STIs in this fashion. Similarly, two vertical programs will be the key topics for CME seminars for FGP doctors, nurses and fieldchrs during 2005 and 2006: the WHO course, PAL (promoted by the Kyrgyzstan-Finland Lung Health Program) and a clinical pharmacology course, (promoted by CitiHope International).

The integration of vertical programs in the national education system helps to promote structural changes within the health care system. Typically, these changes involve shifting health care services from the costly tertiary care level to the more economical and convenient primary care level. For instance, the WHO DOTS strategy for tuberculosis results in the bulk of the diagnosis and treatment for TB patients being done on an outpatient basis by FGP doctors and nurses rather than in a separate national network of tuberculosis clinics and hospitals. FGP doctors were prepared for this by studying DOTS during their retraining course, and now they are having DOTS reinforced through the PAL program as part of the CME system.

to combine the FGPA and the two NGOs that are involved with FM education into a single NGO. This new combined NGO should be able to assist other international organizations to easily integrate their vertical health programs into the CME system nationally, thereby supporting the CME system.

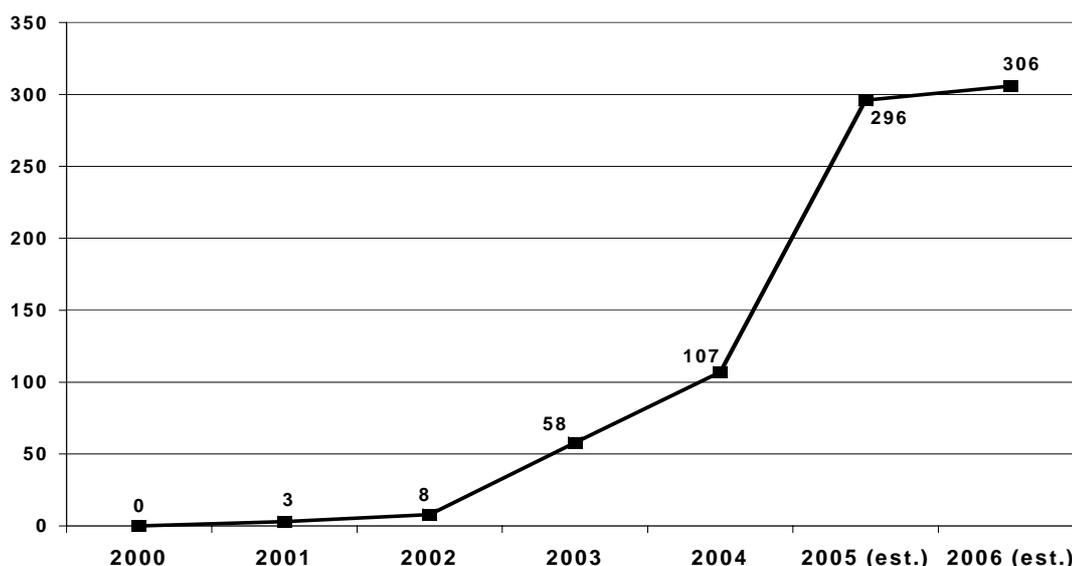
### **C. Quality Improvement System (QIS)**

**Overview:** The CME system was begun in conjunction with a Quality Improvement System (QIS). The QIS helps FGP staff to self-evaluate their practice and then to improve it quarterly on an ongoing basis. The QIS is linked loosely to the CME system, in that learning issues identified by the QIS can be addressed to some extent during CME site visits and by individual study CME topics. The QIS has many other benefits as well. Probably the two most important results, which unfortunately are hard to quantify, are: a shift in the mentality of the FGP staff toward internally-driven self-improvement and away from a passive dependence on the centralized health bureaucracy; and the development of a more supportive link between the community and their FGP. One aspect of the QIS evaluation process is a quarterly patient satisfaction survey. Sometimes, the FGP staff responds to this feedback by asking the community to help solve any problems which patients identified. For example, in response to patient's concerns about their facility, some FGPs have asked the community to help, and people have donated materials or labor to improve the building. This has resulted in a greater sense of ownership and involvement on the part of the community. The QIS also focuses on improving clinical care in a non-threatening low-cost manner.

**Expansion of the QIS:** Like most other FM programs, the QIS was piloted initially in Issyk-Kul by the FM trainers at the FMTC in Karakol. With the help of a ZdravPlus consultant, they established the QIS in three FGPs during 2001, focusing initially on improving the quality of reproductive health services.<sup>ii</sup> Since then, the QIS has been expanded in scope to focus on additional clinical areas, including hypertension, well-child care, and anemia. It also expanded geographically, to all oblasts by 2004, and there are tentative

plans to extend to at least one pilot FGP in almost every rayon nationally by the end of 2006. With the help of the Swiss Red Cross and ZdravPlus, the QIS was expanded to all the FGPs and rural feldcher clinics in the Jungal Rayon of the Naryn Oblast in 2004, using the concept of voluntary rayon-level QIS coordinators. Two FGP doctors were chosen by their peers to become rayon-level QIS coordinators to facilitate the QIS in the other clinics in that rayon. An addition feature of this pilot expansion process is to encourage a link between village health committees and the QIS process. Experience with this method for expanding the QIS rayon-wide was initially positive, so the method is being used during 2005 to expand a simplified and flexible version of the QIS to all the FGP's and feldcher clinics in the Naryn and Talas Oblasts, with the help of the Swiss Red Cross, the World Bank, and ZdravPlus.

**Cummulative Number of FGPs or Rural Feldcher Clinics  
In Kyrgyzstan Where the QIS Was or Will Be Established**



## VIII. Results

### A. Overview of Recent Monitoring Studies

Clearly, the national reforms have had a big impact on the efficiency and the effectiveness of the health care system in Kyrgyzstan. Recently, was been documented in two studies: the 2002-2003 study by the MOH and the KSMIRCE, which evaluated the staff of 55 randomly chosen FGPs from all oblasts<sup>iii</sup>, and a 2003-2004 study by a team from London's Imperial College (led by Dr. Rifat Atun) in conjunction with the World Bank<sup>iv</sup>, which compared the health care reform process in four former Soviet republics. This study involved 100 FGPs and 200 FGP doctors from three oblasts in Kyrgyzstan. Both surveys confirmed that the new FGP doctors and nurses in Kyrgyzstan are indeed making significant contributions toward accomplishing the main goal of the Manas Project: improving the efficiency of the health care system while maintaining or improving quality. The positive results of these two studies are consistent with some data on the burden of disease in Kyrgyzstan collected by the Central Asian branch of the US Center for Disease Control, which documents significant improvements in the years of potentially lost life due to a variety of common causes of death.<sup>v</sup> Another study from 2001, by ZdravPlus consultant Charles Hardison, documented the attitudes of 650 FGP doctors toward the reforms and compared them with colleagues in neighboring republics.<sup>vi</sup> Finally, annual KAP (Knowledge, Attitude and Practices) surveys of the general population done by ZdravPlus documented the patients' views regarding the new health system. The results of all these studies are detailed in the sections that follow.

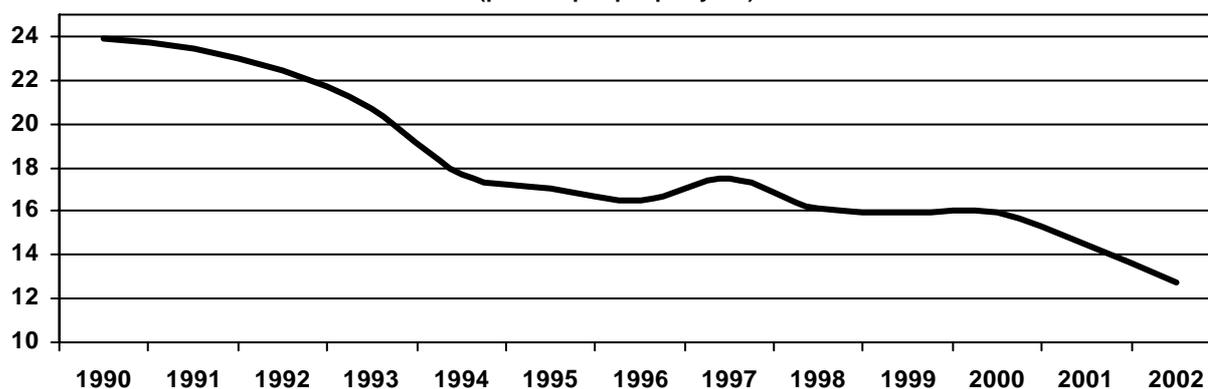
## **B. Improved Continuity and Comprehensiveness of Primary Care**

Early on in the reform process the MOH identified Issyk-Kul Oblast (IKO) as the pilot site for the health care reforms. This has proven to be a very effective method of reform implementation. It allowed the interventions to be tested, improved and proven before expanding them to the entire country. Thus, IKO has also provided the best evidence of a positive impact from the reforms in general and from the introduction of FM in particular. The 2003 Imperial College/World Bank monitoring took advantage of the relatively maturity of health reforms in the IKO, by comparing them to areas where the reforms had been implemented more recently and less completely, like Osh Oblast and the City of Bishkek.

This study showed that FGP doctors in IKO are significantly more likely to serve as the point of first contact for patients with a very wide variety of conditions, when compared to FGP doctors in Bishkek and Osh Oblast. For example, in IKO, FGP doctors were the point of first contact for 100 percent of the children with a rash or severe cough, compared to only 56-64 percent Bishkek and Osh. Similarly, in IKO more than 95 percent of women needing oral contraception or a confirmation of pregnancy and 95 percent of men with abdominal or chest pain would seek help first from their FGP doctor. In contrast, less than 45 percent of Bishkek patients with these issues would present to their FGP doctor first. That study also demonstrated that IKO doctors were significantly more likely than their colleagues in Bishkek and Osh to manage their patients' chronic illnesses, to provide health promotion and preventive services, and to use a variety of medical techniques. Almost 90 percent of the FGPs in the IKO provide mental health services compared to less than 60 percent of the FGPs in Bishkek and Osh.

This research also documented that the FGP doctors in all the oblasts surveyed had declining number of hospital referrals per person on their patient list, with a 13 percent decrease between 2001 and 2002 and a 56 percent decrease the following year. Very similar declines in hospital referral rates were documented for acute ENT problems, lower respiratory tract infections in children under five years old, hypertension, type II diabetes mellitus, angina, and asthma. These findings are supported by the MOH statistics for the entire republic, which show declining hospitalization rates. This change implies improved continuity of care and convenience, since more patients are now getting more of their care from a doctor in their neighborhood clinic, rather than being cared for by multiple subspecialists in a hospital. This point is more significant than it might at first seem, since there is very little communication between in-patient and out-patient doctors. Of course, the economic benefit of the lower admission rate is also significant, particularly since there has also been a decrease in the average length of stay from 15 to 13 days. These improvements have allowed a 35 percent decline in the number of hospital beds over the past five years.

**Hospital Admissions Nationally  
(per 100 people per year)**



### C. Improved Quality of Care and Cost Effectiveness

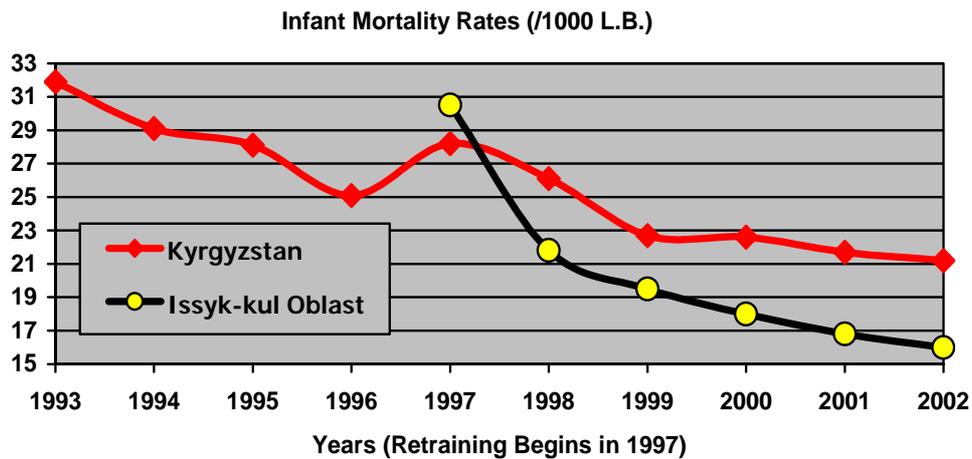
As just implied, improvement in the quality of primary care often provides the added benefit of reducing costs. The 2002-2003 MOH monitoring study mentioned earlier showed, on average, a two-fold improvement in FGP doctors' compliance with the new MOH clinical protocols for asthma, hypertension, peptic ulcer disease, acute respiratory illness in children under five, pneumonia in adults, diarrhea, and iron deficiency anemia. This improvement in the quality of care was reflected as well by the study's data on prescribing patterns, treatment costs and referral rates for emergencies. The study documented a much more rational prescribing pattern in 2003 as compared to 2002. The average percentage of medications prescribed that are included in the essential drug list increased from 45 percent to 79 percent. Also, the average number of drugs prescribed for each visit dropped from four to two. The average percentage of prescriptions given as injections was also cut in half between 2001 and 2003, dropping from 34 percent to 17 percent. Similarly, the average percentage of patients with upper respiratory infection who were prescribed antibiotics fell from 34 percent in 2002 to 13 percent in 2003. The benefits of these improvements were supplemented by a decrease in the average medication cost for treating all the illnesses monitored in the study, due primarily to the government dropping the value added tax on imported medications. The end result was better care at a lower cost.

#### *Clinical Practice Guidelines and Evidence Based Medicine*

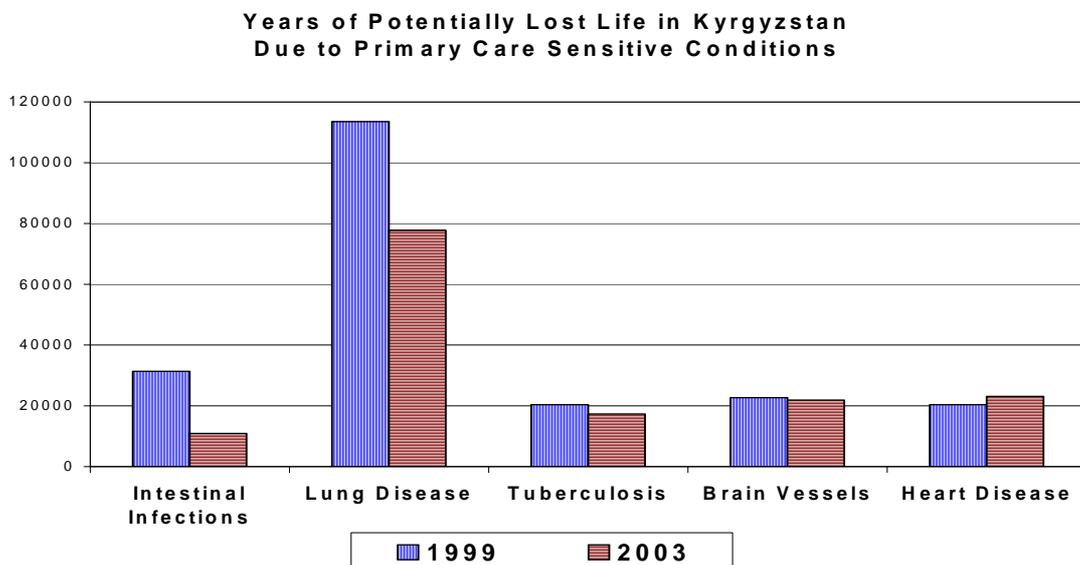
Kyrgyzstan is moving rapidly to improve the quality and efficiency of clinical practice through the introduction of evidence-based medicine and new clinical protocols. To date, 162 new clinical protocols have been approved by the MOH. In 2003, ZdravPlus, WHO, and the World Bank collaborated to do an audit of Family Group Practice (FGP) medical records to determine if FGPs increased their compliance with these clinical protocols from 2002 to 2003. The results for three PHC-sensitive conditions show increased compliance as follows:

- Hypertension –compliance increased from 49% to 77% nationally, and from 51% to 86% in Issyk-Kul Oblast, where FGP development has been occurring the longest;
- Bronchial Asthma – national compliance increased from 27% to 60% and Issyk-Kul Oblast compliance increased from 22% to 77%;
- Stomach and Duodenum Ulcer – national compliance increased from 28% to 65% and Issyk-Kul Oblast compliance increased from 44% to 71%. During this same time period, the average cost for treating an ulcer patient decreased by 50% and one-third fewer ulcer patients were referred to the hospital.

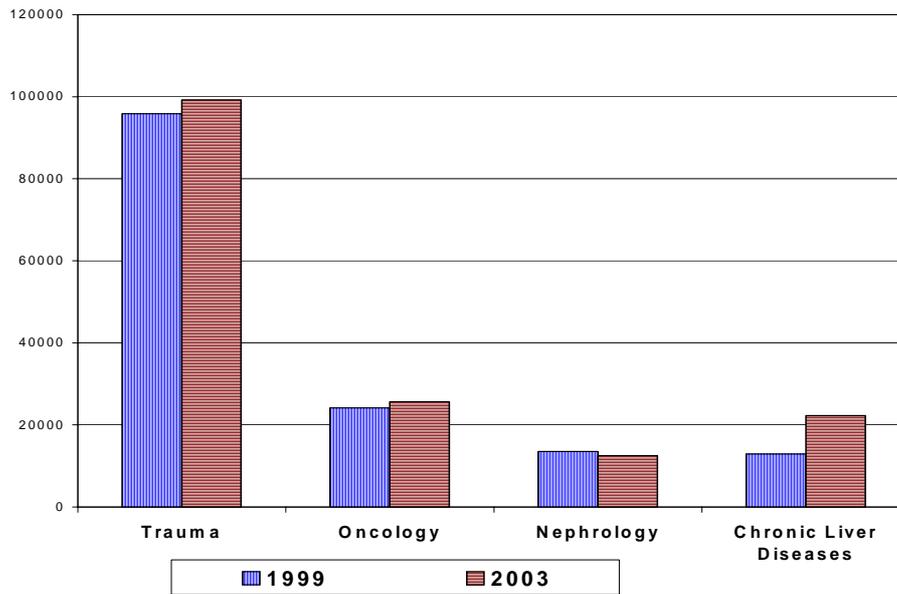
These data shared so far document mainly intermediate results: showing that the new FGP doctors and nurses are providing more evidence-based primary care according to the principles of FM, which promote continuity, comprehensiveness and cost effectiveness of health care. Fortunately, additional data from other sources also document improvements in the population's actual health status. For example, in 1997, the year the FGP retraining started, the IKO had the highest infant mortality rate in the republic (31/1000), according to official MOH statistics. Since 2000, it has had the lowest infant mortality rate compared to all other oblasts, having fallen to 16 in 2002. It was the first oblast to start and to finish the retraining (2001). While there are probably many causes for this improvement, it is likely to be related, at least in part, to the Manas Project in general and to the FM training in particular.



Similarly, the CDC's independently collected data shows dramatic declines from 1999 to 2003 in the years of potentially lost life (YPLL) due to pulmonary diseases and intestinal infections in Kyrgyzstan. It is likely that these improvements are related, at least in part, to improvements in primary care since these diseases can be impacted quickly by basic improvements at the primary level. The YPLL did not change much for some other primary-care sensitive conditions, such as heart disease and stroke, presumably because many years of good care are required before mortality levels begin to improve. Other conditions, which are less impacted by basic primary care, such as trauma and oncology, also showed little change.



**Years of Potentially Lost Life In Kyrgyzstan Due to Conditions that are Less Sensitive to Primary Care**



#### **D. Attitudes Toward the Manas Reform Project**

**FGP Doctor’s Attitudes:** In 2001, a ZdravPlus team lead by Dr. Hardison showed that FGP doctors’ attitudes toward reform were correlated positively with the quantity of resources devoted to the reform effort in their region. Thus, the FGP doctors in IKO felt the most positive about the reforms. The doctors felt that the most progress had been made in the area of FM education and that the least progress had been made in the area of improving health care worker’s salaries. However, this was before the complete rollout of the financial reforms, which have subsequently resulted in some improvement in salaries. The Imperial College study in 2003 confirmed, though, that most FGP doctors remained dissatisfied with their low salaries and the excessive amount of paperwork.

**The Population’s Attitudes:** In general, the populations’ attitude regarding the health reforms has been positive. The MOH/ KSMIRCE study included some information about patients’ attitudes. In 2003, 84 percent of patients had faith in their family doctor and 85 percent ranked the attitude of their family doctor and nurses as good.

ZdravPlus conducted four Knowledge, Attitude and Practices (KAP) surveys between 2001 and 2004 to examine public attitudes on a range of health topics.<sup>viii</sup> These surveys included a sample of 300 people over the age of 15, half from urban areas and half from rural areas, in three oblasts (Issyk-Kul, Jalal-Abad and Talas).

The surveys indicate that public perceptions of FGPs are more positive than a few years ago. While only 25 percent of respondents in 2001 stated that they thought services in FGPs were better than a couple of years ago, by 2004, 36 percent of respondents thought them better. About a third of respondents in both years thought they were about the same and a diminishing proportion thought they were worse.

Growing proportions of the population reported that they would prefer to go to a family doctor for routine health care, rather than to a specialist. In 2001, 40 percent preferred a family doctor, while 38 percent preferred a specialist. By 2004, though, this had shifted substantially in favor of family doctors with 57 percent preferring them, compared with 25 percent preferring a specialist. (Others in the survey saw no difference or had no preference.)

Utilization of family doctors also seems to be increasing, with just 25 percent of those interviewed in the 2001 KAP survey saying they had visited a family doctor, as compared with 61 percent in 2004. Increasing proportions of respondents stated that they would go to FGPs (rather than a hospital or polyclinic), for a variety of care: a child with diarrhea, childhood immunization, a child with a cough or cold, prenatal care, family planning, and hypertension.

### E. Related Results from Other Components of the Manas Project

The success of FM is interdependent on all the other components of the Manas Project. For instance, unless FGP staff salaries improve, it is likely that many of them will quit working and that few new medical and nursing school graduates will choose careers in FM. The initial success of the financial reforms and health care restructuring, have resulted in improved salaries for primary care workers in the past two years. Recently, ZdravPlus in collaboration with the World Bank and Kyrgyz partners solidified the process of documenting the progress with health delivery system restructuring. The process is ongoing, but early analyses show significant and positive results, as portrayed in the table below. In summary, the results show reductions in physical infrastructure and a reallocation of savings towards increases in staff salaries and direct patient care such as drugs.

<b>Year:</b> <b>Indicator</b>	<b>2001</b> <b>Actual</b>	<b>2002</b> <b>Actual</b>	<b>2003</b> <b>Actual</b>	<b>2004</b> <b>Planned</b>	<b>Change</b> <b>2001-2004</b>	<b>% Change</b> <b>2001-2004</b>
No. of Buildings	1598	921	921	843	755	-47%
Total Floor space	804,960	523,019	523,019	477,149	326,711	-40%
No. of Total Staff	49,371	50,201	51,087	47,639	2,632	-5%
No. of Hospital Staff	38,615	30,364	28,764	26,243	12,372	-32%
Average Salary/month (som)	533	645	754	932	399	+73%
Amount spent on Drugs per case (som)	135	157	207	277	142	+105%
No. of Treated Patients	503,877	465,115	529,206	549,789	45,912	+8%

Similarly, FM could not have developed without the help of the Manas Project's legal and policy team. Many official documents had to be created and approved to define and regulate the new specialty of FM. Progress within many other related components of the Manas Project are contributing to the success and sustainability of the FM training component: continued strides in the introduction of evidence-based medicine including the development of new clinical practice guidelines by specialty associations, approval of a national quality improvement strategy, expansion of reproductive health services in rural areas through midwives, health promotion campaigns (on nutrition and child health) and interpersonal communications skills training. These and other aspects of the reform effort are explained in more detail in various other ZdravPlus ([www.zplus.kz](http://www.zplus.kz)) and World Bank reports.

### *Out Patient Drug Benefit Package*

The introduction of an Outpatient Drug Benefit (ODB) was a key aspect of the single payer system and an important step in instituting Family Medicine in Kyrgyzstan. It provides a good example of intelligent health purchasing by the MOH/Health Insurance Fund. The HIF recognized that many patients were going directly to the hospital in order to obtain drugs; which were free for certain categories of patients. Regardless of whether patients wanted to visit a family doctor or not, being able to receive drugs for free from the hospital was a significant incentive to skip the FGP level and go straight to a hospital. Consequently, it was very difficult to strengthen or expand the scope of service of PHC without providing outpatient drugs. By subsidizing the drugs people need and letting them make those purchases at their local drugstores, the ODB works to reduce hospital admissions while still providing patients access to needed medications. The ODB was first tested in Bishkek and has now been rolled out nation-wide. Data from Issyk-Kul Oblast shows that, following the introduction of the ODB package visits to FGPs increased by 6 percent, emergency cases decreased by 38 percent and there was a 22 percent decrease in referrals to hospitals for primary health care sensitive conditions (asthma, hypertension, anemia, ulcers) from 2000-2001.

## **IX. Conclusion**

### **A. Summary of Successes**

In order to fully appreciate the successes of the Manas Health Care Reform Project in general, and of its FM training component specifically, one must envision what Kyrgyzstan's health care system would be like if such comprehensive reform had not been attempted. Very likely, it would have collapsed due to lack of funding, degenerating into a two-tiered system consisting of a basically non-functioning governmental system and an expensive, poorly regulated private medical system for the few who could afford it.

Thanks to the reforms, Kyrgyzstan has an intact national health care system that is still accessible to all, while remaining affordable for the government. At the same time, the quality of care has improved. The introduction of FM on a national basis has contributed to this success. Almost the entire primary care workforce has been retrained to provide a broader scope of care, using more evidence-based approaches. This expanded scope of primary care practices has resulted in fewer referrals to the secondary and tertiary care systems, which, in turn have been downsized. Thanks to the Single Payer System, savings from downsizing are now being reinvested into the primary care system, which helps to protect the investment made in retraining the workforce.

Other essential steps toward sustainability have included the creation of a national CME system for the new FM doctors and nurses, and, more recently, for feldchers. A solid national FM residency program has been established to respond to the natural attrition of FGP doctors, and this program was recently expanded to Osh to help address workforce shortages in the South.

### **B. Keys to Success - Lessons Learned and Barriers Overcome**

The success of such profound nationwide health reforms is unusual, and provides a good example for other CIS countries. Indeed many other countries have investigated the Kyrgyz model and are incorporating parts of it in to their health care systems. For those interested in learning from Kyrgyzstan's experience, it can be helpful to review the keys to the success and the lessons learned in the process.

Probably the most important key to the success of Project Manas has been the interagency cooperation involving many partners: the MOH, the Mandatory Health Insurance Fund, the FGP Association, the KSMIRCE, the KSMA, the World Bank, all of the USAID-funded health programs,

WHO, the Swiss Red Cross, and the Kyrgyzstan-Finland Lung Health Program. The work plans and budgets for Project Manas and the ZdravPlus project were highly coordinated, resulting in a very productive synergy. The benefit of this synergy has been multiplied by the continuity of the personnel involved with most of the organizations and the good communication between these personnel. This has resulted in good cooperation, a minimum of duplication, and a united front with which to face programmatic challenges and political opposition.



As discussed earlier, it was essential to reform many different aspects of the health care system simultaneously, since the various components of the system (the financing, the health delivery structure, the workforce, the legal and policy framework, and the population) are all interdependent. Changing these components is not easy, though, and it has required a step-by-step approach, typically starting with pilot projects outside of Bishkek involving relatively small changes, and then expanding these changes programmatically and geographically. The relatively small size

of Kyrgyzstan (five million people), has made truly national reforms more feasible, when compared to some of the other CIS countries. Even so, the same principles are also being applied successfully in some of the other Central Asian Republics.

Another critical factor that contributed to the national scope of the FM training efforts was the relatively high retention of the FM doctor and nurse trainers. This resulted from many factors, including the policy of recruiting future trainers from the places where they would later work, providing higher salaries than these trainers would receive in typical government positions, providing adequate facilities and ongoing logistical/political support, and providing long-term mentoring by foreign family doctors and nurses.

### **C. Remaining Challenges to Overcome**

While much progress has been made, many substantial challenges remain. Although, the system has become more efficient, much of the savings has been consumed by higher utility costs. If the overall economy does not improve and the amount of money allotted to the health care system does not increase, the financial gains from the reform process may be undermined, jeopardizing much of what has been accomplished. For instance, if salary increases for FGP workers do not continue, particularly for those in rural areas, serious shortages of primary care workers will result from increase attrition of retrained workers and a lack of interest in pursuing a career in FM on the part of graduating medical and nursing students. It is of great concern that over three-fourths of the FGP doctors surveyed in Imperial College/WB study in 2003 stated that they would abandon their medical work in favor of non-medical work if they had an opportunity. Similarly, if sustainable sources for adequate salaries and benefits for the FM teachers are not developed, the best trainers will leave for more attractive work.

Although the quality of the primary health care workers has improved, there will be an ongoing need to help them continue to expand their scope of service, quality of care, and cost effectiveness. The undergraduate training still needs significant improvement, including more of a primary care orientation. More practical approaches toward prevention and patient education also need to be developed and disseminated. The population needs to be better educated about how to appropriately

use their family doctor and nurse. The urban health care system needs to transition to a FM-based primary health care system. More legal and policy changes are necessary in order for the new FM doctors and nurses to be able to fully use their recent training. High priority should be given to reducing the administrative burden placed on FGP doctors and nurses, so that they can spend more time with patients and less time with paperwork. Further health system restructuring is needed, especially to address two difficult problems: the continued over-utilization of health care resources by the Republican Level Health Institutes in Bishkek, and a surplus of outpatient subspecialist physicians who are currently working in FM Centers alongside the FGP doctors. Finally, evidence-based medicine and quality improvement principles still need to be promoted and further institutionalized at all levels. Hopefully, this will result in gradual resolution of other pervasive problems inherited from the former Soviet health care system, including a tendency toward excessive use of laboratory and radiology testing, over-diagnosis, over-treatment, ineffective non-evidence-based public health strategies and regulation, and a lack of coordination between the inpatient and outpatient arenas.

#### **D. Next Steps**

Fortunately, there is still time to address these remaining challenges and to work toward a sustainable system that can continue to improve on its own. USAID has just awarded a new five-year Quality Public Health and Primary Health Care in Central Asia, enabling ZdravPlus to continue the work begun in 1996. The next five years will emphasize the further institutionalization of the health reforms, with the final goal of sustainability. It appears that this project will again dovetail nicely with the next World Bank – MOH project, Manas II, which is slated to start in 2006.

These new projects will help the FM training system to also continue to move toward sustainability. This will start with the completion of the transition from short-term TOT/retraining programs to the long-term programs – continuous medical education, the national FM residency program, and the FGP-level quality improvement program. Furthermore, the CME program will gradually include more computer-based distance education, first for faculty development, then eventually for primary care workers nationally.

- 
- <sup>i</sup> “Primary Health Care Staffing Strategy”, Cochrane D., The World Bank 2004. Presentation in Bishkek Nov. 2004
- <sup>ii</sup> “Improving the Quality of Reproductive Health Services in Issyk-Kul Oblast, Kyrgyzstan: Report on a Pilot Project.” Seitkazieva N., Kamakhunova F., van der Velden T., Kenney A., Shaikh A., ZdravPlus ([www.zplus.kz](http://www.zplus.kz)).
- <sup>iii</sup> “Report on Quality Monitoring of FGP Performance and Implementation of National Drug Policy in the Kyrgyz Republic”, Ministry of Health of Kyrgyzstan and the KSMIRCE. April – June 2003.
- <sup>iv</sup> “Evaluation of Family Medicine Reforms in Kyrgyz Republic”, Atun RA. The World Bank, 2005. (In Press)
- <sup>v</sup> “The Mortality and Years of Potentially Lost Life (YPLL) Indexes for Burden of Diseases in Kyrgyzstan”, Favorov, M., Director of the Center for Disease Control’s Central Asian Regional Office. Personal correspondence.<sup>vi</sup> “FGP Doctors Attitude Toward Reform in Kyrgyzstan”, Charles Hardison and Aijarkyn Sheralieva (personal correspondence, 2001)
- <sup>vii</sup> “Kyrgyzstan Knowledge, Attitudes, and Practices Surveys, 2001-2005: Methodology,” Expert Fikri, Siar–Bishkek, et al, forthcoming, ZdravPlus Project, [www.zplus.kz](http://www.zplus.kz))