Kyrgyz Republic National Health Care Reform Program

«Manas Taalimi»

for 2006-2010
Ministry of Health
of the Kyrgyz Republic

Kyrgyz Republic National Health Care Reform Program
«Manas Taalimi»
for 2006-2010

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on development of Kyrgyz Republic National Health Care Reform Program
“Manas Taalimi” for 2006-2010

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<td>DFID</td>
<td>Department for International Development, Great Britain</td>
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<tr>
<td>DOTS</td>
<td>Directly Observed Therapy Strategy</td>
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<tr>
<td>KfW</td>
<td>German Development Bank</td>
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<tr>
<td>PAL</td>
<td>Practical approach to lung health</td>
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<tr>
<td>SWAp</td>
<td>Sector-Wide Approach</td>
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<tr>
<td>ODD</td>
<td>Outpatient Diagnostic Department</td>
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<tr>
<td>ADB</td>
<td>Asian Development Bank</td>
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<tr>
<td>BFH</td>
<td>Baby-Friendly Hospitals</td>
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<tr>
<td>WB</td>
<td>World Bank</td>
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<td>HAI</td>
<td>Hospital-acquired infection</td>
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<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
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<tr>
<td>WHO</td>
<td>World Health Organization</td>
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<tr>
<td>WTO</td>
<td>World Trade Organization</td>
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<tr>
<td>FGP</td>
<td>Family Group Practitioners</td>
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<tr>
<td>DHRCI</td>
<td>Department of health reform coordination and implementation</td>
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<tr>
<td>DSSES</td>
<td>Department of state sanitary-epidemiological surveillance</td>
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<tr>
<td>DDP&amp;ME</td>
<td>Department of drug provision and medical equipment</td>
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<tr>
<td>EBM</td>
<td>Evidence-based medicine</td>
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<tr>
<td>ADP</td>
<td>Additional Drug Package</td>
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<tr>
<td>IMCI</td>
<td>Integrated management of childhood illnesses</td>
</tr>
<tr>
<td>STI</td>
<td>Sexually transmitted infections</td>
</tr>
<tr>
<td>KSMA</td>
<td>Kyrgyz State Medical Academy</td>
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<tr>
<td>KSMIPGT&amp;CE</td>
<td>Kyrgyz State Medical Institute of Post-Graduate Training and Continuous Education</td>
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<tr>
<td>CDD</td>
<td>Consultative-Diagnostic Department</td>
</tr>
<tr>
<td>CDF</td>
<td>Comprehensive Development Framework of the Kyrgyz Republic until 2010</td>
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<td>KR</td>
<td>Kyrgyz Republic</td>
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KRSU Kyrgyz-Russian Slavic University
KFPLH Kyrgyz-Finland Program on Lung Health
KSHRSP Kyrgyz-Swiss Health Reform Support Project
MOIA Ministry of the Internal affairs
LSA Local state administration
MOH Ministry of Health
MOD Ministry of Defense
LG Local government
MOJ Ministry of Justice
VAT Value added tax
RI Research Institute
NGO Non-governmental organization
NSC National statistic committee
NPRS National Poverty Reduction Strategy
NC National Center
NCC&T National Center of cardiology and therapy
MHI Mandatory Health Insurance
OMH Oblast Merged Hospital
UNO United Nations Organization
ARI Acute respiratory infections
OshSU Osh State University
HPAP Health Policy Analysis Project, WHO/DFID
SGBP State-Guaranteed Benefit Package
PHC Primary Health Care
UNDP United Nations Development Program
RHIC Republican Medical Information Center
HPRC Health Promotion Republican Center
AIDS RC AIDS Republican Center
MM Mass media
EC Emergency care
<table>
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<tr>
<th>Acronym</th>
<th>Abbreviation</th>
<th>Description</th>
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<tr>
<td>MTBF</td>
<td>Medium -Term Budget Framework</td>
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<td>PEPS</td>
<td>Promoting Effectiveness of Prenatal Care Strategy</td>
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<tr>
<td>CVD</td>
<td>Cardio-vascular diseases</td>
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<tr>
<td>CVS</td>
<td>Cardio-vascular system</td>
<td></td>
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<tr>
<td>TH</td>
<td>Territorial hospital</td>
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<tr>
<td>MHIF TD</td>
<td>Territorial Department of Mandatory Health Insurance Fund</td>
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<tr>
<td>FAP</td>
<td>Feldsher-obstetrician unit</td>
<td></td>
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<tr>
<td>HTF</td>
<td>High-Tech Fund for expensive medical services</td>
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<tr>
<td>MHIF</td>
<td>Mandatory Health Insurance Fund</td>
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<tr>
<td>MF</td>
<td>Maintenance Fund</td>
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</tr>
<tr>
<td>FAO</td>
<td>Food Organization</td>
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<tr>
<td>MDG</td>
<td>Millennium Development Goal</td>
<td></td>
</tr>
<tr>
<td>FMC</td>
<td>Family Medicine Center</td>
<td></td>
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<tr>
<td>HR</td>
<td>Human resources</td>
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<tr>
<td>UNICEF</td>
<td>United Nation International Children’s Emergency Fund</td>
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<td>UNFPA</td>
<td>United Nation Population Fund</td>
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<tr>
<td>USAID</td>
<td>United States Agency for International Development</td>
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Foreword

Over the previous decade, the Kyrgyz health system has gone through a school of perseverance.

Today, one can say with confidence that as a result of the “Manas” National Health Care Reform Program (1996-2005), we not only maintained the state health care system but also introduced new fundamental principles for its continued development with focus on the needs of our population, achievement of equity principles, reduction of financial burden, quality improvement and accessibility of medical services.

Without revolutionary changes introduced in the health system -- establishment of family medicine institute, restructuring of health care delivery, introduction of mandatory health insurance system, implementing progressive provider payment methods, and since 2001, the single payer system and the basic benefit package -- the new horizons targeted in the “Manas-Taalimi” National Health Reform Program for 2006-2010 would not be achievable.

When the “Manas-Taalimi” National Program was being developed, the population rebelled against lawlessness, high level of poverty and corruption. The revolution in March 2005 became a turning point in the Kyrgyz health care system.

With the technical support of the World Health Organization and DFID, the best specialists of our Republic were invited to develop the new program to further reform the health system in consultation with health professionals and civil society. A balanced assessment of the results of the “Manas” National Program was conducted, positive experiences and lessons learnt were carefully studied, and remaining problems were comprehensively analyzed.

The result of this collaborative effort became the “Manas-Taalimi” National Program presented in this book. The Program defines key priorities for the further development of the health system for the next five years. The main directions are: (i) contributing to poverty reduction; (ii) achieving fairness in population access to health services and elimination of differences between urban and rural areas; (iii) increasing efficiency of the proposed measures for significant improvement in the quality of health services, and the influence of these achievements for population health and achievement of the health Millennium Development Goals.

The Program gives great importance to the role of citizens, local communities, local self-governments in decision-making over issues of health protection and health promotion, formation of
healthy lifestyle and health culture.

An important factor in the achievement of health sector goals is effective management, capacity building, strengthening cross-sectoral interaction and coordination of donor support.

In consultations with the donor community, the principles of a sector-wide approach (SWAp) were introduced for the implementation of the Program. The SWAp is a new form of interaction between the Kyrgyz Republic Government and donors. It allows increasing the effectiveness of resource use on the basis of coordination and harmonization of the activities of the government, donors and civil society.

As a distinctive feature of the SWAp, donor funds will be channeled to support the state health care budget for the first time using standard budget procedures but not to specific projects. Such an approach to program implementation is used for the first time in the post-soviet area and it reflects a high degree of trust in our Republic.

Thanks to the budget developed for 2006 within the SWAp, implementation of a number of measures included into “Manas-Taalimi” National Health Reform Program has already started.

A distinctive feature of the “Manas-Taalimi” Program is that the government’s obligations are supported with financial resources and real mechanisms to achieve set goals. This inspires and increases the responsibility of the entire health sector towards the citizens.

I am certain that this new phase of health system development in the Kyrgyz Republic will be supported by all health professionals.

On behalf of the medical community I would like to thank the President and the Government of the Kyrgyz Republic and the donor community for the trust rendered and assure that all our power and knowledge will be targeted to the benefit of the people.

Dr. Shayloobek Niyazov
Minister of Health
1. Introduction

1.1. National Health Care Reform Program “Manas Taalimi” and its continuity with National Health Care Reform Program “Manas”

After gaining independence, Kyrgyzstan has taken the course on building of democracy and market economy. Severe economic recession has occurred due to breakup of economic links established during the Soviet period and drastic reduction of production volume. Health sector along with other sectors faced the problem of insufficiency of financial resources, inability to maintain inherited from Soviet period excessive infrastructure with predominance of inpatient sector and excessive specialization of health services.

Basic principles of Soviet health care were social nature of healthcare, universal access and free health services. However, inherent to health system hyper-centralized management, high level of bureaucracy, lack of flexibility, fragmentation and duplication of health care delivery, inefficient methods of financing and the need to maintain bulky infrastructure did not allow provision of declared principles of universal access and absence of payment.

Burden of health expenditures was falling more and more on population and the level of informal payments was growing. This reflected in deterioration of demographic indicators, especially among low-income households.

Similarly to other sectors in Kyrgyzstan it became essential to implement cardinal changes in health system. In the period of 1994 – 1996, National Health Care Reform Program “Manas” for 1996 – 2006 was developed under the support of the World Health Organization.

Main characteristics of created health model of the Kyrgyz Republic were multi-structural nature, creation of infrastructure that corresponds to population needs in medical care and financial resources, decentralization of management and enhancement of administrative and financial autonomy of health organizations. Health sector was split into providers and purchaser of health care services. Recognized priority was the development of primary health care, family medicine, free choice of family doctor and ensured access to health services for population in the context of State-Guaranteed Benefit Package. Introduction of new outcome-oriented methods of financing and payment to health workers depending on quality of performed work was launched.

In 1994 – 1996, USAID piloted demonstration project in Issyk-Kul oblast to work-out restructuring mechanisms of health services delivery and change mechanisms of health financing. Concurrently, health reform project design intended for 4.5 years was under development. This project was funded by the World Bank and based on clearly identified policy of National Health Care Reform Program “Manas”. It was intended to implement structural changes in delivery of primary health care, rehabilitation of health facilities, change in financing methods and drug management in pilot regions (Chui and Issyk-Kul oblasts) according to four components.

Second health reform project to be funded by the World Bank and intended for 2001 – 2005 was designed in 2000 with a view of further implementation of health reforms. This project was oriented at deepening and countrywide dissemination of changes launched in pilot regions under the first project.

Health reform obtained political support from government of the country, which was reflected in such strategic documents as Comprehensive Development Framework of the Kyrgyz Republic until 2010 and National Poverty Reduction Strategy of the Kyrgyz Republic for 2003 – 2005.

Outcomes of ten-year period of health reform show that Kyrgyzstan managed to overcome systemic health care crisis despite complicated economic situation and thanks to support from government of the country and partners from the World Health Organization, World Bank, German Bank of Reconstruction and Development (KfW), Asian Development Bank, USAID, UNDP, DFID, international governmental organizations of US, Japanese and Swiss Governments, Global Fund on control of TB, malaria and HIV/AIDS as well as international non-governmental organizations.
Health system developed in Kyrgyzstan and internationally recognized as “Kyrgyz health model” allows retention of population access to health services provided in the context of State-Guaranteed Benefit Package in all regions and functioning of health sector in the environment of market economy with operative response to population needs. Most of implemented changes obtained sustainability from securing in a series of laws and require further institutionalization.

In 2004, Ministry of Health of the Kyrgyz Republic applied to the World Health Organization for technical support in development of further reform strategies to secure obtained results and ensure sustainability of the system. This initiative obtained support and Ministry of Health launched development of new health care reform program intended for 2006 – 2010.

National Health Care Reform Program “Manas Taalimi” is based on continuity with National Health Care Reform Program “Manas” and aimed at delivery of high-quality health services that correspond to society needs.

“Manas Taalimi” National Program will ensure further development of qualitatively new service of public health. It will be based on functional separation of activities on prevention and health promotion on the basis of diseases control from supervisory functions on health protection and services delivery.

The example of Jumgal experience (creation of rural health committees) shows that it is possible to achieve significant outcomes in population health promotion through more active involvement and partnership collaboration with communities, non-governmental and community-based organizations and close collaboration with mass media and local governments.

It is planned to ensure further strengthening of primary health care potential and enhance the role of family medicine in integrated solution of health problems of individuals, families and society in general.

Further optimization of inpatient sector performance is intended with a view of delivery of high quality health services on the basis of vertical and horizontal integration and continuity in health services delivery.

It is planned to pay big attention to further integration of priority programs to created system of delivery of individual and public services with enhanced role of leading centers and institutes in coordination of work of health organizations, monitoring of population health status indicators and development of methodic materials based on scientific evidence.

Significant role is given to the development of human resources of the health system to make them correspond to the requirements of modern health care. At the same time, special emphasis will be placed on the unequal distribution in human resources and on attracting health workers at the local level, and on the improvement of the medical education system.

The role of Ministry of Health in development of public policy on health protection and health promotion, strengthening of inter-sectoral collaboration and coordination of work of donor organizations will be enhanced. It is planned to introduce new outcome-oriented methods of strategic management based on partnership interrelations, coordinate work of dependent organizations and delegate them with executive functions.

Decentralization of management in health entails enhancement of administrative and financial autonomy and responsibility of providers for their performance. To increase the efficiency of the work of health organizations, it is planned to pool health funds at the republican level and to shift the Single-payer system to strategic purchasing oriented at population needs and health priorities. Moreover, special mechanisms will be introduced to enhance financial sustainability or providers and make adjustments in levels of funding of regions.

It is planned to implement further changes in health sector on the basis of sector-wide approach (SWAp) to ensure it sustainability. The agreement with the World Bank and KfW was reached on provision of investments to support Health-3 project which will be implemented in the context of “Manas Taalimi” program on sector-wide approach basis. Active involvement of other international organizations in “Manas Taalimi” program implementation is also expected.

National Health Care Reform Program “Manas Taalimi” is a logical continuation of “Manas” National Program. Foundation of “Manas Taalimi” program is laid by deep analysis of results, problems and experience obtained during previous years. Successful realization of objectives of the health sector embedded into Comprehensive Development Framework of the Kyrgyz Republic by 2010, Millennium Development Goals and “Manas Taalimi” program and aimed at maintenance and protection of population health will contribute significantly to poverty reduction.
1.2. Development of the National Program “Manas Taalimi”

The development of the National Program “Manas Taalimi” was launched with technical support from the WHO/DFID. An expert group of local consultants was created for this purpose. Responsibilities of this group included coordination of development of different program components. Development process took place in a friendly environment with involvement of the key players in the health system.

New approaches to further reforming of the health system were discussed at the working meetings with the medical community in all oblasts, Bishkek and Osh cities, Republican health facilities and Ministry of Health, in which over 700 people took part. Overall, the proposed actions of further development received support on the part of medical workers; constructive suggestions and comments on implementation mechanisms were brought up during the meetings.

Implementation mechanisms under the sector wide approach, transition to pooling health funds at the republican level and health sector budget formulation on a program basis were discussed in details with financial-economic specialists of the Ministry of Economy and Finance of the Kyrgyz Republic, Central Treasury under the MOEF KR, TD MHIF as well as with international consultants on fiduciary assessment during a number of working meetings and round tables sessions.

A big contribution to program and its implementation mechanisms development was made by donors and international consultants in the process of discussing strategies in the context of “Manas Taalimi” Program.

A distinctive feature of “Manas Taalimi” Program is the possibility to implement it under the sector-wide approach, which implies consolidation of efforts of the Government of Kyrgyz Republic and donor community. The Kyrgyz Republic is given an opportunity to receive health sector budget support out of pooled donor funds, as well as parallel financing in order to achieve identified goals and objectives.

Work plans for “Manas Taalimi” Program implementation and costing of activities were discussed in details during the missions of the World Bank, KfW and DFID.

National Health Care Reform Program of the Kyrgyz Republic “Manas Taalimi” for 2006 – 2010, and mechanisms for its implementation were discussed at the Round Table meeting held on October 6, 2005 which was attended by the President of the Kyrgyz Republic Bakiev K. S., representatives from the Government of the Kyrgyz Republic, representatives from non-governmental organizations and donor and medical community.

Outcome of the Round Table meeting became a Joint Statement of the Government of the Kyrgyz Republic and donor community on commitment to further development of the sector on the basis of sector-wide approach under the National Health Care Reform Program of the Kyrgyz Republic “Manas Taalimi” for 2006 – 2010.
2. Lessons learnt from the National Health Reform Program “MANAS”

This section presents a brief description and analysis of the main achievements under the 10-year reform process of health sector in the context of the National Program “Manas”, their impact on health outcomes, including indicators from Millennium Development Goals (MDGs) in health, as well as on indicators reflecting the accomplishment of the main goals of health systems defined by the WHO.

Analysis used research findings from studies implemented by the Health Policy Analysis Project WHO/DFID (HPAP), as well as data from Republican Health Information Center (RHIC) under the MOH KR, Mandatory Health Insurance Fund under the MOH KR and USAID funded ZdravPlus Program [39,40,41,46].

2.1. Implementation of the National Health Care Reform Program “MANAS” 1996-2006

“Manas” Program launched comprehensive structural changes of health system financing and management to ensure achievement of the main objectives of the health system defined by the World Health Organization, namely:

- equity in resource allocation;
- efficiency;
- access to health care;
- system responsiveness to population needs.

Major reform components included:

- Structural changes of the health services delivery system, strengthening of PHC, development of Family Medicine and restructuring of hospital sector;
- Introduction of new outcome-based payment methods;
- Improvement of quality of provided care;
- Strengthening of the role of public health;
- Introduction of new health management methods in the context of greater autonomy of health facilities.

2.1.1. Structural changes of the health services delivery system: strengthening of PHC, development of Family Medicine and restructuring of hospital sector

The following structural changes were undertaken to ensure increase the effectiveness of health care and reduction of expenditures on costly inpatient care:

- Legal separation of the primary health care and inpatient care took place. Family Group Practice and Family Medicine Centers were established. By the beginning of 2005, there were 85 FMCs created which covered 673 FGPs. In addition, there are 31 FGPs, which function as independent legal entities. Oblast FMCs coordinating primary health care activities were established in every oblast. Doctors and nurses were trained and retrained in family medicine. The principle of free choice of FGP was introduced and the campaign on population enrollment with FGPs was carried out. Simultaneously new methods of per capita financing at the primary level were introduced encouraging health personnel to improve quality of services.

- Additional Drug Package on provision of drugs to insured population at outpatient level was introduced with a view of improvement of affordability and accessibility of drugs for population.
• Activities related to strengthening of material and technical base of health organizations at PHC level including renovation and supply with medical and laboratory equipment were undertaken.

• In 2004, ambulance units were removed from inpatient facilities and transferred to FMCs to ensure primary health care efficiency and improved continuity of emergency care.

Restructuring and rationalization of the excessively developed hospital network started in 1996 and has become one of the key reform objectives. Considerable changes such as optimization of staff number, reduction in number of beds, release of empty and inefficiently used buildings and facilities have happened during 2001-2004. Specialized facilities were merged and general profile hospitals were created. Oblast merged hospitals were created in all oblasts of the Republic. Inefficient small hospitals were transformed into structural subdivisions of territorial hospitals or FMC and FGP. In parallel, repair and renovation works were implemented.

More rational approach to efficient use of resources resulted in the reduction in the number of beds. Number of hospital beds reduced by 14.1% from 30313 in 2001 to 26040 in 2004. In the meantime, the number of hospitals reduced by 44.2% from 256 in 2001 to 143 in 2004 [46].

Along with reduction of spaces and closure of buildings, efforts were made to reduce utility costs through introduction of effective planning and control including the introduction of energy saving technologies.

2.1.2. Change in methods of financing

Despite the decline in the share of health financing as % of GDP from 4.0% in 1991 to 1.9% in 2002 [13], fundamental changes have taken place in the health financing system during the reform period.

Tax revenues received by the state budget have served as the main source of health funding from 1996 through 2004. In 1997, mandatory health insurance (MHI) was introduced with a view of attracting additional sources of funding to the health sector and ensuring social protection of population. This resulted in creation of the Mandatory Health Insurance Fund (MHIF) which laid the foundation for the following:

- introduction of contracting strategy,
- emergence of additional sources of health financing,
- improved accessibility of health services especially for socially vulnerable categories of population (pensioners, children and persons receiving social benefits),
- testing and introduction of progressive payment methods for health services,
- introduction of monitoring system based on quality indicators,
- mechanisms on population rights protection in the process of receiving health services.

MHI funds in the structure of health expenditures have gradually increased from 0.8% in 1997 to 19.6% in 2004 [35,36].

MHI was developed within the framework of the health reform; new progressive payment methods including case-based payment in hospitals and capitation rate at primary care level were developed and introduced.

In 1999-2000, with the increased share of MHI funds due to wider coverage of the population and health facilities with MHI system, the contradiction between incentives built in the payment mechanisms under MHI (based on outcomes) and line-item budget financing (based on the infrastructure and number of health facilities and staff) became more prominent. Transition to a single rule for payment for health services became necessary. In 2001-2004, new financing methods were gradually introduced with the development of the Single Payer system.

There was a shift from financing system fragmented by administrative levels to pooling of local budget funds at oblast level with inclusion of categorical grants from the Republican budget (Fig. 1).
Technical and institutional capabilities of the MHIF on pooling of financial flows and introduction of new provider payment systems were employed to develop the Single Payer system in 2000-2004 embodied in the MHIF and its territorial departments [4,5] with conversion of health facilities to outcome-based financing.

Since 2001, thanks to the introduction of amendments and additions to some laws [8, 9], local budget funds have begun to be pooled at oblast level. Pooling mechanisms for health funding were tested in the form of health contribution norm for each rayon possessing tax potential (Chui and Osh oblasts), or through reallocation of revenues remaining at the disposal of oblast budgets from regulated taxes. Regardless of the health funds pooling option, it became possible to equalize health funding within one oblast across rayons.

In addition to the transition to progressive financing methods in the reform process, an equally important role is played by the introduction of the State Guaranteed Benefits Package (SGBP) and co-payment for health services, which affect both supply and demand [34] and stimulate the transition of health organizations to managerial and financial autonomy.

The SGBP is the state social standard in the health sector that defines the scope of health services provided to citizens free of charge or on exemption basis from the budgetary and MHI funds. In parallel with introduction of the SGBP, co-payment paid by population for certain types of health services was introduced aiming at replacing informal charges and payments that flooded the health system.

The Additional Drug Package on provision of drugs to insured population at outpatient level gained great acceptance among people. It contributed to increased demand for evidence-based primary health services [30], improved access to high-quality drugs [31] and decline in complications in primary care sensitive conditions.

2.1.3. Improvement of quality of provided care

In order to improve quality of health services, a whole set of activities was introduced aiming to improve professional competence of health workers, including introduction of incentive mechanisms, improvement of material and technical base of health organizations, enhancement of accessibility of drugs, introduction of evidence-based medicine principles, monitoring and modern methods of quality assurance of delivered health care services.

Qualitative restructuring of undergraduate and postgraduate education system was performed. Faculties of the Kyrgyz State Medical Academy (KSMA) were reorganized and curricula were revised in accordance with the ongoing health reforms. The Republican Center on Continuous Training of Medical and Pharmaceutical Workers was re-organized into the Kyrgyz State Medical Institute of Post-Graduate Training and Continuous Education to provide training on family medicine, postgraduate and continuous education.
National Drug Policy was developed and is being introduced with the aim of providing safe, effective and high-quality drugs to population and promoting rational use of drugs including essential drug list.

Clinical guidelines development process based on evidence-based medicine principles was introduced to ensure improved quality of diagnostic services, medical assistance and standardization of treatment schemes. About 200 clinical protocols were developed and are being implemented into practice.

Accreditation and licensing standards for health organizations were developed and introduced.

Non-governmental professional associations were established to provide support to health organizations and lobby their interests.

Quality assurance concept to manage quality of health care services was developed on the basis of medical records expertise, monitoring and analysis of quality indicators and introduction of continuous quality assurance methods.

New methods of financing and labor remuneration of health personnel create economic incentives for quality improvement of health services delivery. Growth of salaries and their equalization is observed in inpatient and primary health facilities.

Quality monitoring of health services poses great importance to studies of patient satisfaction conducted by MHIF and hotlines which serve to reduce bureaucratic obstacles. Hotlines are used by both population and health workers to obtain consultations, request assistance in health care delivery as well as to complain about violation of patient rights by health organizations.

2.1.4. Strengthening the role of public health

The reform of health protection and promotion service started in 2001 and this service was separated out from the sanitary epidemiological service and became an independent structure.

Structural reforms were partially implemented in the health promotion service by merging and creating a number of institutions and laboratories. Equipment of 20 laboratories, identified as national level basic laboratories and a number of sanitary-epidemiological surveillance facilities, was improved, which allowed to expand significantly the list of physical-chemical and microbiological tests.

Systems on infectious disease monitoring using information technologies were introduced in Bishkek city and Chui oblast.

Systems of epidemiological surveillance for a number of relevant infections were designed. State sanitary-epidemiological surveillance centers shifted to new financing methods under the Single Payer system.

In 2003 – 2004, oblast health promotion centers were created in order to improve activities on prevention, health promotion and fostering healthy lifestyles. Their main purpose is to provide methodological assistance to FMC and FGP through health promotion units within FMC.

New models of population involvement in addressing health care issues are tested in pilot regions. With the support from international donor organizations, 250 rural health committees, 160 initiative groups and 9 community-based organizations were established in Naryn, Talas and Issyk-Kul oblasts.

Training of specialists on the issues of sanitation, hygiene, epidemiology and health promotion was conducted on a systematic basis.

2.1.5. Introduction of new health management methods in the context of greater autonomy of health facilities

A transition to decentralized health management system with partial transfer of functions to the local level was initiated in the process of health reform.

Health Management Coordination Councils were created in every oblast, as well as in Bishkek and Osh cities to coordinate activities of health organizations at the regional level.

The function of provision of drugs and medical supplies was privatized. The function of health services delivery was also partially privatized.

Qualitatively new management principles were developed in the context of health organizations

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1 With the exception of Chui oblast, where the PHC and health promotion services were integrated at oblast level.
autonomy.
Within the framework of administrative reform, oblast health departments were abolished in 2000. This speeded up the transition to and introduction of the Single Payer system with pooling of funds at oblast level and excluded an interim chain of bureaucratic administration.

Implemented changes were institutionalized legislatively in the laws “On protection of population health in the Kyrgyz Republic”, “On health organizations in the Kyrgyz Republic” and “On the Single Payer system in health financing of the Kyrgyz Republic”.

2.2. Evaluation of health reform impact on the main goals

This section analyses the impact of comprehensive health reforms on the main goal – health gain, and assesses the impact on policy goals of the “Manas” health reform, namely –

- Health care equity aimed at reduction of differences in health indicators across regions of the republic, as well as between urban and rural population;
- Guaranteed access of health services to population;
- Effectiveness and quality of health care;
- Responsiveness of the system to population needs,
- Responsibility of the population, as well as respect and protection of patient rights.

Dynamics of human development indicators

Analysis of population health status shows that over 10 years indicators characterizing human development have improved.

Thus, life expectancy at birth grew by 2.3 years (from 66.0 in 1995 to 68.3 in 2004), while crude mortality reduced from 8.2 per 1000 population in 1995 to 6.7 in 2004 (Fig. 2).

Fig. 2. Human development indicators: (1) Life expectancy at birth and (2) Crude mortality

Source: NSC, RHIC, 2005

Dynamics of the Millennium Development Goals indicators

Since 2000 there has been a trend towards improvement of natural population growth and reduction of maternal (from 67.4 per 100 000 live-births in 1995 to 45 in 2004) and infant mortality (from 28.1 per 1000 live-births in 1995 to 20.8 in 2003) (Fig. 3). Since 2004 there has been a projected growth in maternal mortality rate related to transfer to the new live-birth criteria recommended by WHO. Further increase in these rates is expected in the coming 2-3 years.
Fig. 3. MDGs Indicators: (1) Maternity mortality rate, and (2) Infant mortality rate

![Graph showing Maternity mortality rate per 100 000 life-birth](image1)

![Graph showing Infant mortality rate per 1000 birth](image2)

Source: NSC, RHIC, 2005

A sustainable declining trend of child mortality (Fig. 4) from 42.1 per 1000 live births in 1997 to 27.7 in 2003 changed to an increase of this indicator in 2004 reflecting transition to new live-birth criteria and growth of infant mortality rate, which constitutes up to 60% in the structure of child mortality. Herewith, there remains a variation in child mortality indicators between boys and girls, as well as between urban and rural areas (Fig. 30). Child mortality rate among boys is 25-30% higher than among girls. Higher child mortality rate in urban areas is caused by a number of socio-economic factors, the most important of which, along with poverty, is intensification of internal migration [43].

Fig. 4. MDGs indicator: (3) Under 5 mortality rate

![Graph showing Under 5 mortality rate per 1000 birth](image3)

Source: NSC, RHIC, 2005

Analysis of the dynamics of these indicators shows that without urgent actions to curtail maternal and child mortality, Kyrgyzstan will fail to accomplish the Millennium Development Goals.

**HIV/AIDS.** In the Kyrgyz Republic, HIV/AIDS has spread rapidly since 2001, when HIV/AIDS incidence rate increased 2.8 times as compared to previous years. As of January 1, 2005 there were 655 officially registered HIV cases in the country (Fig. 5). The majority of them are young men who use drugs intravenously. Over 20% of HIV-infected persons are registered in the penitentiary system. Incidence is no longer limited to a narrow circle of intravenous drug users affecting wider population via sexual transmission.
Fig. 5. Registered HIV/AIDS cases in the Kyrgyz Republic

<table>
<thead>
<tr>
<th>Year</th>
<th>Registered cases of HIV/AIDS</th>
<th>Kyrgyz Republic citizens</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>14</td>
<td>53</td>
</tr>
<tr>
<td>2001</td>
<td>149</td>
<td>134</td>
</tr>
<tr>
<td>2002</td>
<td>146</td>
<td>160</td>
</tr>
<tr>
<td>2003</td>
<td>132</td>
<td>125</td>
</tr>
<tr>
<td>2004</td>
<td>161</td>
<td>153</td>
</tr>
</tbody>
</table>

Source: DSSES, AIDS Center

**Tuberculosis.** Necessitated by growing morbidity and mortality from tuberculosis, comprehensive measures have been implemented in the country within the framework of National Programs “Tuberculosis-I” for 1996-2000 and “Tuberculosis-II” for 2000-2005 including integration of the TB control service with primary health care and training of FGP doctors on DOTS and DOTS+ programs. As a result of these activities, in 2001-2002 tuberculosis morbidity was contained, a declining trend in TB mortality was observed in 2003-2004 (Fig. 6).

Fig. 6. TB Morbidity and Mortality rates (per 100 000 population), the Kyrgyz Republic

<table>
<thead>
<tr>
<th>Year</th>
<th>Tuberculosis morbidity rate (per 100,000 of population)</th>
<th>Tuberculosis mortality rate (per 100,000 of population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>140</td>
<td>25</td>
</tr>
<tr>
<td>1997</td>
<td>135</td>
<td>20</td>
</tr>
<tr>
<td>1998</td>
<td>125</td>
<td>15</td>
</tr>
<tr>
<td>1999</td>
<td>115</td>
<td>10</td>
</tr>
<tr>
<td>2000</td>
<td>100</td>
<td>5</td>
</tr>
<tr>
<td>2001</td>
<td>90</td>
<td>5</td>
</tr>
<tr>
<td>2002</td>
<td>80</td>
<td>5</td>
</tr>
<tr>
<td>2003</td>
<td>70</td>
<td>5</td>
</tr>
<tr>
<td>2004</td>
<td>60</td>
<td>5</td>
</tr>
</tbody>
</table>

Source: NSC, RHIC, 2005

**Brucellosis.** Structural changes in agriculture with the development of small animal-breeding farms and weak work of veterinary services have led to a rapid growth of brucellosis morbidity in the Kyrgyz Republic from 21.0 per 100,000 population in 1999 to 50.3 in 2003. In some rayons of Naryn, Issyk-Kul, Osh, Talas and Batken oblasts this figure was 3-4 times higher than average figure for the country. Herewith, the largest risk is associated with employing young people during the period of cattle lambing without observing the safety measures.

Active work with population on prevention of brucellosis and is underway. As a result of undertaken measures, 2004 was marked by a decrease in brucellosis incidence rate (Fig. 7).
**Vaccine-preventable infections**

Immunization coverage has been preserved at high level in the republic (in 2000 – 95%, in 2004 – 98.7%), which allows to control vaccine-preventable infections. As a result of a set of measures, in 2002 the country received a WHO certificate confirming the absence of a wild poliovirus on the territory of the republic. Following the National Immunization Campaign against measles and rubella, incidence rate for these diseases declined from 47.2 per 100 000 population in 2001 to single instances (Fig. 8).

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**Health care equity aimed at reducing the differences in health outcomes across regions of the republic, as well as between urban and rural population**

The principle of health care equity means, first of all, equitable distribution of health care resources across regions of the country and ability of people to receive health services irrespective of income level. Hereby, a special emphasis is placed on the system of exemptions for the poor and socially vulnerable categories.

State-Guaranteed Benefit Package (SGBP) and payment methods for delivered health services are designed in such a way that the vulnerable population categories get an opportunity to obtain health services. This is ensured through a set of free of charge services, differentiated levels of co-payment and an opportunity to use means from the reserve fund created by health organizations to render services to the poor. WHO studies [41] show that in 2003 as compared to 2000 level of health services...
utilization by better-off and worse-off patients equalized both at inpatient and outpatient levels against the background of overall decrease in care-seeking behavior at outpatient and inpatient levels (Fig. 9). These findings suggest that now more health care resources are spent on poor patients than before.

Fig. 9. Access of outpatient (1) and inpatient (2) health services for the population in the Kyrgyz Republic in 2000 and 2003

![Graph showing access of outpatient and inpatient health services for different quintiles of the population in 2000 and 2003.]

Source: WHO/DFID, 2004

Currently, there remains inequality in financing across regions (Fig. 10), which is related to different tax potentials of the regions, limitations in Republican budget and impossibility to redistribute local budgets among regions.

Fig. 10. Inequality in funding level by regions of the Kyrgyz Republic, in %

![Graph showing percentage deviation from average republican value in health financing per capita for different regions.]

Source: MHIF, «Socium Consult», 2005

Ensuring guaranteed access to health services

Guaranteed access to health services is ensured by the State-Guaranteed Benefit Package (SGBP) that defines types, scope and terms of health services delivered free of charge and on exemption basis. The SGBP has been introduced on phased basis since 2001 along with introduction of co-payment that was meant to replace informal payments.

Fixed co-payment levels ensured advance knowledge of treatment costs for patients and containment of informal payments. Introduction of new financing methods and co-payment was accompanied by improvements in drug provision and salary raise of health personnel. This has resulted in containment of informal payments made by patients in oblasts where SGBP was introduced earlier, while in oblasts where SGBP was introduced later, informal payments grew (Fig. 11.)
Introduction of SGBP and increased patient awareness about impending treatment costs contributed to reduction of informal payments.

Anonymous surveys of patients in hospitals confirm the reduction of additional expenses on drugs (Fig. 12) and out-of-pocket payments to health personnel (Fig. 13). Growth of patients’ spending in hospitals of Talas oblast was due to uneven allocation of equalization grants from the Republican budget for health in the course of year; in Issyk-Kul oblast it was due to poor management in health organizations. Thus, data suggest that the problems with financing and organization of treatment process directly affect population in the form of additional financial burden and, consequently, accessibility of health care.

**Fig. 12. Changes in patient’s additional expenses for inpatient care in Kyrgyz Republic**

![Graph showing changes in patient's additional expenses for inpatient care in Kyrgyz Republic](image)

Increased awareness and reduced financial burden for treatment of the socially vulnerable population categories improved their access to health services. From 2000 to 2004 accessibility of one of the most vulnerable population categories – persons receiving social benefits, who are primarily composed of invalids since childhood, has become 2.4 times as better.

SGBP ensures free basic health services provided by FGPs for the whole population. In this regard, targeted work was conducted to strengthen primary health care and channel financing to the primary level [40]. So, on average the share of PHC financing increased in the country from 16% in 2000 to 29% in 2004 (Fig. 14.)

Thus, the data show certain improvements in accessibility of health services, especially for socially vulnerable contingents. Unfortunately, due to shortage of public financing, the co-payment level remains high for individuals and households. Besides, informal payments also remain thus limiting population access to health services.
Dynamics of health system effectiveness indicators

Undertaken measures on restructuring of health services delivery system and introduction of new health financing methods have facilitated more efficient functioning of health organizations.

This has reflected on beds utilization efficiency (average length of stay, bed turnover and bed efficiency) (Fig. 15).

Fig. 15. Efficiency of beds utilization in the Kyrgyz Republic

![Efficiency of beds utilization](image)

Source: RHIC, MOH, 2005

Significant outcome for the health system was facilitated by the reduction of inefficiently used spaces and utility costs of health organizations [39].

In parallel, the work on energy saving and more efficient use of water, heat and electricity has been carried out. A study was implemented [46] exploring the impact of restructuring in 8 hospitals. It showed that during the past 4 years utility costs reduced by 40% (Fig. 16).

Fig. 16. Comparison of utility costs with and without restructuring in 8 investigated hospitals, the Kyrgyz Republic, soms

![Comparison of utility costs](image)


Overall, direct treatment expenditures on patients have almost doubled as a result of structural changes, introduction of new financing methods and improved management in health organizations (Fig. 17).
Thus, restructuring combined with new financing methods have had a great impact on the efficiency of available resources, more rational use of resources, improved quality of medical care (increased accessibility of drugs, medical supplies, improved hospital stay conditions) and increased salary of health workers. All of these contributed to reduction of informal payments.

**Quality of health services**

In recent years, the scope and content of services rendered by family doctors have been significantly expanded; their job descriptions now also include health promotion functions. Provision of medical care have shifted from delivery of services to specific population categories to delivery based on the family practice principle, with an emphasis on prevention and health promotion of enrolled population. This has facilitated the improvement of the quality of care.

Since 2000 evidence-based clinical protocols have been introduced to medical practice to improve the quality of health services [38].

In 2000-2003, the Additional Drug Package of MHI on provision of drugs to insured population at outpatient level (ADP MHI) was introduced. Under the ADP, cost of drugs dispensed in pharmacies contracted by MHIF is partially reimbursed from the MHI funds. Inclusion of drugs for treatment of primary care sensitive conditions into the ADP list of drugs for reimbursement allowed for indirect affect on pricing of drugs, significantly improved accessibility of drugs [31] and increased incentives for patients to receive treatment at PHC level [32].

Introduction of evidence-based medicine principles to clinical practice (Fig. 18) resulted in observed reduction of hospitalization rate for modulated diseases (primary essential hypertension, bronchial asthma, stomach and duodenum ulcer) as well as in reduction of hospitalization rates caused by complications from these diseases (Fig. 19).
**Fig. 18. Compliance of hypertension treatment to clinical protocols**

![Compliance of hypertension treatment with clinical protocols, %](image)


**Fig. 19. Assumed prevented cases of hemorrhagic strokes, Chui oblast**

![Assumed prevented cases of hemorrhagic strokes, Chui oblast](image)

Source: MHIF, RHIC, 2005.

**System responsiveness to population needs**

Recognition of responsiveness as one of the goals of the health system forms the understanding of fact that health systems must serve people and implies respect to person’s dignity and client-orientation [19].

Respect and protection of patient rights, as well as population responsibility for their own health constitute one of the principles of “Manas” Program policy.

To realize this principle the new Law of the Kyrgyz Republic “On protection of population health in the Kyrgyz Republic” stipulates the norms regulating rights, liabilities and responsibility of citizens in delivery of medical care.

Ministry of Health of the Kyrgyz Republic adopted the “Code of Professional Ethics of Health Worker of the Kyrgyz Republic” which determines degree of responsibility for breaching professional ethics.
Ministry of Health regularly conducts anonymous surveys at PHC level and in hospitals in order to learn about patient opinions about quality of health services. Survey results show growth in patient satisfaction with quality of health services at primary level (Fig. 20), as well as with quality of inpatient care (Fig. 21).

**Fig. 20. Patient opinions about quality of health services in FGP**

![Patient opinions about quality of health services in FGP](image)


**Fig. 21. Patient’s satisfaction with quality of inpatient care**

![Patient's satisfaction with inpatient quality of care, %](image)

Source: MHIF, Anonymous interviews with patients in hospitals (2003-2480 cases, 2004 – 2251 cases)

Patients opinions about conditions of hospital stay and attitude of health staff to patients in hospitals vary across regions despite overall high appreciation of the two factors (Fig. 22).
Fig. 22. Patient opinions about attitude of health workers to patients in hospitals

![Patient's satisfaction with personnel attitude to patients in hospitals, %](image)

Source: MHIF, Anonymous interviews with patients in hospitals (2003-2480 cases, 2004 – 2251 cases)

Thus, findings from WHO/DfID HPAP studies, as well as analysis of data from RHIC, MHIF, DSSES and Republican AIDS Center show that comprehensive structural health reforms, which were intensified in 2000, have resulted in improvement of individual health indicators and increase in equity, transparency and responsiveness of health system to population needs. Nevertheless, it is too optimistic to expect the achievement of prominent results over such a short historical period. Conducted analysis shows that reforms should be continued and accompanied by on-going monitoring to ensure operative response to identified problems (Tab.1).

<table>
<thead>
<tr>
<th>Key achievements</th>
<th>Remaining challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive dynamics of indicators characterizing human development</td>
<td>Achievement of the Millennium Development Goals</td>
</tr>
<tr>
<td>Vaccine-preventable disease control</td>
<td>Achievement of independence on vaccine supply</td>
</tr>
<tr>
<td>Accessibility of health services has not worsened for the poor; Increased share of public funding used to cover services delivered to the poor</td>
<td>Increase of the share of public health financing Equalization of financing across regions, reduction of differences in health care utilization between urban and rural areas</td>
</tr>
<tr>
<td>Introduction of mandatory health insurance</td>
<td>Increased share of MHI funding in health expenditures</td>
</tr>
<tr>
<td>Introduction of the system of progressive, outcome-based financing methods, and the Single Payer system</td>
<td>Improvement of mechanisms of health revenues collection and pooling Introduction of the minimum standards of budget financing with consideration of age-gender population structure and remoteness of health organizations from administrative centers Improvement of financing methods</td>
</tr>
<tr>
<td>Introduction of the State-Guaranteed Benefit Package</td>
<td>Equilibrium of government commitments and financial provision of the State-Guaranteed Benefit Package</td>
</tr>
<tr>
<td>----------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Containment of informal payments, replacement of informal payments with an official co-payment</td>
<td>Rational policy in regard to co-payment rates, reduction of the financial burden on population</td>
</tr>
<tr>
<td>Increased share of funding allocated for PHC</td>
<td>Capacity-building of FAPs, FGPs and ambulance services</td>
</tr>
<tr>
<td>Restructuring and downsizing of excessive capacity of hospital sector, increased share direct expenses on patient</td>
<td>Optimization of hospital sector, achievement of financial sustainability of hospitals</td>
</tr>
<tr>
<td>Improvement of quality of delivered services and introduction of evidence-based clinical protocols</td>
<td>Further introduction of evidence-based medicine at all levels of health service delivery</td>
</tr>
<tr>
<td>Improvement of drugs accessibility for all categories of insured population at PHC level in the context of ADP</td>
<td>Improvement of drugs accessibility, further ADP expansion</td>
</tr>
<tr>
<td>Orientation of the health system to population needs</td>
<td>Increase of health system responsiveness</td>
</tr>
</tbody>
</table>
2.3. Remaining challenges and issues to be addressed

A) Critically low level of public expenditures in the Kyrgyz Republic during the period 2000-2003 threatened the viability of the health sector

Level of financing from pooled sources is critical for the achievement of many objectives of the health sector financing. It should be noted that all activities on reform agenda assumed that the share of public health expenditures would remain at the level of year 2000. However, actual share of health expenditures is decreasing both as percentage in the state budget structure (from 13.5% in 1996 to 7.2% in 2004) and as percentage of GDP (from 3.7% in 1996 to 2.12% in 2004). In addition, there is also a practice of annual sequesters of the state budget which primarily affects the health sector. Consequently, many provisions of the State-Guaranteed Benefit Package remain declarative. Population has to purchase missing drugs after paying the co-payment, which undermines implemented health reforms.

Decrease in the level of public health spending increases financial burden on individuals and households, especially on low-income population groups, and results in inequalities in accessibility and quality of health services.

The Kyrgyz health model is characterized by well designed systems of pooling of funds and purchase of health services based on information technologies which ensures wide scale impact on improvement of efficiency, quality and equality. However, even a perfectly fine-tuned system is unable to ensure considerable financial protection and quality of health services without adequate funding level and equitable allocation of resources.

B) Heavy financial burden on households that utilized health services at outpatient and/or inpatient levels caused by continued informal payments and high level of co-payment

Financial burden remains especially high for households with low income. Despite the fact, that in absolute terms cost of treatment is lower in the poorest households than in better-off households, share of treatment expenditures for the poorest grew up to 7% of their annual income in 2003, while in the richer households there was a slight decline down to 4.5% of annual income [46]. Introduction of the Single Payer system, new financing methods and co-payment policy helps to contain informal payments in hospitals. In the regions that began to reform earlier informal payments are growing slower than in other regions.

Increased level of public financing, transparency of health services delivery and reduction of co-payment levels will lead to a significant reduction of the financial burden for individuals and households.

It is also necessary to develop a whole set of measures to fight against informal extortions on the part of health workers. A key step in this regard will be a significant raise of health workers' salaries. Hereby, it should be noted that along with the use of internal resources of the health system, the government should also take part in addressing this issue.

C) Need in further quality improvement at all levels of health services delivery system aimed at improvement of population health status

Further promotion of evidence-based medicine at all levels of health services delivery system, expansion of list of monitored primary care sensitive conditions, strengthening of work aimed at mitigation of risk factors and fostering of health culture along with rational drug management and control of hospital-acquired infections will contribute significantly to improved quality of life of population. Great significance belongs to the level of professional competence of health workers, which necessitates further improvement of undergraduate, post-graduate and continuous training systems.

D) Need in more active involvement of population, local communities, non-governmental and community-based organizations in activities with health agenda

Community involvement in health protection and promotion is one of the key success elements of the public health approach which depends on understanding and support of the population, since the real results can only be achieved under the condition of people’s active participation. In the context of state governance reform, certain functions or state authorities in terms of health promotion and protection of patient rights can be delegated to non-governmental organizations (NGO). Capacity and resources of NGOs that are able to make flexible decisions quickly, supplementing the activities of public health organizations, gain greater importance.
E) Building of health sector capacity that will ensure sustainable and progressive functioning of the sector

Building of health sector capacity is the key factor for progressive development of health care system. Despite the increase in the level of salaries of health workers, the average salary does not exceed 75% of the country average salary and is less than the minimum consumption budget. This serves as one of the leading causes of low prestige of this profession. It leads to imbalance in staffing, remaining insufficient quality level of health services and continued informal payments maid by patients. In this regard, salaries of health workers need to be raised significantly. To improve health sector capacity and efficient functioning it is required to ensure efficient management of human resources, improvement of material and technical base of health system and upgrading of information-communication technologies.

F) Need to focus on mother and child health issues to ensure achievement of Millennium Development Goals

Achievement of Millennium Development Goals is hindered by a number of factors beyond health system control, such as poverty, internal migration and low population awareness. Ministry of Health of the Kyrgyz Republic is to carry out a set of measures aimed at enhancement of effectiveness of national and state programs on mother and child health and ensure regular monitoring of their implementation for managerial decision making.

G) Further institutionalization of health system

In the context when the main structural changes are completed, the key area of health policy focuses on further institutionalization of the system on the basis of new functional characteristics, exclusion of duplication of functions and their clear separation, integration of health services, preservation and strengthening of the managerial capacity, and synchronization and harmonization of legislation.
2.4. Lessons learnt

Success of health reforms in the Kyrgyz Republic is the result of focusing on comprehensive approach rather than on individual mechanisms and instruments

Health sector reforms have been implemented comprehensively, not in one isolated direction, and included a structured system of incentive and disincentive mechanisms for both health providers and population, based on changes in financing mechanisms. Systemic approach to introduction of progressive, outcome-based financing methods was followed by introduction of mandatory health insurance in the context of overall health reform. Concerted measures on restructuring of health services delivery system, strengthening of the PHC and decentralization of management of health organizations were combined with capacity-building, improvement of the material-technical base and creation of unified health information system. New mechanisms of collection of funds for health including inpatient co-payment, pooling and strategic purchasing allowed for introduction of State-Guaranteed Benefit Package which defines types, scope and terms of delivery of health services for free and on exemption basis. At the same time, mechanisms of protection from financial burden for socially vulnerable population categories were envisaged. Changes implemented within the health sector obtained have been secured legislatively.

“Manas Taalimi” Program is based on continuity with “Manas” Program and focused on systemic approach to further health reform process, poverty reduction issues and achievement of MDGs.

In the context of significant reduction of public spending on health, restructuring was one of the ways to maintain population access to health services

Excessive infrastructure which required significant financial resources for maintenance was not able to retain access of health services at adequate level in the context of drastic decline of health financing level. Timely implemented restructuring allowed for both preservation of access to health services as well as more rational use of available scarce resources and spending savings on patients.

Phased implementation of reforms with piloting of new mechanisms allowed determining the most effective mechanisms of intra-sectoral and inter-sectoral collaboration for their further application countrywide

Targeted testing of new mechanisms in pilot regions helped for timely identification of unforeseen problems, find solutions and develop adaptation and institutionalization mechanisms for their implementation in the rest of the country. Phased implementation of changes allowed for achievement of considerable success in terms of improving transparency and efficiency of public administration in the health sector and increasing autonomy of health services providers. “Manas Taalimi” Program will pay great attention to improving intra-sectoral interaction and comprehensive development of inter-sectoral collaboration.

Coordination of donor assistance

Reform implementation process entailed great deal of work coordination of donor activities, which facilitated increase in efficiency of investments and elimination of duplication. At the same time, there was a lack of coordination in terms of implementation of individual projects in social sector managed by other ministries. Coordination of donor assistance and on-going projects is crucial for avoiding duplication of activities, increasing efficiency and avoiding controversies in policy orientation.

Political support

Support of the reform is crucial at both the high political level and inter-sectoral level expressed by top management. During 2000-2004, the Kyrgyz health reform repeatedly encountered critical situations of rollback due to changes in the political environment. These affected the speed of reform implementation. It is necessary to conduct wide-scale work to explain the goals and objectives of the health reforms implemented in the context of wider public reforms, and make weighted evidence-based decisions. In this respect, research and monitoring carried out by the WHO/DfID Health Policy Analysis Project has been extremely helpful.

Support of health workers

During the reform implementation, poor understanding of innovations by a part of the medical
community, reluctance to refuse habitual stereotypes as well as insufficient awareness of on-going reforms in some regions and health organizations resulted in slowdown in reform implementation. This has reflected on the socio-economic indicators of those regions. Effective implementation of strategies requires support, involvement and adherence to the reform goals by health workers who serve as direct executors. It also requires availability of positive “critical mass”, which was formed during the process of on-going training on new management methods and communication of changes happening in the health sector.

**Understanding and support of people**

Active involvement of non-governmental and community-based organizations, local communities and mass media, their understanding and support of on-going processes in the health sector significantly increase the legal literacy of population and demands towards health workers as well as assist in proper decision making oriented to population needs.

**Balance of government commitments to ensure funding**

Following the introduction of the State-Guaranteed Benefit Package, it was difficult to reach the balance between the level of health financing and a large number of benefits declared by the state. There has been a strong pressure from the politicians demanding the expansion of benefits to people without corresponding provision of adequate financing. This led to discredit of the health reforms. Therefore, the balance between government commitments and allocated funding is crucial.

**Health system cannot be punished for implemented reforms**

In order to reduce informal payments paid by patients and improve transparency of resource use it was decided to introduce a co-payment for inpatient services. During the process of budget planning and approval some local state administrations were interested in reducing public expenditures motivating it by the fact that the health sector acquired additional funding in the form of co-payment. Reduction of public spending on health in the context of extreme insufficiency of funding undermines trust of health workers and population to the health reform.
3. Goals of “Manas Taalimi”

3.1. Mission

Achievement of goals set in the Comprehensive Development Framework of the Kyrgyz Republic until 2010, National Poverty Reduction Strategy and Millennium Development Goals, accomplishment of objectives declared by the World Health Organization in the programs “Health for All in the XXI Century” and “Health Care in Kyrgyzstan in the XXI Century”, realization of right of every citizen of the Kyrgyz Republic to being healthy which has a great impact on quality of life and poverty level, are possible only under active, purposeful actions of every medical worker, administrator, health manager, state governance and local government authorities, NGOs, civil society and every citizen.

Recognizing propriety of political direction of health reforms, evaluating lessons learnt along the traversed path, the mission of the Program “Manas Taalimi” consists of further implementation of reforms in the health sector of the Kyrgyz Republic aimed at institutionalizing and reinforcing the changes made under the National Health Care Reform Program “Manas” (1996-2006), at the same time ensuring more active involvement of wider population in the process.

Main principles of health reform policy include:

- continuity with the National Health Care System Reform Program of the Kyrgyz Republic “Manas” for 1996-2006 with consideration of lessons learnt;
- comprehensiveness and consistency of activities undertaken under the reform agenda;
- orientation of strategies towards poverty reduction and reduction of differences between urban and rural areas in health services utilization;
- transparency of the decision-making process, publicity and open participation of all citizens, society, state governance and local government authorities in health protection and promotion activities;
- balance between state commitments and health care financing;
- sector-wide approach to health reforms.
3.2. Goals and objectives

The main goal of the National Health Care Reform Program “Manas Taalimi” is to improve health status of population through the creation of a responsive, efficient, comprehensive and integrated system of individual and public health services delivery, increased responsibility of every citizen, family, society, public authorities and administration for health of each person and society in general.

Goals of health reform policy include:

- achievement of equity and accessibility to health services;
- reduction of financial burden on population;
- increase in effectiveness of health services delivery system;
- improvement of quality of health services;
- increase of responsiveness and transparency of health system.

Objectives:

1. To increase efficiency and responsiveness of the health system through development of comprehensive, integrated health services delivery system corresponding to the needs of people and society.

2. To reduce the financial burden on the population on the basis of sustainable health financing and equitable resource allocation aimed at improved accessibility of high-quality health services for population especially poor and socially vulnerable groups, and ensure balanced government commitments under the State-Guaranteed Benefits Package and other priority programs.

3. To improve quality of health services on the basis of further health sector capacity building, effective human resources management, improvement of the material and technical base of health sector, further improvement of information and communication technologies, increased efficiency of resource use and performance optimization of health organizations.

4. To improve population health status and achieve the Millennium Development Goals by addressing the priority issues of health protection and promotion, strengthening of inter-sectoral collaboration with active involvement of population, non-governmental and community-based organizations, local communities, mass media, state governance and local government authorities.
3.3. **Priority areas**

- Increase of primary health care effectiveness with a special emphasis on strengthening capacity of FAPs and ambulance services;

- Optimization of specialty care and regulation of access to health services, including high-technology health services;

- Improvement of quality of health services through introduction of mechanisms of effective internal management, promotion of evidence-based medicine principles, rational pharmaceuticals management, strengthening of the laboratory services and management of hospital-acquired infections and waste utilization;

- Orientation of health care towards the achievement of Millennium Development Goals, strengthening of the role of public health, fostering health culture with active involvement of communities, non-governmental organizations, mass media, and local governments;

- Improvement of quality of undergraduate, post-graduate and continuous education through increased accreditation requirements towards educational institutions and training programs and introduction of mechanisms to secure health personnel, especially in rural areas.
4. Reform Plan

4.1. Population and community involvement in health protection and health promotion

The Kyrgyz Republic has launched activities on population involvement in health protection and health promotion issues in the context of Manas National Health Care Reform process. Work with population is based on creation of new approaches such as shift from passive transfer of information and knowledge to partnership relations and identification of priorities focused on solution of problems of both the society in general as well as individual communities, population groups and each individual. Rights and responsibilities of population in the field of health protection are secured in the Constitution of the Kyrgyz Republic and the Law of the Kyrgyz Republic “On health protection of citizens of the Kyrgyz Republic”.

Reform of state governance may contribute to delegation of some functions and authorities concerning health promotion and protection of population rights on health protection to non-governmental organizations. High significance is gained by abilities and resources of NGOs which are able to make fast and flexible decisions supplementing to the work of public health organizations.

Experience related to involvement of local communities and NGOs in development and implementation of health programs and strategic operational directions on quality improvement of health care showed high efficiency. The result of work of health committees in Naryn oblast on prevention of iodine-deficient conditions and quality control of imported white salt exercised by local communities was the increased share of households using iodized salt for cooking. This share increased by 25% and reached 92% of households in 2003 whereas consumption level of iodized salt in other regions does not exceed 70% (Fig. 23).

Fig. 23 Use of iodized salt by households in 2002-2003

Currently there are community-based organizations that unify patients with various conditions such as Hypertensive patients club, Asthma center, “Diabetes” Association, community-based organization on social protection of population and health committees. These NGOs in close collaboration with health sector and donor organizations provide training to new members of their organizations on methods of self-help and mutual aid, disease prevention and control and sanitary-hygienic skills.

Social marginalization, unemployment, poverty are important psychological factors leading to depressive disorders, change of behavioral patterns. Therefore, it is planned to undertake activities of mental health promotion as well as physical health promotion of the population.

The goal
Development of new approaches of population involvement based on the shift from passive transfer of information and knowledge of health protection and promotion to partnership, identification of priorities oriented at solving of problem entire society, as well as individual communities, population groups and each individual.

**Objectives:**

1. Improvement of mechanisms of population involvement into physical and mental health promotion of population, prevention of diseases.

2. Development of new approaches of population involvement based on the shift from passive transfer of information and knowledge of health protection and promotion to partnership, identification of priorities oriented at solving of problem entire society, as well as individual communities, population groups and each individual.

4.1. Improvement of mechanisms of population involvement into physical and mental health promotion activity and disease prevention

**Objectives:**

1. Improvement of mechanisms of population involvement into physical and mental health promotion of population, prevention of diseases.

2. Involvement of mass media in more active work with public in relation to the issues of health protection and promotion, increasing public awareness in health reform process.

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4.1.2. Involvement of mass media in more active work with public in relation to the issues of health protection and promotion, increasing public awareness in health reform process

**Key Actions:**

A. Development of population interaction strategy in the issues related to health promotion and diseases prevention.

B. Rendering assistance in development of different models of community mobilization into the issues of physical and mental health protection and promotion.

C. Improvement of Ministry of Health interaction with population.

4.1.2. Improvement of mechanisms of population involvement into physical and mental health promotion activity and disease prevention

**Objectives:**

1. Improvement of mechanisms of population involvement into physical and mental health promotion of population, prevention of diseases.

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4.1.2. Involvement of mass media in more active work with public in relation to the issues of health protection and promotion, increasing public awareness in health reform process

**Key Actions:**

A. Improvement of MOH Press-Center operation

B. Improvement of MOH Press-Center operation

C. Improvement of MOH Press-Center operation
4.2. Health financing

Sustainability of the health care system is connected to a considerable degree with effective system of financing, which presumes adequate level of funding allocated to health care, its equitable distribution and rational use.

In the first phase of the health care reform the following was achieved: institutional changes were made that led to the split into purchaser and providers of health services in the health sector; the Single Payer system was introduced; a foundation was laid for progressive, output-based methods of financing of health services provided within the State-Guaranteed Benefit Package; a health information system was created. The structural changes implemented in the health care sector were institutionalized by three main laws of the Kyrgyz Republic adopted in 2003-2005.

The established legislative foundations and integration of a number of priority (vertical) programs in the overall health delivery system enhance (a) the formation of a financing system based on separation of individual medical services and health care services provided to the whole society, and (b) allow to continue the development of health financing reform with a clear definition of financial flows, roles and functions of all stakeholders of health financing system.

Goal:

Formation of a sustainable, effective and integrated system of health financing based on increasing volumes of funding that ensure equitable and even distribution of resources, balanced state commitments within the State Guaranteed Benefit Package and other priority programs, decrease of the financial burden of population, especially the poor, improvement of people's access to health services, and effective and rational use of health care resources.

In order to achieve the set goals, the health sector has determined the following objectives:

1. To increase the share of public financing of the health sector and to improve revenue collection for health care;
2. To ensure an equilibrium of governmental commitments for health care and financial resources allocated to health care;
3. To gradually equalize health financing across regions;
4. To improve the process of purchasing of health services under the State Guaranteed Benefit Package, as well as the process of procurement of material resources necessary to provide health services that meet population needs;
5. To ensure transparency in the distribution and utilization of health funds.

4.2.1. Financing of health services

Based on the nature of health services, all services can be divided into:

- Individual health services provided under the SGBP and additional programs (individual services)
- High technology (costly) health services (hi-tech services)
- Health services provided to the whole population (population-based services)

**Individual health services provided under the State-Guaranteed Benefit Package and additional programs**

Individual health services provided directly to every citizen can be provided by the state, agency and private health organizations and are intended to satisfy the needs of an individual citizen. At that, financing of these health services can come from different sources specially appropriated for these purposes:

- Individual health care services provided under the SGBP are financed by the MHIF from the state budget and mandatory health insurance funds appropriated for the SGBP.
• Individual health services provided under the Additional Mandatory Health Insurance Program “Drug provision to insured citizens at outpatient level” and other additional MHI programs are financed by the MHIF from the MHI funds.

High technology (expensive) health care services

Health services using high technology are financed from the High Technology (expensive) Health Services Fund financed through the Ministry of Health.

Population-based services

Health services provided to the whole population are based on society needs and divided into:

- Public health services;
- Centralized provision of state health organizations with necessary material resources (drugs and medical equipment) oriented to satisfy population needs.

Tab. 2. Financing of health services

<table>
<thead>
<tr>
<th>Type of health service</th>
<th>Funding organization</th>
<th>Funding source</th>
<th>Health service beneficiaries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual health services under the SGBP</td>
<td>MHIF</td>
<td>State budget</td>
<td>All citizens of the Kyrgyz Republic. For certain population categories – exemptions, determined by the legislation. Privileges for insured citizens (lower co-payment rates) given a referral from an FGP doctor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MHI funds</td>
<td></td>
</tr>
<tr>
<td>Individual health services under the ADP MHIF</td>
<td>MHIF</td>
<td>MHI funds</td>
<td>Insured citizens</td>
</tr>
<tr>
<td>High-technology health services</td>
<td>Ministry of Health</td>
<td>State budget</td>
<td>All citizens of the Kyrgyz Republic</td>
</tr>
<tr>
<td>Public health services</td>
<td>Currently, at regional level – Territorial Departments of the MHIF, at national level – the Ministry of Health Planned – pooling of funds at national level</td>
<td>State budget</td>
<td>All citizens of the Kyrgyz Republic</td>
</tr>
</tbody>
</table>

4.2.2. Revenue collection for health financing

The funding sources of the health system are the state budget (republican and local) and mandatory health insurance funds. The mandatory health insurance funds are formed from mandatory health insurance fees collected by the Social Fund for employed citizens and mandatory health insurance fees for the vulnerable population categories coming from the republican budget.

The health system does not collect revenues itself and is in direct dependence on allocations from the republican and local budgets, as well as from timely transfer of MHI fees from the Social Fund of the Kyrgyz Republic.
In spite of the double increase of health care financing in nominal terms, the decennial period of health care reforms was accompanied by the decreasing share of health expenditures in the structure of state budget (from 13.5% in 1996 to 7.2% in 2004), as well as in the structure of GDP (from 3.7% in 1996 to 2.12% in 2004). At that, the main source of financing was local budget money, the share of which in the structure of state expenditures on health care increased from 71.7% in 1996 to 80.6% in 2002, but in 2004 it fell to 76.7%, and in the structure of GDP – from 2.21% to 1.27%. The share of the republican budget in health spending as % of GDP decreased from 0.87% to 0.39%.

In 1997, mandatory health insurance was introduced in the country; the share of MHI funds gradually increased from 0.03% of GDP in 1997 to 0.46% in 2004. In 2001, due to insufficient health care financing, with the introduction of the State Guaranteed Benefit Package a co-payment was introduced to reduce informal payments of population for treatment. The volume of co-payment increased from 29.0 millions of soms in 2001 (0.04% of GDP) to 206.3 millions of soms (0.22% of GDP) in 2004 (Fig. 24).

In addition to reduced health financing, there are also annual budget sequesters and inequitable financing of the sector across regions. The problem of financing is exacerbated by uneven allocation of funds to finance health care during a year from the state budget and absence sustainable mechanism to transfer the MHI money from the Social Fund and republican budget.

There are no incentives for local authorities to improve the infrastructure of health facilities and secure health personnel.

In order to increase the share of public health financing and improve revenue collection for health care the following key actions are planned:

A. To increase the share of public health financing in the structure of both GDP and public expenditures in accordance with the CDF [1] NPRS [2], and MTBF for 2006-2008 [50], targets, and to improve health revenue collection;

B. To improve mechanisms of health budget formation;

C. To involve local government authorities in additional financing of health protection and promotion activities.

A. Increase of the share of public health financing in accordance with the CDF, NPRS and MTBF for 2006-2008 targets, improvement of revenue collection

Reduction of the share of health financing in the structure of public expenditures since 1996 along with the budget capacity to provide for only 26% of transfers for MHI of children and for 50% for MHI of pensioners has demonstrated that health care is a low priority in the allocation of state budgetary funds. Despite the improvements in revenue transfers from the Social Fund for MHI of employed citizens in 2003-2004, the mechanisms of revenue split remain unsustainable and are subject to risk.

Sustainability of the health delivery system, as well as the health protection, prevention and promotion.
activities, depend on resource provision. The increase of health funding in accordance with the CDF, NPRS and MTBF for 2006-2008 targets will allow to ensure the predictability of health financing, reduce the financial burden of the population, raise effectiveness of risk management, and plan measures to improve the quality of health services and their accessibility to the population.

**Key actions**

- To stipulate for increasing the share of public health financing in accordance with the CDF, NPRS and MTBF for 2006-2008 targets;
- To increase the MHI contribution rates (including at the expense of the employed) in accordance with the Concept of Health Financing Reform of the Kyrgyz Republic;
- To increase transfers from the republican budget (insurance premiums) for MHI of unemployed citizens and to bring them up to the norms established by the Law of the Kyrgyz Republic "On health insurance of population in the Kyrgyz Republic";
- To expand the MHI coverage of citizens not engaged in labor relations;
- To introduce and improve mechanisms of automatic accrual of the MHI funds collected by the Social Fund for employed citizens to the MHIF accounts at the bank level.

**B. Improvement of health budgeting mechanisms**

Clear regulating mechanisms of budget formation and transfer of revenues in the health sector will ensure transparency and enhance the decrease of regional disparities in financing, increase the effectiveness of resource use, and reduce the financial burden of the population.

**Key actions**

- To develop health financing parameters for gradual smoothing over of regional disparities in financing;
- To form budgets taking into account necessary additional allocations to introduce correction coefficients that consider the age-gender population structure, climatic characteristics, remoteness from administrative centers and other factors;
- To form the health budget on program basis taking into account health priorities and population needs on the basis of minimum standards of budget financing;
- To form the State Guaranteed Benefit Package taking into account the financial means necessary to provide for exemptions to vulnerable population categories;
- To reinvest the funds economized by health organizations in the process of restructuring and operational optimization and to take them into account in health budget formation.

**C. Involvement of local government authorities in additional financing of health protection and promotion activities**

The processes of public administration decentralization and increasing role of local authorities are inseparably linked to involvement of local state administrations, self-governance and local communities in addressing issues related to the protection and promotion of local communities' health. In recent years, due to lack of funds for health care in their budgets (except for Bishkek and Osh cities), the local communities have not taken active part in maintaining and improving health of their populations.

A clear separation of functions of state administrations and local government authorities in the health sector is inseparably linked to the availability of additional revenues of local communities to maintain the health infrastructure, secure health personnel and provide for social protection of people.

Endowing local communities with the right to expend local budget money to provide additional support to people and develop health facilities will strengthen their role and create mechanisms to involve local government authorities in decision-making in regard to health care issues and securing health personnel.
Key actions

• Priority-setting of local communities and local government authorities in the area of health protection and promotion at the level of municipal education and additional fund-raising for the implementation of local social programs;

• Needs assessment of municipal health facilities in capital investment, appropriation of additional funds for health care in the local budget;

• Identification of financial sources and introduction of social, financial and material incentives to support health workers at the municipal level.

4.2.3. Pooling

The cardinal changes in the budgeting process and transition to a bi-level budgetary system are planned under the framework of local government reform. At present, in the Single Payer system health revenues are pooled at oblast level.

As the fragmentation of health funds in small pools – local budgets, will drastically strengthen inequity in financing across regions, decrease effectiveness of available resources, increase the burden of the population, and consequently, worsen access to health services, pooling of health funds at the republican level is optimal. It will allow achieving equitable allocation of financial resources across regions on the basis of a single per capita health financing norm, as well as outcome-oriented purchasing of health services based on population needs in health care.

In addition, due to risks pooling and cross-subsidization of health services provided to different social groups, there emerges an opportunity to plan health care resources based on population needs in different types of health services (especially taking into account the health priorities) under single rules, irrespective of geographic characteristics of the regions ensuring transparency of budget formation.

In this respect, it is planned to pool health funds at the republican level with the creation of separate pools (Fig. 25), herewith:

• The MHIF will be responsible for financing of individual health services provided under the State Guaranteed Benefit Package and additional MHI programs.

• The Ministry of Health will be responsible for financing of costly (high-tech) health services, as well as health services provided to the whole population, including the centralized procurement of drugs, vaccines, antibacterial medications, expensive medical equipment and other capital investment, financing of health organizations that are financed from the republican budget and do not provide health services under the State Guaranteed Benefit Package.

Fig. 25 Pooling of health funds
4.2.4. Purchasing of health services

The asymmetry of health care markets combined with irrational behavior of consumers increases the probability of creating a costly mechanism and emergence of structural disproportions in health care. Inasmuch as the state takes upon the responsibility to finance a considerable part of medical and preventive care to the population, a contract strategy with providers has been implemented in the country since 1997 to ensure a fair distribution of resources and to decrease structural inefficiencies.

With the transition to health financing within the State Guaranteed Benefit Package, the contracts included the volumes of medical care provided. At the same time, the negative incentives built in the principles of case-based payment in hospitals have led to growth in the number of admissions, reduction of the average length of stay, unjustified hospitalization referrals by specialists of outpatient-diagnostic departments of hospitals and FGP/FMC doctors.

Due to the financial instability of a number of providers, large credit indebtedness on utilities (due to under financing from the local budgets), incomplete restructuring of the health sector and optimization of health organizations’ operations, and clearing settlements on utilities practiced by local budgets, the re-investment mechanisms have not worked in full capacity.

Historically formed inadequate budget directed primarily to maintain the infrastructure, vivid regional disparities in health financing, and low priority of public financing of health care lead to reductions in the scope and types of individual and public health services in the State Guaranteed Benefit Package, as well as to reduction of exemptions provided to the population, and to growth of informal payments made by people.

In this context, matching the government commitments with financial resources is possible under:

- increased effectiveness of management of the scope and structure of health delivery;
- regulation of the scope of exemptions provided to the populations;
- regulation of co-payment levels;
- improved contractual process and purchasing methods.

In order to exclude duplication of purchasing and integrate financing of priority programs, the purchasing of health services is divided functionally into purchasing of individual health services and purchasing of population-based health services. Herewith, the purchasing parties are represented by the Ministry of Health and MHIF.

4.2.4.1. Purchasing of individual health services by the MHIF under the SGBP

The State Guaranteed Benefit Package defines the types, scope and conditions of health care provision free of charge and on exemption basis. The financing methods of different types of medical care rendered within the Single Payer system are defined legislatively [5]. With the introduction of progressive financing methods, the emphasis has gradually shifted towards primary care, whose share in total financing has increased from 16% in 2000 to 30% in 2004.

The phased introduction of the SGBP and co-payment in 2001-2004, re-classification and re-calibration of clinical-cost groups in 2003, and transition to the classification of cases based on ICD-10 required a deep analysis to find solutions to hospital payment methods for cases above the volumes set in the contracts (Fig. 26).
At the same time, non-readiness of primary care level to take full responsibility for health status of the population and high level of referrals to higher levels of health delivery have revealed insufficiency of economic incentives for effective performance of the primary care.

To increase effectiveness of purchasing of individual health services the following key actions are proposed:

A. Improvement of purchasing of PHC services;
B. Improvement of purchasing of specialty health services provided at outpatient level;
C. Improvement of purchasing of inpatient health services;
D. Strengthening the role of contracts (agreements) in purchasing of health services.

**A. Purchasing of PHC services**

In the first phase of health reforms, with the introduction of the Single Payer system new PHC payment methods were introduced based on capitation norm initially for the MHI funds and then for budget funds. A gradual increase of capitation rate allowed to increase both the PHC expenditures and their share in the structure of health expenditures and to introduce new remuneration methods.

Transfer of ambulance services to family medicine centers in 2004 provided additional incentives to improve the quality of health services and increase effectiveness of family doctors performance. Nevertheless, there was no re-distribution of the economized funds intended for the provision of ambulance services, because financing of ambulance care is done on the basis of a norm per 1 ambulance brigade based on the existing funding levels. In addition, separate capitation financing norms for FGP and specialty services rendered by FMC protect FGP expenditures on the one hand; on the other hand, FGP still have incentives to refer patients to narrow specialists. At the same time, due to strict limitations, FMC do not have opportunities to optimize staffing with narrow specialists and rationally use funds intended for the provision of specialty services in outpatient setting.

Along with increasing professional competence of family doctors, improvement of the material-technical equipment of FMC, strengthening the managerial and financial autonomy of PHC providers, in order to increase PHC effectiveness and create economic incentives for better quality treatment it is planned to improve internal management on the basis of information technology. It is necessary to introduce strategic planning of health services. As PHC providers mature, it will be possible to gradually introduce mechanisms for more rational use of funds to pay for health services provided at outpatient level in both FMC and hospital ODD.
Key actions

- Strengthening the managerial and financial autonomy of PHC providers, increasing the role of financial management
- Improvement of capitation payment methods
- Completion of population’s enrolment with FGPs
- Introduction of information technology to PHC
- Introduction of correction coefficients to increase effectiveness of PHC operations
- Strategic planning of the scope and types of medical, laboratory-diagnostic services provided free of charge under the SGBP, as well as with a co-payment
- Development and introduction of incentives to improve quality of health services
- Determination of workload norms of health personnel developed on the basis of new functions on health care provision, implementation of health prevention and promotion activities
- Development and introduction of reward mechanisms based on the end of year results for good achievements in health promotion on the basis of objective indicators (bonuses for quality)
- Development of mechanisms of more effective management of funds intended for:
  - exempt drug provision under the SGBP,
  - drug provision to insured citizens under the Additional Drug Package,
  - payment for consultations and laboratory-diagnostic tests on the basis of referrals from FMC/FGP to other health organizations;
  - payment for laboratory and diagnostic tests carried out centrally by other health organizations;
- Introduction of an integrated capitation rate at the primary level (ambulance, FGP/FMC).

B. Purchasing of specialty health services at outpatient level

In the process of health delivery re-structuring providers were split into primary and hospital care providers. In this regard, outpatient-diagnostic departments in hospitals (ODD) and FMC were set up. It was planned that there would be no duplication of specialty care services at outpatient level. However, given the unequal equipment and concentration of more qualified specialists in hospitals, a capitation co-payment in ODD and FMC has been introduced as an interim measure until the final re-structuring and optimization.

As a result, many ODD began to function as polyclinics duplicating the work of FMC. Lack of necessary equipment and reagents in FMC became an additional incentive to referrals or high rate of self-referrals to ODD specialists. Besides, ODDs, by exercising their right to refer patients to hospitals, have increased the patient flow to hospitals, while the majority of these patients could have been treated at outpatient level.

In this context, new strategies aimed at creating economic incentives to exclude duplication of health services and increase the effectiveness of FMC and ODD work are suggested along with the changes in organizational approaches to specialty care at outpatient level.

Key actions

- Working out payment mechanisms of hospital-substituting technologies
- Changing ODD payment method – transition from capitation to strategic procurement on the basis of planning the volume of emergency health services
• Introduction of contracting arrangements for consultation and ODD laboratory-diagnostic services payments – between providers (FMC and hospitals), where FMC will pay for rendered services based on FGP/FMC referrals.

C. Purchasing of hospital health services

Introduction of case-based payment in hospitals working in the Single Payer system has created incentives to increase the effectiveness of hospitals performance, reduce the average length of stay, optimize expenses, and increase the share of direct treatment expenses.

Case-based payment of hospitals based on clinical-cost groups (DRGs) using information technologies permits to conduct in-depth analysis of the scope and structure of health services provided to different population categories, and, based on the monitoring system, undertake measures to raise effectiveness and rational use of funds.

Being very sensitive to changes in payment systems, the hospital network has enough flexibility to attract patients. As a result, only for the past three years the number of hospitalizations has grown by 17.3%. There are deviations from the terms of contracts on the number of treated cases. In some hospitals such deviations reach 50-80%. In addition, there are high hospitalization rates for diseases managed at primary level.

Insufficient and uneven financing does not cover patient treatment costs. Due to imbalances in the volume of financing and state commitments under the SGBP and mutual clearing settlements on utilities, there remains a structural disproportion in the volume and types of hospital services; providers have fewer incentives for further re-structuring and cost optimization. Thus, in order to survive in the context of insufficient financing, the tertiary level hospitals have to attract patients, who could be treated at lower levels of the health delivery system.

Hospitals of Chatkal and Chong-Alay rayons, as well as some rural district hospitals located in remote, difficult to reach areas, where there is virtually no transport communication in wintertime, are in a very difficult situation. Monitoring of their activities shows that such hospitals require an individual approach to payment methods.

In order to increase the financial and managerial autonomy of hospitals, along with increasing the effectiveness of contracting arrangements and responsibility for contract fulfillment under conditions of gradual equalization of financing, the following measures are proposed.

Key actions

• Strategic planning of the volumes and structure of hospital care based on actuarial analysis;
• Strengthening of the managerial and financial autonomy, increasing the role of financial management;
• Increasing the role and responsibility of providers for expenditures and quality of health services;
• Improvement of case-based payment method based on monitoring of the volume, structure and quality of health services;
• Development of payment mechanisms for hospitalizations with short lengths of stay, hospitalizations with justified long lengths of stay, and hospitalizations in excess of the volumes set in the contracts;
• Development of integrated financing methods of hospitals situated remote and difficult to reach regions with the attraction of local budget means;
• Use of accreditation results and evidence-based medicine methods in case payments with the use of high-tech and costly treatment methods.

D. Strengthening the role of contracts (agreement) role in purchasing of health services

Conclusion of contracts between the purchaser and providers provides incentives to increase the effectiveness of funds use and quality of services. Definition of mutual liabilities and parameters of payment for health services increases the transparency in resource allocation and use and allows planning expenditures and managing them more effectively.

In the first phase of health reforms, imbalances between the state commitments and credit
indebtedness of health organizations on the local budget funds halted a full-fledged development of contracting mechanisms; the number of treated patients exceeded the number of hospitalizations set in the contracts.

Purchasing and contract management based on the analysis and planning of the scope and structure of different types of health services (strategic purchasing) and transition to a consolidated budget increase the role of monitoring of contract processes, as well as the responsibility of parties on the fulfillment of liabilities.

Key actions

- Transition from automated payments of bills to strategic purchasing
- Increased responsibility of the purchaser and providers for the fulfillment of contract conditions.

4.2.4.2. Exemptions to the population and co-payment

A. Improvement of mechanisms to provide exemptions to the population

In the process of implementation of the State Guaranteed Benefit Package, there has been a considerable increase of the population categories entitled to exemptions – free provision of health services or with a minimum co-payment (in 2001 – 29 categories, in 2004 – 52 categories). At that, if in 2001-2002 the share of people entitled to free provision of health services in hospitals was on average up to 10%, in 2004 the share of people entitled to social exemptions treated in hospitals increased from 8.6% in 2003 to 24.1% in 2004; the share of people entitled to exemptions on disease increased from 8% in 2003 to 20.2% in 2004. Thus, based on preliminary data for 2004 33.3% of patients in hospitals were treated for free, and 11.1% were treated with minimum co-payment, what in total made 44.4% of all treated patients.

Expansion of exemptions is connected with finding additional sources of funding. In this regard, to balance the state commitments and volumes of SGBP financing, an inventory of the legislative base that regulates exemptions to the population is planned. So are studies of these categories’ needs in the types and scope of medical care; calculation of the volume and identification of sources of additional funds necessary to provide for the exemptions.

The mechanism of provision of free medical care to low-income citizens, not entitled to exemptions and receiving health services provided for from the reserve fund of health organizations, has to be improved and be based on targeting of exemptions taking into account the household income.

Key actions

- Definition of a list of population categories entitled to exemptions
- Determination of consumption levels of health services by persons entitled to exemptions at different levels of health care provision;
- Definition of the scope and funding sources for health services to persons entitled to exemptions on the basis of projected consumption of health services by corresponding socially vulnerable population groups
- Development and introduction of mechanisms of targeted provision of health services to low-income citizens.

B. Improvement of co-payment policy

Co-payment was introduced in 2001-2004 due to insufficient health financing and high level of informal payments by the population for treatment as one of the mechanisms to prevent unjustified consumption of health services.

The Law of the Kyrgyz Republic “On health protection of population in the Kyrgyz Republic” stipulates that the population shall take part in payment for health services beyond the State Guaranteed Benefit Package.

Determination of co-payment levels was based on surveys on informal payments for treatment by the population. Socially vulnerable population categories were entitled to full or partial exemptions from co-payment. The levels of co-payment had to be affordable to the population, but simultaneously not too low to prevent unjustified consumption of health services. Hereby, it should be noted that on average, per person who paid a co-payment, it grew from 20.8% (302 soms) of the average monthly wage in
2001 to 30.8% (679 soms) in 2004. The nominal levels of co-payment vary significantly across regions and depend on the disease profile, social status and availability of referral to hospitalization.

At the same time, co-payment should not replace financing from the state budget. In this regard, it is necessary to develop a policy on how to determine co-payment levels in the future taking into account increases in health expenditures. As financing from the state health budget grows, the co-payment levels must be reduced so that it would not be a big burden for households.

**Key actions:**
- Prospective development of co-payment policy on the basis of periodical surveys on informal payments for treatment by the population, levels of public health financing and income level of the population;
- Definition of co-payment ceilings for certain types of health services for different population categories based on differentiated approach to co-payment levels at different levels of health expenditures.

### 4.2.4.3. Purchasing of health services under the Additional Drug Package

Coverage of all territory of the republic with the Additional MHI Program on drug provision at primary level has significantly enhanced improvements in drug accessibility and introduction of evidence-based medicine principles. These are reflected in performance outcomes as prevented complications on some monitored diseases managed at primary care, such as hypertension, stomach ulcer, duodenal ulcer and bronchial asthma.

This program is financed from the MHI funds and limited by per capita norm. Herewith, a number of FMC, meeting the population needs, exceed the limits set by the per capita norm, while other FMC have funds intended for this program underused. In 2004, taking into account that overall the limit of allocated budget was not used up, a redistribution of funds under the MHI ADP began in accordance with population needs, which represents an element of virtual fundholding where pharmacist providers are compensated for drugs actually sold under MHI prescriptions.

Taking into account the significant clinical and economic effect of the Additional MHI Program, especially for diseases managed at primary care level, further improvement of the program in light of population needs and impact on the living standard is planned in the framework of “MANAS Taalimi” Program.

**Key actions**
- Priority-setting for inclusion of drugs in the MHI ADP
- Improvement of calculation mechanism for compensation base prices under the MHI ADP
- Needs assessment for the MHI ADP financing
- Development of regulation mechanisms in drug use under the MHI ADP.

### 4.2.4.4. Purchasing of health services by the Ministry of Health

Ministry of Health finances the Republican level health organizations that do not provide health services under the State Guaranteed Benefit Package, which in addition to health organizations rendering public health services also include tertiary care facilities rendering individual services to the population, including those within the priority and vertical programs.

In the context of pooling of funds for health care at the Republican level and in order to increase the effectiveness of health services purchasing done by the Ministry of Health, the following **key actions** are proposed:

A. Improvement of purchasing of high technology (costly) health services.
B. Ensuring targeted and balanced capital investment.
C. Improvement of financing of public health services.
D. Increase of effectiveness of the centralized procurement under priority programs.
E. Improvement of financing mechanisms of educational and research activity.
A. Improvement of purchasing of high technology (expensive) health services

To cover the costs of health organizations that provide high-tech (costly) treatment, in 2002 the Ministry of Health established a High-Technology (expensive) Fund (HTF). The HTF is formed from the Republican budget money, humanitarian aid, fees of legal and physical entities, sponsors, and public, commercial, religious and other organizations, grants of international public foundations, and non-governmental and governmental organizations of foreign countries. Financing of the HTF in 2004 increased by 3.5 times compared to 2002 and constituted 14.3 millions of soms, or 3.9% of the Republican budget.

In 2004, medical equipment and supplies in the amount of 10.2 millions of soms were purchased for the HTF money. 3.1 millions of soms were spent for the provision of health services. This money is not enough though to cover costs and most of costs are born by the patient.

There remains low access of citizens from the regions to hi-tech treatment. Thus, Bishkek citizens used 54.7% of the HTF funds, citizens of Chui oblast – 17.0%, Issyk-Kul oblast – 8.4%, Jalal-Abad oblast – 7.5%, Osh oblast – 5.9%, Batken oblast – 2.4%, Naryn oblast – 2.3%, and Talas oblast – 1.1% (Fig. 27).

![Fig. 27. Financing of health services from the HTF in 2004](image)

Source: MoH, 2005

**Key actions**

- Gradual increase of HTF financing
- Definition of the volume of health services provided from the HTF
- Definition of quotas for the regions in using the HTF funds
- Definition of the annual need in financing to maintain expensive medical equipment

B. Ensuring targeted and balanced capital investment

One of the objectives of health reforms is to improve the quality of health services, infrastructure of state health organizations, their material-technical base, and technological equipment to provide effective health services. Over the years of health reform in the Kyrgyz Republic the material-technical base has been considerably improved: in the framework of different projects and programs financed by donor organizations health facilities have been repaired and equipped with modern medical equipment and sanitary vehicles (World Bank, Asian Development Bank, Kyrgyz-Swiss Project, US, German and Japanese governments).

In 2003-2004, sanitary vehicles and high-tech modern medical equipment were purchased already for state funds. Yet, the share of state funds spent on capital investment has not exceeded 5% of total state health spending over the decade. A number of health facilities – hospitals, family medicine centers, FGP, FAP need repairs and re-equipment.

An imbalance between the current expenditures and investment, as well as between different types of investments may lead to increases in current expenditures not provided for by available financial resources. Decisions about financing of new investments must be made taking into account the need in...
such financing and financing of corresponding current expenditures.

For the perspective period, the health sector has an objective to set priorities for capital investment given the existing resources and ensuring targeted and balanced capital investment.

**Key actions**

- Priority-setting for investments on the basis of transparency and openness of the priority-setting process
- Needs assessment in capital investments for the perspective period
- Definition of funding sources for capital expenditures
- Provision with technological equipment
- Increase effectiveness and targeted use of funds of the Maintenance Fund (MF).

**C. Improvement of financing of public health services**

Public health organizations aim at employing prevention strategies in the activities oriented towards protection and promotion of population’s health. In 2001-2004, the sanitary-epidemiological surveillance reform began; a capitation-based payment was introduced for the sanitary-epidemiological surveillance services based on the historical budgets. Disproportions in financing across regions, revised volume of the state surveillance functions of the sanitary-epidemiological services, necessity to separate the surveillance functions from health delivery functions, and integration of sanitary-epidemiological surveillance services and health promotion into primary health care require a differentiated approach to payment for different types of public health services.

Taking into account different functions of public health, as well as UNDP/DfID recommendations based on the results of functional analysis of public administration bodies of the Kyrgyz Republic and World Bank mission, a differentiated approach to financing of public health services is planned for the perspective period based on the following strategies:

C1. Pooling of funds for financing of public health services at the Republican level and financing through the Ministry of Health;

C2. Differentiated approach to financing of the surveillance and health delivery functions;

C3. Integrated financing of health promotion and disease control activities.

**C1. Pooling of funds for financing of public health at the republican level and financing through the Ministry of Health of the Kyrgyz Republic**

Taking into account the uneven financing of the public health service at territorial level, pooling of funds for financing of public health services at the republican level as a share of health care budget will help plan the resources more effectively in accordance with the functions performed.

**C2. A differentiated approach to financing of surveillance and health services delivery functions**

Differentiated financing of public health functions will increase the effectiveness of activities on the sanitary-epidemiological safety control of environmental objects. The responsibility of enterprises, organizations, local self-governance and state authorities for observing the sanitary norms and rules will ensure transparency of the fulfillment of these functions by the state bodies and surveillance objects and population and prevent conflicts of interest within the service.

**Key actions**

- To transfer activities on surveillance over the sanitary-epidemiological safety of the environment to a fixed budget based on state orders;
- To carry out activities on joint production control over the sanitary surveillance objects based on agreements, where payment for services by the surveillance objects is based on a set price list with simultaneously increased mutual responsibility for the quality and effectiveness of the surveillance objects;
- To stipulate for subsidies to state social objects to perform joint production control;
To transfer activities on scientific support to public health services to a fixed budget based on state order.

C3. Integrated financing of health promotion and disease control activities

Health promotion, disease control and immune-preventive activities are party integrated with the PHC system. At that, immune-prophylaxis is carried out within the framework of the SGBP, while the procurement of vaccines, sera, immune-drugs and diagnostics materials is done within the framework of centralized activities of the Ministry of Health.

Key actions

- To implement financing of health promotion activities for the perspective five-year period in the existing procedure with gradual equalization of territorial budgets, whose formation will be done on per capita norm based on the population of the region.
- To implement financing of disease control activities in the existing procedure.
- Fund-raising from international donor organizations to finance AIDS/STI control activities;
- To carry out procurement of drugs for immune-prophylaxis, vaccines and sera, bacterial drugs, diagnostic materials, and nutrient mediums in the framework of centralized activities of the Ministry of Health.

D. Increase of effectiveness of the centralized procurement under the priority programs

Currently, health delivery under the priority programs is integrated with the general health delivery system fragmentarily. Purchasing of individual health services is primarily carried out under the State Guaranteed Benefit Package through the integrated system of individual health services delivery at all levels of health care provision: via case-based method in hospitals and capitation method for primary care. At the same time, financing of some health facilities that render individual health services and are financed from the Republican budget (24 hospitals) is carried out by the Ministry of Health based on line-items of the budgetary classification. In addition, procurement of drugs and medical supplies under the priority programs is carried out centrally by the Ministry of Health (primarily sugar-lowering and psychotropic drugs, as well as drugs for immune-prophylaxis and so on, whose share makes up to 12-14% of the Republican budget).

Apart from that, the supply of drugs and medical supplies under such programs as “Tuberculosis”, “Reproductive health”, HIV/AIDS/STI prevention and others, is carried out on grant basis through international donor organizations.

Thus there is an integrated financing of individual health services with the centralized provision of drugs and medical supplies.

Key actions

- Needs assessment in financing of drug and medicines procurement within the framework of priority programs integrated into the SGBP
- Improvement of mechanisms of distribution and monitoring of drugs and medical supplies use on the basis of performance outcomes
- Determination of mechanisms of inter-agency financing of priority programs, clear separation of functions and definition of state agencies' liabilities for their implementation.

E. Improvement of financing mechanisms of medical education and research

The Ministry of Health finances educational activities of two institutions, the KSMA and KSMIPGT CE, from the Republican budget, including salaries, utilities and stipends. The share of education financing in the structure of the republican budget is unstable and varies from 5.3% in 2000 to 7.4% in 2002 and to 5.2% in 2004.

Research activity is financed through the State Agency on Intellectual Property under the Government of the Kyrgyz Republic and actually covers the salaries and Social Fund contributions. As a result, funds intended for the provision of health services to patients are often used for scientific research, while expenditures for laboratory and diagnostics tests are compensated at the expense of patients.
In addition, medical colleges responsible for training middle health personnel are financed from local budgets.

The present human resources imbalance in the health sector, lack of mechanisms of economic regulation of the middle and higher medical education, need in scientific support of health reforms, and introduction of the evidence-based medicine methods into clinical practice, require changes in both the organizational approaches and approaches to financing of education and research activity.

**Key actions**

- Admissions based on referrals from local government authorities with the provision of tuition from corresponding local budgets;
- Introduction of research activity financing on a competitive grant basis in the form of a state order;
- Transfer of medical colleges financing to the Ministry of Health with the transfer of the corresponding budget;
- Transfer of financing of the scientific and research activity in the field of medicine and health care to the Ministry of Health with the transfer of the corresponding budget.

### 4.2.4.5. Capacity-building of the purchaser and providers

Capacity-building of health providers and their financial sustainability is one of the key components of health reforms. With the transition to progressive financing methods from the consolidated budget, strengthening of the managerial and financial autonomy of providers, their responsibility for the scope and quality of services rendered to the population is also increasing. Monitoring shows that a number of providers will not reach financial sustainability despite the optimization of structure and staffing on the basis of the existing single financing norms.

Purchasing and contract management, planning of health organizations budgets and territorial health budgets in the context of pooling of funds for health care at the republican level require the development and improvement of professional and managerial qualities and skills of both the purchaser and providers and a further improvement of information technologies.

With pooling of funds for health care at the republican level the workload of finance-economic workers and information systems specialists will increase in terms of both the annual work (and in the framework of medium-term perspective) on priority-setting and needs assessment in health financing that require balanced state commitments and sector financing. Monitoring of effectiveness of the implemented programs, analysis of capital investment impact on the current health expenditures, and correspondingly the increase of health services costs, require of finance-economic workers an on-going work on raising their professional competences and adapting the normative base to changing environments.

Based on the recommendations of the International Fiduciary Assessment of the health sector in order to mitigate fiduciary risks and increase transparency, capacity of the health sector will be strengthened in financial management and procurement. This requires improving accounting policies and procedures, internal control and audit, financial reporting, and information systems according to international requirements and procedures. To increase the effectiveness of external audit, it is planned to strengthen the capacity of external auditors in conducting ex-post procurement reviews, such as the Chamber of Accounts (COA) and the State Commission on Public Procurement and Material Reserves (SCPPMR) under the Government of the Kyrgyz Republic.

**Key actions**

**A. Capacity-building of providers**

- Training on financial management;
- Improvement of mechanisms of the Technical Support Fund formation and use;
- Further development and improvement of information systems;
- Training in contract process management;
- Training in actuarial analysis techniques.
B. Capacity-building of purchaser

- Development and introduction of training programs in health financing and accounting in the health sector;
- Further development and improvement of information systems;
- Development and introduction of analytic programs and modules;
- Automation of calculation of optimal financing parameters of different types of health services;
- Training in contract process management;
- Training in actuarial analysis techniques.

C. Capacity-building of the health sector in financial management and procurement

- Train accounting staff in modern management accounting techniques;
- Bring MOF and MOH accounting and financial reporting system into one format including accounting policies and procedures;
- Implement reliable system of accounting and financial reporting collection in the health sector that is able (i) to incorporate key accounting controls functions, (ii) consolidate health sector expenditures, and (iii) provide key management information for decision-making;
- Train internal audit functions of the MOH and MHIF in internal audit techniques, extending internal audit functions of MOH and MHIF to implement an audit of the health care facilities financed through them;
- Train staff of the Chamber of Accounts of the Kyrgyz Republic and State Commission on Public Procurement and Material Reserves at the Government of the Kyrgyz Republic in conducting audit of procurement procedures;
- Creation of procurement units in the health sector institutions (in case of their absence), provision of technical assistance and training;
- Build cadre of qualified specialists capable of providing practical and consultative – methodological assistance to procurement staff in health institutions.

4.2.4.6. Improvement of information support systems for purchasing of health services

Over the period of health reforms considerable investments have been made to create a tri-tier health information system; software products were developed to enroll population to FGP, process medical statistics data at outpatient level, pay hospitals for treated cases, compensate the cost of drugs under the Additional MHI Program; integration of the software products has begun.

In order to increase effectiveness of purchasing of individual health services, the following key actions are planned:

A. Further development of the health information system infrastructure, communications and improvement of information systems.
B. Integration of population databases into a Single Database.
C. Development and integration of software products on different types of health services.

A. Further development of the health information system infrastructure, communications and improvement of information systems

In the process of implementation of health reform projects financed by the World Bank, a unique information system has been created in the health sector that requires maintenance in up-to-date condition and further development. A transition of health organizations to payment for health services using information technologies and improvement of operational and financial management increases the purchaser and providers’ need in information processing and analysis.

At the same time, limited financial resources, gradual obsolescence of computer equipment, often extreme conditions, in which operations take place (power surges, low voltage, poorly heated premises), lead to high wear and require effective protection. Besides, low wages of operators,
information technology specialists, need in training in using new software products, analytic modules, support of information systems and maintenance of program products require changes in approaches to financing of information systems.

**Key actions**
- Equipment of health organizations with computer and communications equipment;
- Capacity-building of information systems specialists of both the purchaser and providers;
- Development of mechanisms to secure information technology specialists;
- Creation of the Health Information Technology Support Fund.

**B. Integration of population databases into a Single database**

Since 1997 different population databases have been created in the republic for different purposes:
- On personified accounting of insured citizens based on data exchange with the Social Fund;
- On enrolled population in Issyk-Kul and Chui oblasts and Bishkek;
- On MHI policies for persons not registered in the Social Fund (military, refugees and asylum-seekers).

Currently, data exchange standards are being developed, however, due to incomplete personification of the population in the republic and enrolment to FGP, neither of the databases is complete, while all require significant efforts to maintain them up-to-date.

**Key actions**
- Completion of population enrolment throughout the country (Osh City, Osh, Batken, Naryn and Talas oblasts);
- Integration of the databases on personified accounting of the population with the databases on enrolled population;
- Creation of registers on individual population categories based on the database on population enrolment to FGP (register of diabetes patients, TB patients, medical-dosimetric register, etc).

**C. Development, integration and introduction of software products on different types of health services**

Introduction since 1997 of payment methods for individual health services: case-based method in hospitals, since 1998 – of capitation methods for FGP, and since 2000 – for drugs under the Additional MHI Program, as well as the introduction of software products in FMC/FGP of Issyk-Kul oblast and pilot FMC in Bishkek to analyze FMC performance based on outpatient-policlinic clinic-information forms and their integration with the database on enrolled population in pilot FMC allow analyzing the consumption of health services by an individual citizen in the pilot regime.

Increase of the managerial and financial autonomy of providers and need in analysis of current activities to a considerable degree necessitate the providers’ need in further introduction and use of information technologies in daily operations.

**Key actions**
- Development and introduction of mechanisms to ensure security of information systems and data confidentiality;
- Adaptation and introduction of international health information standards;
- Conversion of the medical-statistical, accounting and other forms of reporting into information technologies;
- Introduction of electronic medical documents;
- Conversion of drug accounting into information technologies;
- Further introduction of information technologies on accounting of outpatient services in FMC/FGP;
• Automation of calculation of optimal financing parameters of different types of health services;
• Development and introduction of automation systems for laboratory tests;
• Further introduction of software products on health and health care statistical data collection, processing and analysis;
• Automation of administrative-support services activities.
4.3. Health Services Delivery

In the process of the health system structural transformations the integrated health care delivery system is formed with the priority focus on the primary health care and family medicine, and implementation on evidence-based medicine into the clinical practice.

Integration of certain health services within the priority programs (“Tuberculosis”, “Reproductive health”, “Integration Management of Childhood Infections” etc.) and public health with the system of individual health care delivery has started.

4.3.1. Individual health care services

Some structural disproportions in service delivery are still remaining despite the changes implemented during the first phase of health reform and reorientation to primary health care level (see section 2). Developed stereotype of going directly to narrow profile specialists and insufficient technical equipment of health organizations at primary health care level (FMCs, FGPs/FAPs) have negative affect on further development of family medicine. Quality of health care services remains to be insufficient.

To ensure quality improvement of delivered individual health care services it is necessary to further develop the infrastructure and staffing potential of PHC with particular emphasis on strengthening of FAPs and ambulance service.

Health care services delivered in inpatient setting continue to be attractive for some population despite the introduction of restrictive mechanisms. The result of this is the fact that hospitals expand spectrum of individual health care services and other services and hospitalization rate for patients with primary care sensitive conditions remains high.

One of the factors that contribute to strengthening of PHC and increased quality of inpatient care is population access to high-quality and safe drugs. This relates to further development of pharmaceutical sector and improvement of pharmaceutical management based on well-defined regulatory mechanisms of circulation of drugs and quality control of drugs.

Substantial part in patient satisfaction with quality of health care services belongs to the conditions in which these services are delivered. To ensure improvement of quality and efficiency of inpatient care it is required to renew medical equipment and facilities, strengthen laboratory service and introduce modern technologies on control of hospital-acquired infections and medical waste utilization.

Further optimization of inpatient sector will entail special emphasis and individual approach to those hospitals that will not be able to survive in the context of new methods of financing. Plans of further optimization and restructuring will take into consideration not only economical condition of the hospitals but also social, geographic and other factors.

It is planned to develop effective mechanisms of collaboration between health organizations aimed at improvement of continuity and feedback between various levels of health care delivery.

Goal

Further improvement of delivery system of individual health care services and improvement of access to high-quality health care services delivered to population at all levels of integrated service delivery system with leading role belonging to PHC and under the support of efficient inpatient care

Objectives:

1. Further development of primary health care with particular emphasis on improved performance of FAPs, FGPs and emergency care;
2. Optimization of performance of FMCs, hospital ADDs and health organizations delivering specialized health care services in outpatient setting;
3. Further restructuring and optimization of inpatient care aimed at establishment of hospital network that would respond flexibly to population needs;
4. Optimization of tertiary level health organizations performance aimed at improved access to highly specialized and expensive types of health care;
5. Improvement of management models of health organizations providing individual health care services aimed at increased performance efficiency and quality of delivered health care services under the further enhancement of managerial and financial autonomy;
6. Development of efficient mechanisms of integration and interaction of health organizations delivering individual health care services that would ensure continuity and feedback;

7. Improvement of physical infrastructure and provision of modern types of medical and laboratory equipment to health organizations providing individual health care services;

8. Improvement of quality of health care services delivered to population by health organizations at different levels of health care delivery.

4.3.1.1. Further development of primary health care with particular emphasis on improved performance of FAPs, FGP and emergency care

Catchment area of FAPs covers 24.4% of rural population (ranging from 500 to over 2.5 thousand people). Health care services provided by FAP staff are the most available type of before-doctor medical assistance. Integration of public health with primary level of service delivery implies significant enhancement of the role and responsibility of FAP staff in implementation of preventive activities related to health promotion and interaction with population, local communities and non-governmental organizations on the issues of healthy lifestyle and development of sanitary-hygienic skills.

At the same time, there are over 400 villages with population number ranging from 30-60 to 1000 people. Moreover, in the summer period many families remain almost without any medical assistance because the Kyrgyz Republic is a cattle-breeding country and in summer the cattle is taken up to mountainous pastures.

Poor quality of emergency care is caused by many reasons including lack of communications and means of communication, irrational location of ambulance units, poor technical equipping, shortage of both ambulance cars as well as resources to maintain it and low salary along with high rate of staff turnover.

Privatization of pharmaceutical sector resulted in the fact that rural population faced critical problem of access to safe and high-quality drugs.

Further development of PHC will be directed at improvement of infrastructure and material and technical equipping of FAPs, FGP and ambulance service, rational location of them, provision with means of communication, development and strengthening of human resources potential and introduction of socio-economic incentives of assignment of health staff.

Considerable role in development of infrastructure of the rural health care belongs to social marketing oriented at needs of certain communities in health care services, drugs and medical supplies, particularly in relation to implementation of effective interventions in the context of health care priorities (see Section 4.3.4).

Key actions

A. Improvement of quality and efficiency of health care services delivered by FGP through improvement of their infrastructure, supply with medical and laboratory equipment as well as computers, and ensuring of continuous training of FGP physicians and nurses on family medicine;

B. Strengthening of FAP: improve material and technical supply, provide means of communications, ensure staff potential and advanced training of staff, and strengthen socioeconomic incentives;

C. Improvement of access to health care for population residing in villages with no medical points through identification of the list of those villages where it would be expedient to create new FAPs. At that, creation of FAPs should be coordinated with local government. It is also essential to look at the issues related to funding and staffing;

D. Rational location of ambulance stations to ensure access to emergency services for the whole population;

E. Improvement of quality of care provided by ambulance services (training of staff, development and implementation of clinical protocols), strengthening of functional interaction with FGP physicians and other health organizations when providing emergency care. Improvement of material and technical equipping of ambulance stations with transportation means (ambulance cars), means of communication and
medical equipment;
F. Ensuring of access to drugs for population residing in villages with no pharmaceutical outlets;
G. Increase of performance efficiency of health promotion rooms based on close interaction with FGP/FAP staff.

4.3.1.2. Optimization of performance of FMCs, hospital ODDS and health organizations delivering specialized health care services in outpatient setting

Currently, there is duplication in established posts of specialists in FMCs and ODDs, insufficient supply of medical and laboratory equipment in FMCs and predominance of more qualified specialists in hospitals. These affect effectiveness and quality of specialized care delivered at outpatient level.

FMC specialists have to work for military-medical commissions of the Ministry of Defense of the Kyrgyz Republic for six months a year. This results in reduced efficiency of their work and quality of health care services delivered in FMCs.

It is planned to ensure further optimization of health care delivered by FMCs and ODDs. The number (and list) of narrow profile specialists in FMCs should be gradually brought to optimal level with consideration of population need and individual approach in rural and urban areas.

Taking into consideration the fact that significant share of patients that do not need round-the-clock supervision are referred for hospitalization by ODD specialists, it would be expedient to establish hospital-substituting (day stay) departments (wards) in FMCs.

Dental service is a specialized type of medical assistance provided in outpatient setting. It is planned to optimize mechanisms of dental care delivery, improve population access and increase quality and efficiency of provided services on the basis of rational use of available resources.

Key actions

A. Determination of need in FMC and hospital ODD specialists on the basis of clear separation of functions;
B. Introduction of hospital-substituting types of medical care (day beds) in FMCs;
C. Supply of FMCs with medical and laboratory equipment, upgrade of qualification of FMC specialists and laboratory service of health organizations;
D. Separation of functions of FMCs and draftee medical commissions under the city and rayon military commissariats on medical examination of draftees;
E. Improvement of dental (stomatological) services delivery.

4.3.1.3. Further restructuring and optimization of inpatient care aimed at establishment of hospital network that would respond flexibly to population needs

Restructuring process covered hospitals located in Chui oblast to a greater extent and hospitals located in Issyk-Kul, Naryn and Talas oblasts to a lesser extent. Restructuring process was launched in Osh and Jalalabat oblasts and in Osh and Bishkek cities. Further restructuring of inpatient sector will be oriented at creation of hospital network sensitively responding to population needs in various types of health care services. The reserve for release of inefficiently used funds comes from optimization of curative-diagnostic processes, improvement of intra-hospital management, transformation of inefficient affiliates or structural subdivisions into PHC organizations reinforced by ambulance cars and means of communication.

Individual decisions that include optimization plans and introduction of appropriate financing mechanisms will be made concerning those hospitals that must be retained due to geographic and socio-economic conditions cannot be closed even if it is obvious that they will not be able to survive in the context of output-based payment.

There are several remote regions in the country with small number of population (under 20 – 25 thousand people) that require individual approach concerning organization of medical care since it is economically irrational to maintain there independent THs and FMCs. Optimal solution is to create Health Center with FMC functions and organize a small hospital under this center.
Key actions

A. Further optimization and restructuring of hospitals including those located in Bishkek and Osh cities;
B. Improvement of access for population to high-quality inpatient services for population residing in remote and mountainous areas by transforming inefficient structural subdivisions of hospitals to PHC organizations reinforced by ambulance cars and means of communication or to Health Centers;
C. Development and implementation of hospital performance mechanisms located in remote and mountainous areas which must be retained due to social and geographic conditions.

4.3.1.4 Optimization of tertiary level health organizations performance aimed at improved access to highly specialized and expensive types of health care

Inpatient care provided by health organizations of tertiary level (republican facilities, Research Institutes, National Centers) is the most expensive care. Many patients come directly to these facilities because they have the right of free choice of health facility and because of unbalanced referral system. This results in the fact that in the majority of tertiary level hospitals up to 45 – 60% and in some hospitals – up to 98% of patients are the citizens of Bishkek city while for citizens of other regions tertiary level care remains difficult to access.

Regulations of population access to services of tertiary level will, on one hand, improve access to expensive (high-tech) methods of treatment for patients from regions and, on the other hand, promote re-referral of patients to appropriate levels of health care delivery after provision of consultative service thus increasing the scope of funds aimed at treatment of patients that need expensive (high-tech) types of health care.

One mechanism to improve access to highly-qualified specialized health care for population, especially population residing in remote villages and villages that are difficult to access can be to increase coordinating role and responsibility of tertiary level health organizations on corresponding directions of health care with expansion of their opportunities to provide consultative-methodic assistance to the regions, organize field teams and deliver practical care to population and health workers locally.

Key actions

A. Increase of the role of tertiary level health organizations in coordination of work of health organizations on corresponding directions, development and implementation of criteria and standards of accreditation for tertiary level health organizations, conduct of scientific and methodic works based on state order and health care priorities;
B. Regulation of patient access to high-tech methods of treatment.

4.3.1.5. Improvement of management models of health organizations providing individual health care services aimed at increased performance efficiency and quality of delivered health care services under the further enhancement of managerial and financial autonomy

Currently, under the equal funding of health organizations there is a significant discrepancy in quality of health care delivery, conditions of delivery and ethical attitude to patients which adversely affect quality of care and patient satisfaction.

In the context of increased managerial and financial autonomy the role and responsibility of health organizations for outcome of their work are increasing, thus, requiring improvement of intra-hospital management aimed at optimization of curative-diagnostic processes and reduction of utilities costs.

A number of health organizations serve as bases for educational facilities. In the context of optimization process it is essential to regulate interrelations between educational and medical organizations as well as health organizations related to payment for consultative services, laboratory-diagnostic examinations, etc.

Key actions

A. Strategic planning of work of health organizations based on population needs, sensitive response to sanitary-epidemiological situation and population health status;
B. Introduction and improvement of contractual interactions with public health services and other health organizations to conduct consultations, laboratory and diagnostic examinations as well as with educational institutions;
C. Realization of activities focused on increase of population and society awareness on the work of health organizations implemented by health organizations.

4.3.1.6. Development of efficient mechanisms of integration and interaction of health organizations delivering individual health care services that would ensure continuity and feedback

Efficiency and quality of health service delivery depends on interaction of health organizations of different levels. Continuity between health organizations plays an important role in ensuring continuous supervision of patient at different levels of health care delivery, increase of efficiency of curative-diagnostic process, responsibility of health workers for the quality of provided health care and reduction of unjustified expenditures for provision of certain types of health services.

Since medical organizations are becoming autonomous there is an emerging risk of fragmentation of health services delivered by providers at different levels of health services delivery. Such fragmentation may have negative consequences both for efficiency and equity of the system of referral to specialists unless there is a clear policy developed to ensure integration between different levels of health services delivery and referral system.

Despite the fact that State-Guaranteed Benefit Package identifies financial incentives for the available referral from family doctor, such as no co-payment for consultation from narrow profile specialists and reduced co-payment for laboratory-diagnostic examinations and admission to hospital, it has been registered that patients go directly to narrow profile specialists in FMCs and ODDs omitting FGP physicians, which results in increased population expenditures on health care services.

There is a need in development of clear regulatory mechanisms of re-referral of patients to higher levels of health care delivery. This will allow for reduction of inefficient use of resources, improvement of patient access to specialized care which cannot be provided at other levels of health care delivery, and for tertiary level – it will improve access to high-tech and expensive types of health services.

It is also important to establish mechanisms ensuring feedback from hospitals to primary care level and from specialized health organizations to family doctor.

In recent years cases of traumatism and emergency situations induced by natural and man-caused catastrophes, local armed and civil conflicts, and terrorist acts have become more frequent. Efficiency of high-quality health care delivery, reduction of human losses in emergency situations, minimization of consequences of natural disasters, accidents and epidemics depend on timely notification, material and technical equipping, fast response of health services, primarily ambulance service, and preparedness of health organizations to provide emergency care. It is planned to strengthen material and technical base of functional structural subdivisions providing emergency care and major health organizations involved in delivery of health care to victims, including blood transfusion service.

Key actions

A. Development and implementation of unified rules (mechanisms) of referral of patients to different levels of health care delivery, strengthening of interaction between health organizations, ensuring of continuity and feedback mechanisms;
B. Organization of effective functional structure that will provide emergency health care in case of trauma and occurrence of emergency situations;
C. Supply functional subdivisions on delivery of emergency care with modern means of communication, ambulance cars, required amount of drugs, blood preparation and medical supplies.

4.3.1.7. Improvement of physical infrastructure and provision of modern types of medical and laboratory equipment to health organizations providing individual health care services

Significant part in patient satisfaction with health services and their quality belongs to the conditions in which these services are provided. Condition of buildings and premises, availability and operation of medical and laboratory equipment, availability of qualified health staff are some of the basic components that ensure provision of high-quality health services.
Series of hospitals, FMCs, FGPs and FAPs were rehabilitated and equipped with medical equipment under the health reform projects funded by the World Bank, Swiss Government and Asian Development Bank. Moreover, German and Japanese Governments supplied medical equipment and sanitary transportation in the context of priority programs. At the same time, material and technical bases of health facilities not included in the list of rehabilitated objects require renovation and necessary medical and laboratory equipment. Improvement of material and technical base and provision of high-tech equipment is also needed for tertiary level facilities. An important factor contributing to efficient use of resources is the implementation of energy saving systems. The result of pilot project funded by USAID and implemented in a number of hospitals in Chui oblast and Bishkek showed savings on utility costs of about 30% even under the increased tariffs for energy.

Key actions

A. Further improvement of material and technical base of health organizations: repairs of premises and buildings, installation of energy saving technologies, provision of medical and laboratory equipment in accordance with needs and list of equipment and operating conditions.

4.3.1.8. Improvement of quality of health care services delivered to population by health organizations at different levels of health care delivery

Quality improvement of provided health care is one the main strategic objectives of health services delivery system.

To improve quality of medical assistance “Manas” National Health Reform Program ensured training and retraining of physicians and nurses on family medicine, introduction of clinical protocols built upon principles of evidenced-based medicine, realization of National Drug Policy, implementation of accreditation and licensing based on appropriate standards, conduction of quality expertise of provided health services and study of patient satisfaction. In 2004, based on accumulated experience, a Concept of quality improvement of health care of the Kyrgyz Republic for 2004 – 2008 was approved to secure system of quality management of health care services institutionally. This Concept identifies the main strategies focused on increased professional competence and motivation of health workers, access to resources and information, further introduction of continuous quality improvement methods and improvement of regulatory mechanisms.

Moreover, implementation of specific activities aimed at quality improvement of medical care, development of clinical pharmacology and rational pharmaceutical management, prevention and control of hospital-acquired infections, as well as efficient and safe medical waste management will contribute to the improvement of health system responsiveness, increase in efficiency of use of resources and minimization of complications of illnesses.

In this relation it is planned to increase the role and responsibility of nurses in organization of nursing care and management of patients as well as improvement of intra-hospital management.

Development of clinical pharmacology will allow for an increase in efficiency of use of resources and quality of treatment: reduce excessive prescription of drugs, inappropriate prescription of injection forms, vitamins, antibiotics, medications effects of which are not proved by scientific evidence, and use of combination of drugs without consideration of their interaction with each other.

Along with excessive prescription of drugs and irrational use of drugs there was registered an excessive use of antibacterial drugs. For example, in 2003 prescription level of antibacterial drugs was 35.7% and some regions up to 45 – 53% (Issyk-Kul and Osh oblasts). Large-scale and irrational use of antibiotics as well as distribution of them without prescription both in outpatient and inpatient settings result in increase and dissemination of resistant bacteria strains. Growth of antibiotic resistance is a global problem which poses great hazard for public health and results in reduced efficiency of treatment, increased incidence and mortality rates as well as in increased cost and length of treatment. There is a need to develop national policy on rational use of antibiotics with introduction of control over their prescription and distribution/sale. This will require introduction of amendments to some existing legislative acts.

Health care quality improvement includes control of hospital acquired infections (HAI) and medical waste management. Reliable registration of HAI, prevention and targeted introduction of mechanisms on reduction of HAI are possible through implementation of infection control programs in each organization.
One of the sources of infection is medical waste produced in health organizations. Potential risk of infection dissemination increases because of the lack of proper management and removal of medical waste from the territory of each health organization. To ensure safe and efficient medical waste management it is planned to develop technologies on utilization of different types of medical waste with consideration of safety for both the environment and staff and on the basis of adequacy of costs depending on their level.

**Key actions**

A. Increased potential of health workers of FAPs, FGs and ambulance service;
B. Increase of the role and responsibility of nurses in the area of intra-hospital management, nursing care and management of patients;
C. Introduction of methods of continuous quality improvement in all health organizations;
D. Further implementation of rational pharmaceutical management with emphasis on development of clinical pharmacology;
E. Development and implementation of public policy on rational use of antibiotics;
F. Further implementation and improvement of programs of infection control in health organizations and training of infection control specialists;
G. Development of economically efficient types of technologies on safe utilization of medical waste for different health organizations (FAP, FGP, hospitals, etc.) with consideration of scope and types of produced waste and territorial location of health organizations.
4.3.2. Public health services

Public health in the Kyrgyz Republic is represented by two independent services focused on prevention – sanitary-epidemiological service and health promotion service aimed at protection and promotion of population health.

Health reform process laid foundation for reorientation of public health to population needs and launched activities on improvement of material and technical base, improvement of regulatory mechanisms, training of specialists on actual issues of hygiene, sanitation, epidemiology and health promotion, introduction of new models of work with population and communities. System of monitoring of infectious diseases with the use of computer information technologies was implemented in Bishkek city and Chui oblast.

The year of 2001 was marked by establishment of the Republican Health Promotion Center, which began to introduce new principles of work with population and promotion of policy on population health promotion based on collaboration with other sectors. Creation of this center helped to arrange partnership relations with PHC and start to integrate functions on health promotion with FGP/FAPs and FMCs through creation of health promotion rooms within the FMC structure.

It is planned to further reorient the work of public health at creation of health culture based on explanation of the most wide-spread health problems, prevention and training of prevention methods aimed at minimization of unfavorable social and behavioral factors, assurance of surveillance and efficient response to changing situation.

Special attention will be paid to prevention of cardio-vascular diseases, reduction of micronutrient insufficiency, stabilization of infectious diseases incidence rate including TB, malaria, helminthiasis, brucellosis, restriction of dissemination of HIV/AIDS and immunization-sensitive infections. Work related to management of ecological and economic risks and safety control of food, drinking water, working conditions, living conditions and environment will be continued.

The work on surveillance of entities subject to control will be continued. Goal of the surveillance is to control the fulfillment of requirements, set norms and rules not allowing manufacture of products dangerous for health and use of prohibited technologies, ensure normal working conditions for people influenced by professional harm and prevent worsening of dwelling conditions, training conditions and living conditions.

Great significance is devoted to disease control including collection of data, analysis, projection and development of recommendations, prevention of outbreaks of infections, detection of sources and determination of reasons causing population morbidity.

Increase in efficiency of public health service may be achieved through provision of three operational lines:

- Epidemiologic surveillance in a wide sense including infectious diseases control and actual non-infectious diseases control;
- Strengthening of government regulation (Sanitary inspection, Lab control);
- Health promotion including promotion of healthy life style, increase of population awareness on main aspects of health, stimulation of inter-sectoral work to control main determinants of health based on evidence collected through execution of previous two lines.

It is anticipated to ensure integrated interaction of these three lines.

Reorganization of public health service will entail the change in legislation, strengthening of physical and technological infrastructure including improvement of information technologies, development of human resources potential and improvement of quality of services.

To ensure significant improvement of population health status it is planned to undertake:

- addressed activities on minimization of risk factors, change population behavioral stereotypes,
- orientation at the needs of both the health system and specific area based on situation assessment, rational planning, expansion of public relations,
- creation of instruments to support public involvement and safety management as well as inter-sectoral collaboration.
Goal:
Creation of sustainable public health service oriented at population needs and based on integration of health protection and promotion programs, wide inter-sectoral interaction and active society involvement in health protection and health promotion activities.

Objectives:
1. Increased efficiency of epidemiological surveillance (disease control), health promotion and government regulation (Lab tests/control, Sanitary Inspection) through creation of sustainable integrated public health service;
2. Creation of normative-legal base that would promote efficient work of the service and ensure conditions for voluntary fulfillment of requirements on health protection and promotion;
3. Further expansion and development of inter-sectoral collaboration and increased performance transparency;
4. Reorientation of work of public health service to health priorities.

4.3.2.1. Increased efficiency of epidemiologic control (surveillance & disease control), health promotion and state regulation (legislative regulations, Lab tests/control, Sanitary Inspection) through creation of sustainable integrated public health service

Weakness of the existing system is shown by the existence of unreasonably ramose and disconnected network of public health organizations, which results in duplication of some functions within the service and with other agencies.

Lack of appropriate structure within the Ministry of Health that would be responsible for policy making related to health protection and health promotion, execution of sanitary-epidemiological rationing and coordination of work of public health service resulted in delegation of these functions to the Department of State Sanitary Epidemiological Surveillance. Along with activities on evaluation of compliance, issuance of licensing system documentation and delivery of paid services this has led to evident conflict of interests. Moreover, the existing situation contradicts the requirements of the World Trade Organization and legislation of the Kyrgyz Republic. In this relation, it is planned to transfer political functions/regulation to the Ministry of Health.

Structural changes will be implemented after revision of functions of each public health organization along with creation of sustainable and integrated public health service supported by PHC and oriented at active population involvement in health protection issues with consideration of population needs. At the same time, special emphasis will be places at elimination of duplications of functions.

It is advisable to establish sanitary inspection on the basis of existing Centers of state sanitary epidemiological surveillance to ensure state supervision over execution of sanitary legislation by supervised entities aimed at strengthening of government regulation. Detailed revision of supervisory functions executed by PH service, adaptation of them to the existing scarce resources, optimization of volume of work, decisions on rationalization of series of functions, partial transfer of some functions to other ministries and agencies with introduction of appropriate changes to legislation will allow for performance improvement.

This will involve decision making on the list and location of inspections depending on the size of catchment area, number of supervised entities and human resource potential. It is important to envisage vertical subordination. Compulsory condition is to attach status of the state employee to inspection workers that will help to assign specialists to certain places and ensure work efficiency.

Recently there was a considerable expansion of the market of goods, labor market and market of services that are provided to population. All of them require modern high-tech sanitary epidemiological expertise (lab tests/control) including assessment of compliance of goods and products to set requirements, legalization of licensing documentation, registration of potentially toxic substances and series of other operations provided on paid basis. Introduction of production control seems to be a perspective type of activity provided to enterprises on a contractual basis. Identification of control milestones for supervised entities will allow for timely prevention of manufacture of products that do not correspond to safety requirements and eliminate adverse affect on working conditions. Work on this direction will ensure creation of conditions for development of partnership interrelations with enterprises. It is rational to assign appropriate structure within public health service at republican and regional levels.
Work on health promotion needs to be improved with active population involvement in the process of control of health determinants. Special emphasis will be placed at health priorities which was not done up to now. At that, remaining operational line is to ensure epidemiological surveillance including infectious and non-infectious diseases control, analysis and recommendations for changing situation, projection and prevention of infections outbreaks and reduction of incidence rate. It is planned to improve existing systems of epidemiological surveillance and develop new systems. It is planned to disseminate systems of monitoring of infectious diseases with use of information technologies introduced in Bishkek city and Chui oblast to the whole country. Revision of the list of monitored infections and identification of the list of non-infectious diseases should be done on continuous basis with consideration of epidemiological situation. It is necessary to arrange production of recommendations for health promotion services to work with population specifically on morbidity rates.

Determination of priority directions in the area of health promotion based on analysis of infectious and actual non-infectious diseases and population needs as well as revision and update of training program for decreed population contingent will allow activating and expanding joint activity with population, communities and organized collectives. WHO has supported the development of Strategy on health promotion of population and mechanisms of inter-sectoral collaboration. The Strategy will become the main tool for institutionalization of systematic, sustainable and evidence-based process of development of public policy encouraging health promotion.

Interaction in the area of state surveillance and health promotion will be based on the need of development of methodic materials, manuals and programs for decreed population groups as well as intervention in case of deterioration of sanitary-epidemiological situation related to activity of supervised entities.

Confirmation of fulfillment of sanitary legislation requirements at supervised entities will be followed by corresponding laboratory examinations and assessment of compliance in the context of state order.

It is planned to further improve material and technical base of service network, supply facilities with modern high-tech equipment, renew and replenish park of vehicles, supply facilities with modern means of information transmission and communication and implementation of repair work. At the same time, it is expedient to evaluate work of organizations to identify perspective organizations taking into consideration organizational and staffing continuity and condition of material and technical base, eliminate inefficient links, liquidation and merger of some organizations.

It is intended to integrate scientific activity with the requirements of practical public health. This requires modernization of scientific and research base which currently does not satisfy the needs of the service. Study of population health status caused by environmental factors, possibility to give scientific justification of hygienic guidelines, finalization and evaluation of new technologies and development of recommendations that prevent worsening of health indicators are imperative for further work.

Special emphasis should be placed at creation and strengthening of human resources potential to execute new functions. Expansion and improvement of aspects of educational programs on health protection and promotion will contribute to the efficiency and quality of work. It will be required to develop sustainable training mechanisms of public health specialists.

Efficiency of the service will increase significantly under coordinated interaction of the main operational lines and close collaboration with individual health care services.

Key actions

A. Implementation of structural reorganization of public health service in the field of health promotion, disease control and government regulation;

B. Increased potential of public health service;

C. Improvement of performance of public health service and orientation at the needs of the society, health priorities and achievement of specific outcomes through increased quality of public health services;

D. Integration of health promotion and disease control activity with PHC, communities and population;

E. Scientific support of the needs of public health service.
4.3.2.2. Creation of normative-legal base that would promote efficient work of the service and ensure conditions for voluntary fulfillment of requirements on health protection and promotion

Existing legislation should be revised with a view of development of more liberal fundamentals of work aimed at weakening of directive nature. Development of consecutive, clear, fairly strict and, at the same time, feasible and balanced requirements with the objectives of socio-economic development, harmonization of these requirements with international standards (WTO Agreement, FAO/WHO, Codex Alimentary) will promote performance improvement of the service.

Revision and reduction of by-laws through their integration will also lead to creation of favorable conditions for voluntary compliance with set requirements, allow for differentiated approaches and procedures of government regulation and exclude concurrency in the area of health protection and promotion.

The need to revise existing normative and legal documents is determined by the requirements of the World Trade Organization and the Law of the Kyrgyz Republic “On fundamentals of technical regulation” resulting from current conflict of interests within the work of the service.

It is essential to ensure legislative securing of free-of-charge coverage of the issues related to health protection and health promotion by mass media and access to social advertising. Development of mechanisms to reduce administrative influence, revision of response system to non-compliance to sanitary legislation requirements and determination of their adequacy based on the severity of the failure to comply will contribute to possible voluntary compliance to set requirements. It is necessary to develop by-laws that will specify and ensure prevention as one of the health priorities.

Key actions

A. Inventory of existing normative and legal documents;
B. Ensuring of perspective development of public health service;
C. Development of common and specific technical regulations harmonized with international standards requirements;
D. Introduction of additions and changes into legislative acts that ensure efficient work of PH service.

4.3.2.3. Further expansion and development of inter-sectoral collaboration and increased performance transparency

Inter-sectoral collaboration includes activities on fortification of food products with iodine, iron and vitamins, advancement of programs on healthy lifestyle, implementation of demonstration projects on “healthy schools” and “healthy cities”, control of brucellosis and malaria, improvement of water supply and expansion of hygienic skills of population.

Increased efficiency of inter-sectoral collaboration in the area of health protection and promotion focused on reduction of professional, ecological and social risks, change of behavioral stereotypes and improvement of working and living conditions will result in improved quality of life of population.

Various programs and projects focused on improvement of socio-economic and ecological situation and development of food policy are realized in different sectors. Interaction of health sector with these programs would also help to make a considerable step forward in the area of health promotion of population. Creation of unified inter-agency monitoring system, databases and mechanisms of information exchange on environmental health and its effect on health will serve as the foundation for development of joint action plans on risks minimization, timely decision making and projection of the situation. Coordinated activities will eliminate duplication, increase effectiveness in achievement of goals and ensure partnership relations and transparency of work of involved services. Preparatory work on development and introduction of social-hygienic monitoring system has been started in order to achieve this objective. Inter-agency working group was established to identify unified indicators which will be measured through monitoring. Social-hygienic monitoring will be an effective tool ensuring interaction of different ministries and agencies in the area on health promotion and protection.

It is essential to pay attention to development and realization of partnership programs and projects together with local government on social mobilization with involvement of internal and external resources, introduction of mechanisms of interaction with population, young people, organized collectives and decreed population contingent.
Increased population awareness about the work of public health service, safety of food products, consumer goods and drinking water and actions on prevention of various diseases will contribute to adequate and timely response of public health service to population needs and change in situation. Creation of conditions for active information dissemination among government and enterprises on existing requirements and their changes will expand involvement of the stakeholders in discussion of drafts of documents concerned with work of the system and interests of population and enterprises. It is essential and perspective to strengthen interrelations with mass media.

It is impossible to increase the role of public health without social mobilization. This work should be done on continuous basis and requires further improvement. Further introduction of sustainable models of work with population is planned for all regions of the country. The role model for this can serve the Jumgal model of local communities with health agenda. Introduced models awoke interest in the rural population. This work resulted in organization of rural health committees, creation of initiative groups and community-based organizations. Existing legislation significantly expanded population and communities (jamaat) empowerment in health problems solving allowing them to participate in the work of state administrations on the issues of planning, improvements, building of socio-cultural, living and economic objects. Rational utilization of the above listed opportunities will contribute to improved control over determinants of health and prevent from adverse effect.

Government support of social advertisement focused on change of behavioral stereotypes, disease prevention, health promotion and enhancement of health culture will serve as one of the major levers of formation of understanding of the fact that being healthy is prestigious. Properly arranged joint work with mass media should cover not only the health problems but also successful change of behavioral stereotypes in population, communities and organized collectives.

Key actions

A. Strengthening of inter-sectoral collaboration on priority directions of health protection and promotion;
B. Development and implementation of the system of social-hygienic monitoring;
C. Ensuring of transparency of public health service performance;
D. Development of skills in population and society on protection and promotion of own health, ability to withstand harmful behavioral stereotypes and ability to make choices in favor of healthy lifestyle.

4.3.2.4. Reorientation of public health service to health priorities

Change of behavioral stereotypes in population, reorientation of health system to health priorities and population needs in specific regions, reduction of professional, ecological and social risks and improvement of working conditions through protection and promotion of physical and mental health require prioritization and functional coordination. It is expedient to have detailed discussion of identified priorities and enable each region in making independent decisions. Analysis of epidemiological situation up to date recognizes the following priorities to be common in the Kyrgyz Republic: reduction of immunization-sensitive infections, fight with HIV/AIDS, alcohol and drug addiction, reduction of helminthiasis prevalence, prevention of micronutrient insufficiency, implementation of European Action Plan on environmental hygiene and health of children and prevention of deterioration of radiation safety, particularly caused by radon, Framework Convention of WHO and European Strategy on tobacco smoking control.

Key actions

A. Strengthening of activity on control of pressing social infectious and parasitic diseases;
B. Implementation of European Action Plan on environmental hygiene and health of children;
C. Promotion of activities on prevention of micronutrient insufficiency;
D. Strengthening of activities on radiation safety.
4.3.3. Content of medical practice

4.3.3.1 Evidence-based medicine and guidelines on clinical practice

Emergence of concept on evidence-based medicine (EBM) was a natural process in light of large increase in the number of scientific medical publications keeping track of which became almost impossible for practicing doctors even on their narrow specialization. At the same time, medicine has become an area of use of high technologies and, consequently, expensive equipment and devices. Even economically developed countries faced questions of choice of optimal medical interventions – with high ratio of their efficiency (for patients) and cost (for health system). In this connection it was decided to develop criteria based on evidence from findings of studies of various methods of treatment, prevention and diagnostics.

Implementation of evidence-based medicine into practice of doctors and health professionals at different levels of will ensure the most efficient distribution of scarce health resources.

In 2001, Coordination Council on development and implementation of clinical protocols was established under the Ministry of Health of the Kyrgyz Republic. This council consists of key health specialists that represent health organizations, MHIF, Department of Reform Coordination and Implementation, Department for Drug Provision and Medical Equipment (DDP DP), DSSES as well as medical educational institutions. At present, the work in this direction covering all health care levels is continued.

Goal

Quality improvement of health care delivered at all levels of the health system based on promotion of evidence-based medicine into health care practice and educational process.

Objectives:

1. Institutionalization of development process of clinical guidelines/protocols based on evidence-based medicine
2. Further promotion of evidence-based medicine into health care practice and educational process

4.3.3.1. Institutionalization of development process of clinical guidelines/protocols based on evidence-based medicine

Development of clinical protocols and guidelines is a labor-intensive process requiring access to modern medical literature, latest research findings and systematic reviews. Great share of such literature is currently available on-line. With a view of facilitation of development of medical practice based on proved research findings it is planned to create Evidence-Based Medicine Center of the Ministry of Health of the Kyrgyz Republic and a network of resources centers/affiliates which will serve to improve access to needed resources for practicing physicians, students and key specialists involved in the process of development of clinical protocols and guidelines.

Key actions

A. Establish Center of Evidence-Based Medicine of the MOH KR and network of the resource centers/branches;
B. Build capacity for evidence-based medicine promotion (training of specialists, including employees of Center of Evidence-Based Medicine, on evidence-based medicine, creation of association of evidence-based medicine specialists);
C. Create and maintain information database on evidence-based medicine, disseminate information among the stakeholders and ensure information support for specialists working on development of clinical guidelines/protocols as well as implementation of scientific medical research studies;
D. Expand international collaboration with other centers and associations on EBM.

4.3.3.2. Further promotion of evidence-based medicine into health care practice and educational process

Development and revision of clinical protocols and guidelines and introduction of them into clinical practice is continuous process involving key specialists of the health sector. In the future, responsibility
for preparation and development of clinical protocols should be shifted onto professional medical associations, national centers, research institutes and republican health organizations. In this regard, it is planned to refine and improve methodologies of their development. Ministry of Health of the Kyrgyz Republic will coordinate introduction of clinical protocols. An important mechanism of introduction of clinical protocols is their inclusion into curriculum of undergraduate and continuous medical education. In the future all medical school curricula should be fully based on evidence-based medicine. At the same time it is planned to monitor introduction of clinical protocols and guidelines into clinical practice and educational process.

Key actions

A. Continue development and introduction of practical guidelines into health care practice with emphasis on priority programs defined in the current strategy;

B. Improve methodology of development of clinical guidelines, introduce mechanism of incentives for specialists involved in this activity as well as ensure monitoring of introduction of clinical protocols and guidelines;

C. Introduce foundation for evidence-based medicine into curricula at all levels of medical educations, use of clinical guidelines in education process at all levels of medical education and monitor quality of training;

D. Revise Essential Drug List and Formulary of Essential Drugs;

E. Monitor implementation of clinical guidelines/protocols.
4.3.4. Delivery of individual and population based services in the framework of priority programs

In September of 2000, at the 53rd UN Assembly 191 countries including Kyrgyzstan adopted Millennium Declaration which reflected standpoint of the world community at the matters of peace, safety, development, environment, human rights and governance. Millennium Declaration sets development goals that are relevant to all countries. These goals identify specific development targets which should be attained by mankind by 2015. Moreover, European and Central-Asian countries adopted additional targets related to attainment of MDGs [48].

National Health Care Reform Program “Manas” (1996 – 2006) has determined a series of priorities for which national and government programs were adopted and supported by international donor organizations. These programs were aimed at improvement of mother and child health protection, improvement of reproductive health and control of TB and other infectious diseases. However, the analysis of implementation of these programs suggests that despite the improvement in aggregated basic indicators there is still wide-range regional variation for many indicators, especially among the poorest population. Thus, health status indicators and indicators of access to health care services are significantly worse in the poorest regions and among the poorest population categories.

Analysis of current epidemiological situation and demographic and health indicators as well as accepted obligations on achievement of MDGs identified the following priorities in the context of Kyrgyz National Program “Manas taallimi” for the following five years:

- Mother and child health
- TB control and prevention of respiratory diseases
- Prevention of cardio-vascular diseases and complications from them
- Containment of transmission of HIV/AIDS

Mother and child health

Child health

Despite the reduction in mortality rates among children under 5 from 41.3/1000 in 1990 to 31.2/1000 in 2004 and among children under 1 from 30/1000 in 1990 to 25.7/1000 in 2004, reduction rate is not sufficient for achievement of MDGs. Almost no improvements are observed for indicators of one-day mortality in hospital among children under 1 (19.8% in 2000 and 17.1% in 2004) and home mortality among children at the second year of life (48.6% in 2001 and 47.1% in 2004).

Generalize data disguise difference between regions and between urban and rural areas. Rates of infant mortality and child mortality under 5 have convincingly positive trends in a number of regions, whereas in Osh and Batken oblast they require urgent interventions Fig. 28, 33).

Higher rates of child mortality in urban areas draw particular attention (Fig. 29). This indirectly evidences inadequate management of patients and late recognition of complications at the level of primary health care. This results in concentration of severe patients in the cities at the secondary health care level which is not sufficiently competent in provision of resuscitation care (Fig. 30).
Fig. 28. Infant mortality rate in the Kyrgyz Republic

![Graph showing infant mortality rate in the Kyrgyz Republic from 1997 to 2004, by different regions and years.]


Fig. 29. Under 5 child mortality rate in the Kyrgyz Republic

![Graph showing under 5 child mortality rate in rural and urban areas from 1996 to 2004, by different regions and years.]


Fig. 30. Infant mortality rate and under 5 mortality rate in urban and rural areas in the Kyrgyz Republic (per 1000 live-births)

![Graph showing infant and under 5 mortality rates in urban and rural areas from 1996 to 2004, by different regions and years.]

Source: RHIC, NSC, 2005.
Perinatal causes prevail in the structure of infant mortality causes in urban area, whereas in rural area prevailing causes include respiratory and infectious diseases. Thus, acute respiratory infections (ARI) mortality in Batken oblast is 4 times higher that in Bishkek city (2003) (Fig. 31).

Findings from household survey [49] suggest that infant mortality rate among the poorest households is 2 times higher as compared to the richest households. 50% of children that died at the age of 6 to 36 months had anemia, 33% of children under 5 suffered from deficiency of vitamin A. In this connection, significant role in prevention of mortality among younger children belongs to elimination of micronutrient deficiency.

**Fig. 31. Structure of infant death causes in the Kyrgyz Republic, 2004**

![Structure of infant death causes in Kyrgyzstan in urban areas, 2004.](image)

![Structure of infant death causes in Kyrgyzstan in rural areas, 2004.](image)


Introduction of new live-birth criteria resulted in growth of mortality rate in children under 28 days (Fig. 32). Mortality at this period is caused by non-diagnosed problems during pregnancy, insufficient ante- and intranatal packages of provided health care services, insufficient qualification of health staff attending deliveries and inability to provide resuscitation care to newborns. This situation is paradoxical because in the Kyrgyz Republic prevention of neonatal mortality should be directed at raising the level of health workers skills rather than ensuring deliveries attended by health workers (Fig. 33).

**Fig. 32. Main trends of children mortality rate in the Kyrgyz Republic**

![Main trends of children mortality rate in Kyrgyz Republic](image)

Fig. 33. Paradoxical discrepancy in data on child mortality at neonatal period in Kyrgyz Republic (28 days from birth) in cases of delivery attended by skilled specialists

<table>
<thead>
<tr>
<th>Region</th>
<th>Neonatal Mortality Rate/1000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>90</td>
</tr>
<tr>
<td>Asia</td>
<td>80</td>
</tr>
<tr>
<td>Latin America</td>
<td>70</td>
</tr>
<tr>
<td>More Developed</td>
<td>60</td>
</tr>
<tr>
<td>Kyrgyzstan</td>
<td>50</td>
</tr>
</tbody>
</table>

Source: National Center of Pediatric & Child Surgery, 2005

Mother health

As it was already mentioned in section 1.2, maternal mortality rate reduced from 62.9 per 100,000 in 1990 to 46.4 – in 2004. At the same time, there are significant variations in maternal mortality rate by regions similarly to child mortality. (Fig. 34)

Fig. 34. Maternal Mortality Rate in 1997-2004 in the Kyrgyz Republic

Concern is raised by the fact that until 2003 prevalent cause of maternal mortality was gestosis and in 2004 – obstetric hemorrhages (Fig. 35). This is related to insufficient skills of health workers at primary health care level on pregnancy management, early recognition of complications and insufficient skills of obstetrician-gynecologists at secondary health care level on safe labor management and provision of resuscitation care as well as accessibility of health services.
TB control and prevention of respiratory illnesses

As it was mentioned in section 2.2, DOT Strategy was introduced in the Kyrgyz Republic in the context of National Health Care Reform Program “Manas”. Introduction of DOTS contributed to reduction in TB morbidity growth rate since 1998 and laid downward trend in TB mortality. This means that TB related epidemiological situation was taken under partial control. However, crude TB morbidity rate remains high, especially in Bishkek city and Chui oblast (Fig. 36), which concentrate up to 75% of penitentiary institutions that serve as the main source of TB.

In the Kyrgyz Republic, respiratory diseases (Fig. 37) prevail in morbidity structure and thus create unfavorable environment in the context of epidemiological situation related to high TB morbidity rate. Granting this, Kyrgyz-Finnish Program on Lung Health launched implementation of Practical Approach to Lung Health (PAL) Strategy in pilot regions (Bishkek city and Toktogul rayon of Jalal-Abad oblast) in 2003. This strategy was developed by WHO for countries that already implemented DOTS and have primary health care infrastructure. PAL strategy concentrates on improvement of TB detection, early diagnostics and proper treatment of other respiratory infections, bronchial asthma, early diagnostics and minimization of risk factors of origination of chronic obstructive lung diseases.

Data from Regional WHO Office show that Kyrgyzstan and Tajikistan have the highest registered mortality rate from respiratory diseases. Since PAL strategy is focused on improvement of detection of respiratory infections, it also contributes to quality improvement of health care delivery to patients with acute and chronic lung diseases, thereby reducing significant socio-economic losses.
Prevention of cardio-vascular diseases and better treatment

Cardio-vascular diseases (CVDs) take the first place in the Kyrgyz Republic in crude mortality structure taking up almost half (46.4% in 2004) of all cases of annual deaths. Particular anxiety is caused by CVD mortality among young and able to work population (Table 3). Major contributors (80%) to CVD mortality include arterial hypertension, coronary heart disease and cerebro-vascular diseases. Results of sample studies show high prevalence of these diseases and risk factors of their development. However, up to date no activities on early detection of CVDs (based on population screening) and implementation of adequate interventions were undertaken. This results in development and increase in the number of severe complications with fatal outcome.

According Regional WHO Office data, the Kyrgyz Republic occupies the first place on standardized mortality rate from cerebral stroke in Eurasian region and thus in the world. Average mortality rate from cerebral stroke for the last 10 years makes 60.67 cases per 100 thousand population (Fig. 38).

Mentioned diseases of cardio-vascular system are not only the major cause of mortality in Kyrgyzstan, but also the cause of premature loss of ability to work and disability in people. During the last 5 years, growth rate of primary disability of population of the Kyrgyz Republic caused by CVDs reached 13.4%.

### Tab. 3. Cardiovascular diseases mortality rate in the Kyrgyz Republic (per 100 000 population)

<table>
<thead>
<tr>
<th>Age groups (years)</th>
<th>1990r.</th>
<th>2003r.</th>
<th>% of growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>30-39</td>
<td>47,4</td>
<td>56,7</td>
<td>19,6%</td>
</tr>
<tr>
<td>40-49</td>
<td>168,3</td>
<td>189,5</td>
<td>12,6%</td>
</tr>
<tr>
<td>50-59</td>
<td>457,9</td>
<td>533,0</td>
<td>16,4%</td>
</tr>
</tbody>
</table>

Source: RHIC, NCC&T, 2004
Introduction of evidence-based methods of treatment of arterial hypertension in 2000 and improved access to drugs under the Additional Drug Package resulted in reduced number of complications. So, hospitalization rate for hemorrhagic stroke in Chui oblast reduced from 14.4 per 1000 patients in 1999 to 3.3 – in 2004 (Fig. 19).

Containment of transmission of HIV/AIDS

Considerable increase in the number of registered HIV cases was observed in Kyrgyzstan in the period of 2001-2004. Since 1987 (when the first case of HIV-infection was detected) till 2004, 655 cases were registered, including 572 Kyrgyz citizens. Of the total number of registered HIV-positive patients 533 are intravenous drug users. There is a reported trend of shift of HIV-infection from drug-users environment to general population (Fig. 39). AIDS was detected in 35 people, 26 of which have died.

Period of 2003 – 2004 was marked by increased number of HIV infection cases among women. From the time of registration of first HIV cases the number of HIV-positive women increased 34 times (from 3 to 102 people). In the period of 1996-2004, there were nine children born from HIV-infected women.

There is a real threat of fast dissemination of HIV infection in correctional institutions of the Kyrgyz Republic. As of beginning of 2005, there were 128 HIV-infected patients that reside in penitentiary institutions.

Limited allocations of funds don’t ensure execution of regulations on provision of all types of qualified and specialized health care and free provision of drugs to HIV-infected patients stipulated by the Law “On HIV/AIDS in the Kyrgyz Republic”.

Fig. 38. Age-adjusted (0 – 64) cerebral stroke mortality rate (per 100 000 population)

Fig. 39. Number of HIV-registered cases among men and women (1) in the Kyrgyz Republic and types of transmission (2)
Goal
Increased efficiency of delivery of individual and public health services in the context of priority programs (motherhood and childhood protection, TB control and prevention of respiratory diseases, prevention of cardio-vascular diseases and their complications, Containment of HIV/AIDS transmission) directed at reduction of morbidity, disability and premature mortality of population and achievement of Millennium Development Goals in health.

Objectives:

1. Reduction of maternal and child mortality rates through increased coverage with evidence-based health care services;

2. Reduction of TB and respiratory diseases morbidity and mortality by effective implementation of DOTS and PAL strategies;

3. Prevention of the most widespread and socially significant diseases of cardio-vascular system that determine the main causes of mortality and disability;


4.3.4.1. Reduction of maternal and child mortality rates through increased coverage with evidence-based health care services

Considerable improvement of mother and child health and, accordingly, attainment of the 4th and 5th Millennium Development Goals (MDGs), require urgent and effective interventions from the government. Otherwise, under existing trends and socio-economic conditions Kyrgyzstan will not be able to fulfill undertaken commitments in health.

There is a list of effective evidence-based interventions, implementation of which can prevent two thirds of deaths of children under 5 and thus contribute to attainment of set MDGs [44]. 90% of these interventions can be executed through primary health care services and public health services. These interventions are based on preventive approaches that can effectively reduce susceptibility to diseases, which are the leading causes of child mortality, and medical interventions that are evidence-based and feasible for the Kyrgyz Republic.

Implementation of the following programs have been supported by donors during the last 5 years: Promoting Effectiveness of Perinatal Care Strategy (UNICEF/WHO), Integrated management of childhood illnesses (UNICEF/WHO), Program on support and encouragement of breastfeeding (UNICEF), Prevention of iron-deficient anemia in pregnant women (UNICEF), Motherhood and childhood protection (KW), Safe motherhood (UNICEF/WHO), Introduction of new live-birth criteria (WHO/CDC), emergency obstetric care, safe abortion, social attendance and other. All these programs contain elements of the above mentioned interventions. However, findings of qualitative sample studies show that these interventions cover about 20-30% of population (except immune-prophylaxis, supplementation with vitamin A and use of oral rehydration agents).

A number of interventions were never tested in the Kyrgyz Republic. Thus, expansion of list and coverage with evidence-based interventions is sees as persuasive reserve that can help in achievement of MDGs. In this relation, it is intended to disseminate tested programs countrywide, institutionalize them and develop mechanisms of sustainability and gradual inclusion into State-Guaranteed Benefit Package (SGBP).

It is planned to institutionalize interventions through their inclusion into standard packages of ante-, intra- and postnatal care provided to pregnant women, newborns and children under 1. Funding is presumed to come from donor assistance at the beginning with gradual inclusion into SGBP.

Training of health workers at primary health care level as well as gynecologists-obstetricians, neonatologists and resuscitation specialists is the foundation that should be laid with a view of achievement of MDGs. At that, training will have different emphasis for health workers of primary and secondary care levels. Health workers at PHC level require professional development on the issues of management and care of healthy and ill child, family planning, pregnancy management, timely recognition of complications and re-referral (programs like IMCI, breastfeeding, nutrition, child care, safe motherhood, new live-birth criteria, prevention of HIV transmission from mother to child, etc.); at secondary level – on management of delivery and provision of emergency care to parturient women and children according to evidence-based principles; and tertiary level – on provision of methodological and consultative assistance and coordination of work of health organizations on increase of implemented programs efficiency.
To ensure coordinated implementation of activities and determination of priorities and operative directions for health organizations involved in motherhood and childhood protection problem it is essential to develop series of strategies (Protection of reproductive health of population, Protection of child and adolescents health) and programs (Improvement of child perinatal care, Nutrition of children and reproductive age women), promote laws and issue a number of statutory and legal documents that will help to ensure continuity of services and compliance to internationally accepted norms, definitions and regulations.

One of the main directions in a complex of activities which is required for achievement of MDGs and has encouraging indicators is immune-prophylaxis. Immunization coverage in the Kyrgyz Republic reaches 98-99%. Vital challenges include retention of financial independence to ensure timely procurement of vaccines, expansion of National immunizations schedule and provision of training to PHC specialists on qualitative and timely vaccination.

Continuation of activity on prevention and reduction of micronutrient deficiency will require development of new innovative approaches, support from justified activities and development of mechanisms of sustainability and financial independence.

In the context of transitional period of establishment of family medicine it is essential to fulfill further integration of vertical specialized programs into general health services delivery system and improve monitoring system that allows for timely response on effectiveness of motherhood and childhood protection programs. This will require disintegrated analysis and monitoring of implementation and efficiency of realized activities based on operative data and implementation of qualitative studies.

Taking into account the importance of reliability of registration of mother and child births and deaths in the process of delivery, it is required to develop incentive mechanisms that can improve access to and reliability of registration. It is planned to ensure active population involvement in solution of series of tasks and problems related to timely registration of birth and death, assertion of patient rights, implementation of immunization, supplementation and activities aimed at community support of issues related to nutrition and health of children and women of reproductive age.

Verification of causes of death in children under 1 is the foundation for development of interventions aimed at elimination of causes of death and improvement of quality of health services delivery. In this relation, it is planned to implement activities on quality improvement of pathology-anatomic examinations.

To increase implementation efficiency of certain evidence-based interventions it is planned to provide training and increase population awareness about healthy life style, rational care over healthy and ill child, family planning issues, reproductive choice and safe motherhood, recognition of dangerous symptoms, first aid in case of their appearance and timely referral to health worker.

It is very important to ensure accessibility and availability of drugs for children and women of reproductive age especially those residing in remote and difficult to access regions.

Inclusion of children under 5, pregnant, parturient and puerperant women into target groups of Additional Drug Package will significantly enhance access to drugs and rationality of their use. Limited access to drugs for population residing in remote regions requires innovative methods of drug provision based on social marketing.

Key actions

A. Gradual expansion of types of health care services provided to pregnant, parturient and puerperant women and children under 5 in the context of State-Guaranteed Benefit Package;

B. Ensured expansion of coverage with effective interventions aimed at improvement of mother and child health;

C. Improvement of legislative and statutory-legal base and development of targeted programs;

D. Maintenance of high-quality coverage with immune-prophylaxis and programs on elimination of micronutrient deficiency at adequate level;

E. Further integration of specialized care to general delivery system of individual services on the basis of improved continuity and provision of methodical and consultative assistance by tertiary level health organizations;
F. Studies and monitoring;
G. Optimization of child birth and death registration, ensuring its availability, reliability and effectiveness;
H. Enhancement of awareness of health workers and population on the issues of child care and care over pregnant woman (breastfeeding, nutrition, dangerous symptoms, care over and breeding of younger children both healthy and ill);
I. Provision of drugs to pregnant and parturient women and younger children at all levels of health care delivery.

4.3.4.2. Reduction of TB and respiratory diseases morbidity and mortality by effective implementation of DOTS and PAL strategies

Introduction of DOTS into primary health care and restructuring of inpatient sector resulted in partial integration of anti-TB service with general health care network. Introduction of PAL strategy countrywide will contribute to improved detection of TB, prevention of acute respiratory diseases and chronic lung diseases as well as gradual integration of anti-TB and pulmonology services. Moreover, PAS strategy is oriented at standardization of treatment methods, quality increase of health services and strengthening of preventive work with population.

Kyrgyz Republic remains the country with unfavorable TB-related epidemiological situation. One of the sources of TB infection including MDR TB is penitentiary system institutions where TB patients are primary subject to annual amnesty. In this relation it is planned to introduce DOTS and DOTS+ in penitentiary system, develop rehabilitation mechanisms of TB patients before release from places of detention and design activities on improvement of inter-sectoral collaboration (MOJ, MOI, MOH).

Key actions

A. Enhancement of role of PHC facilities in prevention and treatment of respiratory diseases and TB;
B. Further implementation of DOTS and PAL strategies countrywide on the based of gradual integration of anti-TB and pulmonology services;
C. Optimization of management and coordination of activities on control of respiratory diseases and TB;
D. Strengthening of priority and support of activities on primary and secondary prevention of respiratory diseases and TB;
E. Introduction of effective evidence-based technologies on control of TB and respiratory diseases including establishment of immune interlayer among children (vaccination and re-vaccination against TB);
F. Coordination and development of bacteriological service and quality increase of microscopic investigations;
G. Implementation of DOTS in penitentiary system along with improvement of material and technical base, development of rehabilitation mechanisms of TB patients before release from places of detention;
H. Expansion of detection and treatment of MDR TB.

4.3.4.3. Prevention of the most widespread and socially significant diseases of cardio-vascular system that determine the main causes of mortality and disability

With a view of early detection of the most widespread and socially significant diseases of cardio-vascular system and adequate timely correction of them as well as effective reduction of prevalence of modifiable risk factors of emergence of these diseases it is planned to expand preventive work with population through execution of population screening and provision of training on basic principles and skills on prevention of CVDs and complications from them. Identification and implementation of tactics of curative and preventive interventions depending on family gradation (healthy, relatively healthy – having risk factors, with detected cardio-vascular diseases and risk factors, with complicated diseases course) will significantly increase quality of health services delivery. At the same time it is rational to develop and implement methods on ensuring incentives for health workers at primary care level.
To increase quality of health services delivery it is essential to maintain adequate level of knowledge and practical skills related to CVDs in health workers. This will require continuation of development and introduction of addressed programs on continuous education with a view of training and re-training of doctors and nurses on primary and secondary prevention of socially significant CVDs, methods of early detection and strategies of evidence-based curative-preventive interventions at the family level. It is expedient to introduce efficient methods of distant learning for health workers. Use of telecommunication technologies will contribute to delivery of high-quality health care to population residing in remote regions (through operative round-the-clock consultations and provision of adequate recommendations).

Great importance falls on improvement of organization of cardiological service and strengthening of its material and technical base. It is intended to ensure additional supply of cardiology profile structural subdivisions with modern medical equipment and devices, strengthen material and technical base of National Center of Cardiology and Therapy under the MOH KR as tertiary care level health organization that provides care related to cardio-vascular pathology, supply it with high-tech medical and laboratory equipment and introduce modern and effective technologies of diagnostics, prevention and treatment of CVDs.

It is planned to expand and deepen research works on creation of new technologies on prevention, diagnostics and treatment of the most socially significant CVDs, and ensure their further standardization through development and implementation of clinical protocols on examination and treatment based on modern achievements of medical science and practice. Moreover, it is planned to implement modern non-drug, pharmacological, endovascular, surgical and other justified intervention methods under CVDs into practice.

Large significance belongs to strengthening of interaction between all levels of cardiological care delivery – emergency, primary, secondary and tertiary – by ensuring effective patient referral process and feedback as well as organization and improvement of rehabilitation of patients with complications from CVDs, including prevention of anxiety and depressive disorders.

It is necessary to improve system of health-statistical reporting and monitoring of CVD status.

Special emphasis is placed on the role of public health services with active involvement of population, communities, local governments and non-governmental organizations. Significant role will be assigned to local Health Committees, Clubs of arterial hypertension, Coronary-lipid clubs established with a view of training of patients and family members on measures of prevention of CVDs based designed training programs aimed at reduction of risk factors (overweight, imbalanced nutrition, physical hypodynamia, stress susceptibility, arterial hypertension and hyperlipidemia). With the same purpose, it is necessary to use mass media on a broader basis as well as disseminate published for population booklets and popular brochures on measures of control and prevention of cardio-vascular diseases, strengthening resistance of people to external negative impact and strengthening of protective factors.

It is important to develop legislative acts on CVD risk factors control – ban on tobacco smoking, limitation of alcohol consumption – and public policy on healthy and safe nutrition as well as implement unified education program on healthy life style into the system of secondary and higher education.

**Key actions**

A. Further integration of specialized health organizations in the area of cardiology into general delivery system of individual and public health services;
B. Strengthening of coordinating role of National Center of Cardiology and Therapy under the MOH KR as tertiary health care level organization including research institute under NCCT as coordinating republican reference laboratory in the area of cardio-vascular pathology;
C. Enhancement of potential of health workers at primary and secondary health care levels on prevention of the most widespread and socially significant diseases of cardio-vascular system with expansion of functional responsibilities and resource provision;
D. Development and introduction of effective preventive activities with active involvement of population, communities, local governments and non-governmental organizations and enhancement of health culture;
E. Introduction of effective evidence-based technologies on prevention of the most widespread and socially significant diseases of cardio-vascular system;
F. Further improvement of National Drug Policy and expansion of Additional Drug Package on provision of drugs at outpatient level;
G. Introduction of effective methods of training on basic principles of primary and secondary prevention of CVDs to health workers at all levels of health care;
H. Coordination of donor assistance;
I. Integration of monitoring indicators on CVDs into existing system of health-statistical reporting.

4.3.4.4. Containment of transmission of HIV-infection/AIDS, STIs and drug addiction

It is planned to launch targeted actions on containment of transmission of HIV/AIDS and STIs in penitentiary institutions and among target groups, introduction of effective activities on safety of medical procedures, implementation of information-educational work with population on prevention of HIV/AIDS and STIs, change of sexual behavior as well as introduction of modern effective interventions aimed at Containment of transmission of HIV/AIDS and STIs including from mother to child.

Besides, taking into account that TB is the main opportunistic infection and the main reason of death for HIV infectious patients, there are activities planned on HIV/AIDS and TB programs interaction.

Key actions

A. Increased implementation efficiency of National policy on prevention of HIV/AIDS/STIs and drug addiction in the Kyrgyz Republic;
B. Conduction of activities ensuring safety of medical procedures;
C. Implementation of activities on Containment of transmission of HIV infection among intravenous drug users, TB patients including in penitentiary system institutions;
D. Provision of access to health care in case of STI including in penitentiary system institutions, introduction of effective methods of treatment of STIs;
E. Introduction of short-term anti-retroviral preventive treatment and consultations on child feeding and use of safe methods of feeding a child for HIV-positive mothers;
F. Further implementation of information-educational programs on prevention of HIV/AIDS/STIs and drug addiction on the basis of inter-sectoral approach;
G. Implementation of activities on medical and social support of people living with HIV/AIDS and people that suffered from HIV/AIDS;
H. Introduction of programs on change of sexual behavior as well as provision of voluntary consultations and testing.
4.3.5. Investing in human resources

Strong human resources capacity in health are one of success constituents of health reform. Qualitative composition of staff, level of staff training and professional competence significantly impact quality of health services and, consequently, population health status.

The first phase of health reform placed significant emphasis on the issues of undergraduate and postgraduate training, advanced training, continuous training and re-training of doctors, nurses and pharmaceutical staff. Introduction of family medicine and shift to evidence-based methods of treatment requires change in approach to curricula.

At the same time, there is an apparent imbalance in regional distribution and qualitative composition of health staff caused by law salaries, lack of motivations and mechanisms of securing health staff in the regions, especially in rural area, as well as outflow and high fluctuation of staff and poor material and technical base.

The issue of planning of health staff remained unresolved. Despite annual increase in the number of young specialists – doctors graduating from medical schools there is a shortage of doctors in rural areas and excess of narrow specialists in urban areas. Reverse situation is observed with nurses. In rural areas there is an excess of nurses and the ratio doctor-nurse is 1:5 in Batken oblast, 1:4 in Naryn oblast and 1:1 in Bishkek city, whereas international practice shows that the optimal ratio should be 1:3.

Goal

Improvement of human resources policy of health care on the basis of strategic planning, improvement of medical education system and introduction of sustainable and efficient mechanisms of human resources management in health

Objectives:

1. Introduction of strategic planning of human resources of health system;
2. Improvement of medical education system focused on health needs and ensuring strengthening of primary health care;
3. Introduction of sustainable and efficient mechanisms of human resources management in health.

4.3.5.1. Introduction of strategic planning of human resources of health system

Reorientation of health system to primary health care level, development of family medicine, increased role of public health, increased responsiveness of service delivery system, elimination of geographic imbalance and elimination of structural disproportions in staff require strategic planning of human resources.

Introduction of strategic planning of human resources is inseparably linked with (i) increase of MOH potential, (ii) introduction of new regulatory mechanisms enhancing MOH authorities in training and distribution of staff as well as increasing requirements to qualitative composition and qualification characteristics.

Key actions

A. Increase of MOH potential in the area of strategic planning of human resources;
B. Improvement of information technologies with respect to human resources.

4.3.5.2. Improvement of medical education system focused on health needs and ensuring strengthening of primary health care in the context of comprehensive integrated health services delivery system

During the recent years there was a considerable increase in the number of medical departments in higher education institutions. Specialists are graduating without consideration of the need in health staff. Introduction of market mechanisms into educational process, lack of educational standards and poor material and technical base of medical educational institutions affect quality of education and result in unclaimed health staff in the cities despite apparent shortage of staff in rural areas.

There is an annual increase in the number of students that pay for their education on contractual basis and to a certain degree cover budget-based educational process. For training of one student per year budget allocates only 5000 soms, the amount not corresponding to actual expenditures. Moreover,
content of curricula is not unified and falls behind reforms implemented in health sector and knowledge obtained by graduates do not fully correspond to requirements of practical health care.

Postgraduate training of family doctors is provided by KSMA and KSMIPGT CE from budget funds. With a view of improving quality of postgraduate training of family doctors funded from the budget this training should be retained in KSMA and KSMIPGT CE, whereas re-training, advanced training and continuous education – in KSMIPGT CE to be done upon accreditation corresponding to international standards.

Concentration of residential training in Bishkek and Osh cities at the same clinical bases does not give a chance to students to obtain appropriate practical skills and reflects on quality of training.

In this relation it is reasonable to change approaches to residential training by ensuring partial distribution of residential students during the second year of training to bases located in general clinics (OMH, TH) and FMCs at oblast, city and rayon levels. This will require revision of curricula, determination of criteria for clinical bases and introduction of established post of intern-doctor. Such approach will serve an additional mechanism of securing the young specialist.

It is planned to provide postgraduate training and continuous education on competitive basis in national centers, research institutes and educational institutions that have appropriate material and technical base and highly qualified teaching staff corresponding to accreditation requirements. Such approach will provide choice for students and will stimulate improvement of curricula.

When making decision about transfer of funding of medical colleges from local budgets to Ministry of Health it is possible to consider training of nurses on the bases of large general hospitals and FMCs with a view of quality improvement of training.

Key actions

4.3.5.2.1. Reformation of undergraduate and postgraduate medical education system

A. Development and introduction of mechanisms of admission to medical educational organizations on the basis of state and municipal order (departments where training is covered from budget funds) and identification of quotas for contract departments (training is covered from contracts paid by students);

B. Improvement of medical education system in accordance with international standards;

C. Revision and accreditation of existing curricula and development of new targeted programs on undergraduate and postgraduate training with emphasis on securing practical skills by doctors and feldhsers following priority directions;

D. Quality improvement of medical education through revision of accreditation criteria of higher and high medical educational institutions in accordance with international standards and introduction of quality improvement mechanisms of teaching staff;

E. Improvement of postgraduate training system for specialists directed at acquisition of practical skills in health organizations countrywide.

4.3.5.2.2. Improvement of continuous medical education system

A. Improvement of programs on re-training of health staff of PHC and introduction of modules on priority directions;

B. Development of methods of distant learning for postgraduate and continuous training of doctors, feldhsers and nurses;

C. Development of normative-legal base regulating interaction of stakeholders involved in training process of staff for health system.

4.3.5.3. Introduction of sustainable and efficient mechanisms of human resources management in health

The Law “On health protection of population in the Kyrgyz Republic” stipulates obligatory two-year labor-rent according to MOH referral for graduates of medical schools graduating from budget-covered departments; registration and attestation; responsibility of local governments to create conditions to secure young specialists locally. However, the problems related to securing and balanced provision with health staff are remaining due to lack of clear regulation mechanisms of hiring process, professional development and system of rewards and motivations.
Stability and efficiency of human resources policy depends on clear distribution of planning functions (perspective and operative planning), administrative functions (attestation, registration and distribution), development and realization of new functional responsibilities and roles of health workers in accordance with structural changes occurring in health services delivery system.

**Key actions**

A. Introduction of new functional responsibilities and roles of health workers in accordance with structural changes occurring in health services delivery system;

B. Strengthening of health organizations potential on management of human resources;

C. Introduction of mechanisms allowing health workers to exercise practical activity on the basis of registration and attestation;

D. Creation of sustainable system of staff motivation;

E. Change of system of training of health managers and nurses with higher education.
4.4. **Stewardship**

In the context of growing population expectations of the health system and scarce financial resources, the governments face the need to identify strategic directions for health system development [19].

In general, health system includes four main functions:

1) stewardship;
2) provision of resources (investing in human resources and training of staff);
3) financing (collection, pooling, purchasing);
4) delivery of services oriented at achievement of the main goal of health care – improved population health status – by ensuring equitable contribution and responsiveness of health system to population needs and expectations.

Stewardship in this situation holds significant place since it has influence on all functions of health system. Stewardship includes development of public policy in health, clear vision of goals and lines of development, coordination of all work of all health system entities, concerned systems and structures as well as international donor organizations and regulation of processes and activity of health organizations.

Framework of current program “Manas Taalimi” implies shift from command-administrative system of management to management based on development of partnership relations with system players, clear separation of functions, introduction of outcome oriented evidence-based methods of health management and creation of climate of openness and feedback.

Development of health policy in the new environment should correspond to the major public policy directions in social sphere, take into consideration economic situation and be based on principles of continuity, continuous monitoring of population health indicators and action processes of health organizations on health protection and health promotion.

**Goal:**

Creation and stabilization of the course of sectoral policy and development priorities aimed at achievement of the main goal of health care, which is to improve health status of the population and improve health system performance.

This goal can be achieved through proper identification of development priorities and realization of the following **objectives:**

1. Development of health policy based on clear vision, continuity, assurance of legislative foundation, improvement of inter-sectoral interaction and donor coordination;
2. Shift to new methods of management based on new functional characteristics and effective regulatory mechanisms;
3. Further institutionalization of health sector;
4. Improvement of mechanisms on enhancement of processes of information collection and monitoring ensuring operative and adequate decision making.

**4.4.1. Development of health policy based on clear vision, continuity, assurance of legislative foundation, improvement of inter-sectoral interaction and donor coordination**

Sustainability of the course of sectoral policy and development priorities is only possible under the support of political leadership of the country. It is essential to gain support from the government and parliament of the country and concerned allied systems and structures to ensure operative training and making of legislative and normative decisions.

It is essential that policy is focused on vision of goals directed at maintenance and promotion of health of the whole society and oriented at population needs, especially the poor and socially vulnerable categories.

High-quality state governance is one the major priorities identified in the long-term strategy, which is Comprehensive Development Framework of the Kyrgyz Republic until 2010, and mid-term program, which is National Poverty Reduction Strategy.
Manas National Health Care Reform Program entailed structural changes aimed at ensuring access and quality of health care services, introduction and strengthening of new methods of health financing. Implementation of this program allowed for realization of management decentralization (predominantly deconcentration) and development of administrative and financial autonomy of health services providers with establishment of legislative foundations aimed at increase of health sector performance efficiency.

Decentralization process of health system management cannot happen spontaneously, it has to be explicitly linked with general reform process of state governance. Management decentralization should also be followed by transfer of responsibility for decision making and outcomes. There is a need to strengthen responsibility of local state administrations and local governments for health status of their region. To do that, it is necessary to separate governmental authorities in the area of health protection and health promotion with local governments.

Achievement of goals of the health system on improvement of population health status is inseparable from efficient intra-agency and inter-sectoral interaction based on task-oriented performance of all sectors on creation of sustainable environment contributing to health protection and health promotion.

Ministry of Health will take a responsibility to influence other sectors, local governments, non-governmental organizations, community groups and other players to undertake actions directed at important determinants of health and coordinate work of medical services of other ministries according to health priorities.

It is important to strengthen the role and potential of Ministry of Health in development of public policy concerning health protection and health promotion, identification of strategic directions of further development and mechanisms of comprehensive development and interaction of public and private health sectors.

At present, there is a need in task-oriented activity on population health promotion and strengthening of role of public health as well as enhancement of responsibility of each individual, family, society, state authority and governance for the health of each individual and society as whole.

Further development of health protection and health promotion policy should be based on principles of continuity with previously implemented health reform in the context of decentralization of state governance and budget process reform.

Involvement of civil society and local governments in development of strategic directions of health care development will increase performance efficiency and ensure transparency of decision making process.

To ensure efficient functioning of health system under qualitatively new environment it is necessary to synchronize and harmonize legislation. In particular, the issue on removal of VAT on health services and basic items procured for health organizations should be considered in order to shift to new organizational-legal forms of public health care organizations and develop competitive environment in health, reduce cost, improve population access and increase quality of health care services.

Health reform in the context of “Manas” National Program entailed close collaboration of the Government of the Kyrgyz Republic with international donor organizations and executive agencies. Coordination of donor assistance and complementary investments excluding duplication laid foundation for further transformations in the health sector based on Sector-Wide Approach (SWAP).

**Key actions**

A. Development and introduction of mechanisms of protection of health system from political and economic risks;

B. Separation of governmental authorities in the area of health protection and health promotion among central state governance agencies and local governments;

C. Increase of coordination efficiency of donor assistance on the basis of sector-wide approach (SWAP);

D. Increase of efficiency of inter-sectoral interaction and responsibility of managing agencies;

E. Synchronization and harmonization of legislation;

F. Promotion of health policy and health reforms.
4.4.2. Shift to new methods of management based on new functional characteristics and effective regulatory mechanisms

Split of health sector into "purchaser" and "providers" of health care services created preconditions for shift from command-administrative system of management to management based on development of partnership relations with system players, clear separation of functions and implicit execution of functions by all players of the system.

Regulation of work of health organizations in the context of comprehensive integrated system of service delivery is possible in the presence of effective regulatory mechanisms which include licensing, accreditation, attestation, standards, norms, etc. Some authorities of the Ministry of Health may be delegated to professional associations and non-governmental organizations. The Law of the KR “On health organizations in the Kyrgyz Republic” specifies that the founders of health organizations may be various governmental agencies, local state administrations and local governments. For that, they will require to undergo licensing process. At the same time, the Law “On licensing” regulates this procedure only for private providers. It is necessary to introduce changes to the legislation of the KR concerning licensing to increase quality of health care delivery.

Strengthened autonomy of health organizations requires increase of their responsibility and efficient coordination of their performance at regional level. Work of coordination boards under the oblast state administrations and city administrations of Bishkek and Osh cities needs to be activated. Taking into account special status of Bishkek and Osh cities it is planned to establish health sector within city administrations with corresponding authorities. This sector will coordinate work of health organizations and bear responsibility for functioning of coordination boards. This will allow splitting functions of purchaser and providers of health services. This work is currently executed by Bishkek Territorial Department of MHIF.

Selection and appointment of managers of health organizations is major success component of occurring reforms since flexible implementation of plans, projects and programs depends on the level of professional training, managerial and administrative skills and moral characteristics of managers.

Thus, it is necessary to develop mechanisms of selection, appointment and horizontal and vertical rotation of managers. Appointment of managers should be done on contractual basis and cover only those people who had training, attestation and registration on “health management” specialization and who have stainless reputation. Moreover, the appointment should not be unlimited. Terms of work of each manager in certain health organization will be identified. To make a decision about prolongation of contract after the contract is expired, it is essential to evaluate the work of manager and compare it to his report. Manager should not work in the same organization for more than two terms in a row.

Under existing conditions of pooling of health funds at republican level, one of the regulatory mechanisms of efficient and equitable distribution of resources is health financing based on priorities with separation of functions of funding individual health services provided in the context of State-Guaranteed Benefit Package through Single Payer system and public health services provided by the Ministry of Health.

Findings from WHO studies show [46] show that significant share of population expenditures belongs to drugs procured at outpatient level. To reduce financial burden on population it is necessary to improve regulatory mechanisms controlling circulation of drugs and introduce public price regulation.

Key actions

A. Improvement of regulatory mechanisms;
B. Introduction of unified procedure of appointment and discharge of managing staff;
C. Strengthening of intra-sectoral interaction;
D. Increased capacity of providers in the area of health management, financing and administration.

4.4.3. Further institutionalization of health sector

In the context when the main structural changes are completed, the key direction of health policy becomes the course on further institutionalization of the system, strengthening of managerial potential of both Ministry of Health and dependent structures as well as health organizations.

Decentralization of management and introduction of Single-payer system are aimed at strengthening of administrative and financial autonomy of health organizations that will start working on change of
organizational-legal form of health organizations. It is essential to clarify the issue of founding of territorial and oblast health organizations. At that, Ministry of Health may stand as co-founder of municipal health organizations.

Functional analysis of territorial structures of the Ministry of Health implemented by UNDP with support from DFID [47] showed that there is a need to specify lead institution of the region that will be capable of executing function of performance coordination of health organizations and being responsible for monitoring and assessment of population health in the region. Oblast family medicine center that has health-information center in its structure may serve as such lead organization. at the same time, oblast FMC will integrate service of social attendance, family planning service, etc.

Enhancement of role of public health is associated with institutional changes based on new functional characteristics, exclusion of duplication of functions, clear separation of functions and integration of health services.

Services of health promotion and sanitary-epidemiological surveillance will be reorganized on the basis of separation of functions on service delivery and population health promotion from supervisory functions. Health promotion and disease control services will be integrated with primary health care and oriented at health priorities and population needs. It is essential to institutionalize both the whole system and individual structures on the basis of new functional characteristics.

DHRCI under the Ministry of Health has been providing health management training course during four years to train managers of health organizations on progressive methods of health management since managers of health organizations can only be the people with higher medical or economic education who were attested and registered on “health management” specialization. Obtained experience allowed to conduct the first Flagship course for CIS countries in 2004. In this relation, health management course provided by DHRCI under the MOH KR needs to be institutionalized.

Since key functions of stewardship include policy analysis and monitoring for evidence-based decision-making it is necessary to institutionalize Health Policy Analysis Project (WHO/DFID) and create Evidence-Based Medicine.

**Key actions**

A. Implementation of institutional changes and improvement of MOH structure on the basis of new functional characteristics;

B. Enhancement of administrative and financial autonomy of health organizations with development and introduction of adaptation mechanisms aimed at increase of responsibility of health organizations resulting from management decentralization;

C. Implementation of institutional changes at republican and regional levels on the basis of new functional characteristics;

D. Delegation of governmental authorities to professional associations and non-governmental organizations;

E. Increased capacity of health system in promotion of health policy.

4.4.4. Improvement of mechanisms on enhancement of processes of information collection and monitoring ensuring operative and adequate decision making

Unified three-level information system integrated with governmental corporative network was established with a view of improvement of efficiency of intra-agency interaction. This integration creates preconditions for efficient inter-sectoral interaction. Mailing hub of the Ministry of Health was established, corporative portal is under development and under the electronic health care the following sites were created and are functioning: http://www.med.kg, http://foms.med.kg, http://pharm.med.kg, http://hpap.med.kg, http://ebm.med.kg.

Health information units and MHIF TDs at oblast level are located in one building (except in Batken and Chui oblasts) in order to ensure efficient use of communications and eliminate duplication of functions executed in the context of health reform projects supported by the World Bank, MHIF and RHIC.

It is planned to ensure further development of infrastructure, communications, improvement and development of new software products, their integration, introduction of modern perspectives technologies and improvement of access to information for providers and population in the context of electronic health care development. This will increase transparency and efficiency of resources utilization, improve communicative interaction within the health sector and with population.
Stewardship in health sector should rely on systematic monitoring and performance evaluation of health system with coverage of infrastructure, goal, function and effectiveness of health system.

At present, monitoring, analysis and evaluation are coordinated by Health Policy Analysis Project (WHO/DFID). It is essential to strengthen the potential of health policy monitoring and evaluation of both the Ministry of Health as well as all stakeholders concerned with inter-sectoral collaboration.

Good system of information collection should be selective and contribute to adequate decision-making. Currently, collection of health-statistical data is executed by RHIC on the basis of reporting data. At the same time, collection of operative data is executed by different structural subdivisions resulting in duplication, inefficiency and high cost of collection of operative data. Thus, it is required to revise the existing system and incentives on information collection.

Creation of effective monitoring system based on determination of sources of data collection and frequency of data provision to health organizations will ensure timely assessment of the situation and prevention of possible negative consequences caused by wrong political and administrative decisions. Moreover, system of monitoring, analysis and evaluation will help to assess efficiency of both reform implementation, rational use of resources and undertaken steps and actions. This will contribute to timely correction of current policy and increased efficiency of reform implementation.

**Key actions**

A. Increased role of monitoring, analysis and evaluation of health sector performance on the basis of target indicators with creation of integrated informational-analytical health system;

B. Development of communication infrastructure and creation of corporative informational network of health system;

C. Development of software products, creation of normative-reference identifiers (NRI) and standardization of software.
5. Implementation strategies

This section describes implementation strategies of the main directions and activities presented in section 4 “Reform plan” of “Manas Taalimi” program. The following implementation strategies are planned:

1. Further institutional development and strengthening of health system potential;
2. Ensuring financial sustainability of health sector;
3. Integration of delivered health care services aimed at increase of their efficiency and quality as well as achievement of Millennium Development Goals;
4. Promotion of health policy;
5. Ensuring transparency of purchasing process in health sector.

5.1. Further institutional development and strengthening of health system potential

“Manas” National Health Care Reform Program entailed structural changes and initiated the process of institutionalization of health sector. Family Medicine Centers were created on the basis of complete separation of former polyclinics from hospitals. Territorial hospitals were created instead of city and rayon hospitals and oblast hospitals were merged into oblast merged hospitals.

Health management course was organized and is successfully functioning on the basis of DHRCI under the MOH with a view of training of managers of health organizations and health managers, infrastructure of national medical library is being developed and the group on introduction of principles of evidence-based medicine into practical health care was created.

Legislative base ensuring continuation of health reform and further institutional development has been developed. Proposed strategy of further institutional development of health system takes into account forthcoming changes in administrative-territorial arrangement of the Kyrgyz Republic.

“Manas Taalimi” National Program anticipates changes (a) at central and regional levels aimed at enhancement of MOH role in development of public policy on health protection and health promotion, identification of strategic directions of further development and development of mechanisms of interaction between public and private health sectors. It also anticipates (b) differentiation of authorities between central level of state governance and regional structures including local governments; (c) elimination of conflicts of interests associated with concentration of political, regulatory and control functions; (d) continuation of restructuring and optimization of individual health services delivery system with emphasis on further development of primary care and creation of flexible hospital network; (e) reorganization of public health services delivery system on the basis of separation of supervision functions; health promotion and protection; service delivery; (f) restructuring of specialized health organizations with gradual integration of them into general system of health services delivery; (g) development of partnership interrelations with civil society.

Introduction of institutional changes will require broad discussion with all stakeholders at central and regional levels. Changes will be realized through adoption of corresponding state, governmental and departmental statutory acts.

A. Institutional development

I. Institutionalization at central level

a. Ministry of Health

The result of continuous mechanic reduction of established posts in the Ministry of Health from 62 units in 1991 to 45 in 2005 was drastic weakening of the Ministry of Health. This, in turn, resulted in incapability of MOH is execution of functions determined by the legislation. As a consequence, Ministry of Health delegated some important functions on development of health policy to lower organizations (DDPME, DSSES, DHRCI) which in turn led to emergence of conflict of interests. All of the above also weakened coordination of work of health organizations, international donor organizations and allied ministries and agencies [45].

Realization of “Manas Taalimi” program in the context of sector-wide approach with MOH being an executive agent requires strengthening of MOH role in development of public policy on health protection and health promotion, issues of inter-sectoral collaboration and coordination of work of donor organizations.
To increase performance efficiency of the Ministry of Health and strengthen its potential it is essential to change the structure of MOH aimed at:

- increased capacity in policy making;
- increased capacity in development and implementation of effective regulatory mechanisms;
- improved coordination of intra- and inter-sectoral collaboration.

In this relation, it is planned to establish corresponding functional units within the MOH structure that will be responsible for the following activities:

- health policy making, determination of development priorities, coordination of donor assistance;
- organization of delivery of public and individual health services;
- licensing of health services (medical practice and pharmaceutical activity, etc.);
- management of human resources of the health sector;
- funding of health organizations not included into the Single Payer system.

MOH KR Policy Council will start functioning.

**b. Structures accountable to Ministry of Health**

DHRCI is subject to elimination. Instead, it is planned to create the Center of Health Care Development which will consist of Republican medical library and newly established Center of Evidence-Based Medicine and Health Management Training Center. This will allow for institutionalization of health management course and Health Policy Analysis Project, WHO/DFID. Functions on coordination of donor activity and reform implementation will be transferred to the Ministry of Health of the Kyrgyz Republic.

DDPME will be reorganized and functions of drug policy making and licensing of pharmaceutical activity will be transferred to the Ministry of Health of the Kyrgyz Republic.

MHIF will be strengthened in accordance with performed functions of the Single Payer in health financing in the Kyrgyz Republic. In the context of centralization of health resources, MHIF structure needs to be revised with significant strengthening of financial-economic service. Terms of reference for MHIF and TD MHIF manager should include financial-economic educational background. In the future, when talking about sustainability of the Single-payer system it will be possible to consider separation of MHIF into independent structure under the Government of the Kyrgyz Republic.

Health information systems will be institutionalized through shift to corporative management and establishment of the Center of health information technologies.

DSSES will be reorganized based on new functional characteristics with elimination of existing conflict of interests and duplicating functions. Functions on policy making in the area of sanitary-epidemiological wellbeing will be transferred to the Ministry of Health and authorities on assessment of safety of food products and drinking water will be shared with National institute of standards and metrology of the KR. In general, service of public health will be restructured according to the following major functional lines: health promotion; diseases control on the basis of epidemiological surveillance; supervision of execution of sanitary legislation (sanitary inspection). At that, specialists of sanitary inspection should be provided with a status of civil servants with vertical subordination and centralized funding.

Functions of KSMIPGT CE and health management training center will be explicitly separated. KSMIPGT CE will focus on postgraduate training and continuous education of specialists and health management training center – on training of managers of health organizations.

The role of National Centers and republican institutions on coordination of activities related to implementation of priority programs will be strengthened and their functions on policy making will be transferred to the Ministry of Health.
II. Institutional changes and interrelations at regional level

a. City administration of Bishkek and Osh cities

It is planned to establish health sectors within social units of city administrations. They will ensure effective work of Supervisory Boards on health management and strengthen their interaction with Ministry of Health.

It is planned to revise functions of Bishkek Territorial Department of Mandatory Health Insurance Fund.

b. Health organizations at regional level

It is planned to:

- revise functions and reorganize oblast health organizations focused on elimination of duplication, increase administrative efficiency at oblast level, integrate and improve continuity among different levels of health services delivery;
- transfer functions on coordination of health organizations activity at regional level to FMC as health organization responsible for population health status at a given territory and having appropriate information-analytical base.

c. Local governments and state governance units

It is planned to change organizational-legal form of health organizations. For that, it is necessary to develop mechanisms of possible additional funding directed at health care development and expansion of health services beyond State-Guaranteed Benefit Package and social programs.

III. Interaction with non-governmental and community-based organizations and mass media

It is planned to introduce various models of interaction with non-governmental and community-based organizations.

The work with mass media on the issues of health protection and promotion, health reform, the rights of citizens and terms of access to health services and responsibility for maintenance of health will be strengthened.

It is intended to delegate some authorities of the Ministry of Health to professional medical associations (attestation of specialists, work with population complaints, etc.). In addition, mechanisms of payment for associations for their services should be developed.

IV. Coordination of donor assistance

Coordination of donor assistance will be performed by the Ministry of Health in the context of sector-wide approach.

Health reform process will be discussed 2 times a year at health summits with participation of donors.

B. Strengthening of health system capacity

Strengthening of health system capacity will entail maintenance and further development of existing health system potential. Plus, it is planned to increase the number of staff of the Ministry of Health, improve its material and technical base and supply with adequate resources in accordance with planned institutional changes.

Moreover, to improve activities on strategic planning of health organization and strategic purchasing of health services it is essential to train the staff of providers and purchaser on methods of strategic planning and strategic purchasing.

Great role in strategic purchasing belongs to uninterrupted functioning of information systems, automated calculation of expenditures and performance analysis.

In this relation it is planned to:

a. Improve material and technical base

- Provide new building to the Ministry of Health which will compactly locate all structural subdivisions;
- Provide Ministry of Health with required communications and office equipment necessary for fulfillment of entrusted tasks on strategic management of health sector;
Support functioning of information system from funds brought-in in the context of SWAp and ensure support of information-communication technologies on the basis of corporative management;

Develop software products that automate calculation of expenditures, analysis of health sector performance and monitoring of achievement of Millennium Development Goals;

b. Increase human resources capacity

Introduce new qualification characteristics for administrative staff and selection of staff on competitive basis;

Improve system of training and re-training of administrative staff in accordance with health needs and priorities;

Introduce system of motivation for professional promotion and securing of health workers (professional development, rotation, increased salary, mechanisms of social protection);

Introduce efficient mechanisms of distribution of statutory and legal acts, clinical protocols, analytical and other information.

5.2. Ensuring financial sustainability of health system

It is planned to increase financial sustainability of health system through the use of political and financial-economic tools. Realization of these tools will ensure sustainability of functioning of health care and implementation of reform strategies planned in the context of “Manas Taalimi” program.

Political tools:

− In the context of project and program implementation, the Government should assume obligations on: (i) obligatory complete execution of health financing levels in the context of mid-term budget framework formed on program basis with use of minimal standards of budget funding and inflation adjustment; (ii) increase of transfers from republican budget for mandatory health insurance on behalf of children, pensioners, students, unemployed and other socially vulnerable population categories in accordance with the Law of the KR “On health insurance of citizens in the Kyrgyz Republic”; (iii) equal inflow of financial resources for health during a year.

− Adequate provision of financial resources for benefits guaranteed to people by the State-Guaranteed Benefit Package adopted by the Government on annual basis and barring of assumption of obligations not ensured by financial resources;

− Unconditionally complete transfer of mandatory health insurance contributions collected by Social Fund for employed people and elimination of arrears from previous years;

− Introduction of pooling of health resources at republican level since 2006 to ensure equitable distribution of funds by regions;

− Implementation of wide-range explanatory work in mass media and working meetings concerning reform process and problem areas of the health system in order to enhance understanding and support priority of health sector by the Government and Jogorku Kenesh of the Kyrgyz Republic at the time of state budget formation and approval;

− Support of health organizations at local level by units of state governance and local governments with introduction of additional funding on health for capital investments and social programs;

− Broad coverage of processes of health budget formation and execution by mass media and involvement of representatives of non-governmental and community-based organizations.

Financial-economic tools:

− Equalization of funding of regions with consideration of age-sex population mix and coefficients of high altitude and remoteness from administrative centers;

− Shift to non-line-item funding of health organizations (providers) in the context of consolidated budget;
- Introduction of unified rules for purchasing of health services and strategic purchasing based on analysis of structure, levels and types of health services with consideration of population needs;
- Introduction of individual optimization programs and financial support with attraction of local budget funds for health organizations located in remote and difficult to access regions that are not subject to closure;
- Improvement of accountability of all health organizations on use of resources;
- Universal introduction of treatment standards (clinical protocols) at primary and secondary health care levels.

5.3. Integration of delivered health care services aimed at increase of their efficiency and quality as well as achievement of Millennium Development Goals

One of the objectives of further health system reform is creation of comprehensive integrated system of health services delivery which corresponds to the needs of population and society and ensures efficient use of resources on the basis of modern management methods.

Currently, service delivery system is based on delivery of individual health services and health services delivered to the whole population or public health services. Intermediate position belongs to services provided in the context of priority (vertical) programs. First phase of reform has launched the process of integration of health services provided in the context of priority (vertical) program into primary health care.

Health reform does not anticipate parallel funding of priority (vertical) programs. Thus, the workload of primary health care is increasing. Regulation of access to higher levels of health care provision enhances their role in delivery of health care services of higher quality that meet population expectations.

Fig. 40. Health Care Delivery system

A. Integration of health services delivery system

1. Integration of priority programs with public health and health organizations delivering individual health services

Integration of priority-(vertical) programs anticipates:

- Strengthening the role of public health in population mental and physical health promotion on the basis of diseases control and orientation at health priorities. For that, it is anticipated to introduce mechanisms of active involvement of population, non-governmental and community-based organizations and communities to system of control over determinants of health, formation of healthy life style and health culture through realization of partnership programs, introduction of various models of work with population and active involvement of mass media;
- Expansion of PHC functions (FAP/FGPs) on disease prevention and population health promotion based on enhanced knowledge. It is planned to improve material and technical base of FAPs and FGPs, supply them with standard and specific equipment, supplies and drugs.
required for implementation of preventive activities. For implementation of effective interventions planned in the context of priority programs it is anticipated to provide training and re-training for health staff (FAP/FGPs) and include corresponding modules to curricula of postgraduate training and continuous education;

- Institutional and functional changes aimed at increase of efficiency and quality of provided services will be executed on the basis of functional analysis and discussions with medical community with consideration of health priorities and population needs.

At the same time the following activities are planned:

- Integration of oncolgical service and family planning service into Family Medicine Centers, transfer of social attendance service to local governments;
- Introduction of practical approach to lung health and TB control in the context of PAL/WHO strategy with gradual integration of anti-TB and pulmonology services and their full integration with primary health care;
- Integration of HIV/AIDS with health promotion service on the basis of diseases control with narcological and dermatology-venereal services;
- Bringing psychiatric and narcological care closer to population and further integration into general health care network with installation of crisis beds and small departments in general hospitals.

2. Coordination with departmental health organizations and private sector

Coordination of activity on priority directions of health care is needed to increase quality of health services provided by departmental health organizations and private providers, increase reliability of statistical information and achieve MDGs. In this connection it is planned to do the following:

- Provide assistance in organization of association private providers of health services;
- Develop forms of statistical reporting for private providers;
- Involve private providers of health services into delivery of services included in SGBP and mandatory health insurance programs;
- Ensure accreditation of departmental health organizations and private providers of health services;
- Introduce licensing for departmental and municipal health organizations;
- Expand market of private services in health through introduction of changes into tax legislation (removal of VAT from health services);
- Conduct meetings and round table meeting for development of plan of joint actions on health priorities.

3. Improved continuity among different levels of health services delivery

To improve continuity among different levels of health services delivery the following activities are planned:

- Development of regulatory mechanisms for access to different levels of health care delivery (system of referrals and re-referrals);
- Introduction of mechanisms of continuity and feedback between different levels of health care delivery based on improvement of information-communication technologies;
- Improved interaction of health organizations on the basis of separation of functions and improvement of contractual relations.

B. Achievement of the Health Millennium Development Goals

For significant improvement of population health status and achievement of Millennium Development Goals (MDGs) which are the major indicators of human development, it is planned to:

- Increase and redistribute public expenditures within the health sector aimed at achievement of MDGs especially among socially vulnerable population groups with worst health outcomes;
• Enhance role of public health with orientation at population needs, preventive activities and strengthening of activities at population level on reduction of risk factors that affect achievement of MDGs with special emphasis on unprotected and vulnerable population groups;
• Increase efficiency of use of available health resources with rational renovation of material and technical base on the basis of geographic equality, priorities and determination of needs;
• Increase qualification of health workers through training programs based on introduction of effective evidence-based health services;
• Enhance role of health organizations of tertiary level on corresponding directions;
• Attract and coordinate donor assistance to achieve MDGs;
• Involve public, private health organizations, state governance units and local governments into process of achievement of MDGs;
• Enhance inter-sectoral collaboration on achievement of MDGs;
• Increase efficiency of monitoring of programs aimed at achievement of MDGs.

MDG 4: Reduction of child mortality rate

Target 5: Reduce under 5 child mortality rate by two third by 2015

Since 2004, the Kyrgyz Republic started to introduce live-birth criteria recommended by WHO. It is expected that during the next 2 – 3 years the rates of infant and, accordingly, child mortality will increase both because of introduction of new live-birth criteria and improved registration of birth and death cases.

In urban area, prevailing causes of infant mortality are prenatal causes and in rural area – respiratory and infectious diseases. Moreover, observed increase in infant mortality rate is also caused by congenital anomalies. In this connection, “Mans Taalimi” program plans to implement activities aimed at improvement of access and expansion of scope of health care services provided to pregnant women and children under 5 in the context of State-Guaranteed Benefit Package. On the grounds of this the following activities are planned:

− Expansion of scope of health services provided in the context of State-Guaranteed Benefit Package and exemption of children under 5 from co-payment for treatment at outpatient and inpatient levels;
− Introduction of efficient medical interventions for children under 5: expansion of types of immune-prophylaxis, supplementation of pregnant women and children with micronutrients such as iron, vitamin A, folic acid (for women under 12 weeks of pregnancy) as well as countryside extension of such programs as IMCI, Breast Feeding, Child Care and programs on child nutrition pre-tested in pilot regions;
− Upgrade of qualification of health workers involved in child delivery and provision of care to newborns at all levels of obstetric care delivery;
− Improvement of mechanisms that ensure reliability and timeliness of registration of birth, health status and death of children under 5. Shift from punishment measures for high child mortality rates to provision of targeted (related to causes of deaths) methodic, practical and financial assistance focused on reduction of this rate;
− Development of information-analytical system that allows monitoring and analysis of causes of child mortality and efficiency of implemented activities;
− Involvement of family and society into problems related to child health protection on the basis of initiatives and increased awareness.

MDG 5: Improvement of motherhood protection

Target 6: Reduce maternal mortality rate by three forth by 2015

With a view of reduction of maternal mortality rate it is planned to introduce drug and non-drug interventions efficiency of which is proved by the world practice, expand scope of antenatal services at primary care level, increase qualification of health staff of obstetric institutions and disseminate effective
programs countrywide. The most effective activities include:

- Increase motivation of pregnant women in receiving a complete complex of antenatal services (early registration for pregnancy, timely provision of health services in accordance with clinical protocols);
- Include mandatory ultra-sound examination for pregnant women for detection of congenital malformations of fetus organs and system, regular measuring of arterial blood pressure, height and weight, screening of urine for bacteriuria, protein and iodine and screening for anemia into the scope of antenatal health services provided to women in the context of State-Guaranteed Benefit Package; supplement women with pregnancy under 12 weeks with folic acid;
- Optimize complex of (i) intranatal services (delivery attended by trained health worker, protection of fetus, early detection, clinical management and re-referral in case of complications, antibiotic therapy in case of premature discharge of amniotic fluids, antenatal use of steroids for prevention of premature delivery and resuscitation of newborns) and (ii) postnatal nursing (attendance, encouragement of breast feeding, rational feeding up, thermal hygienic conditions, resuscitation of newborns, antibiotics for infections, anti-tetanus serum for home deliveries, early diagnostic of diseases and proper child care, timely and high-quality immune-prophylaxis in the context of National immunization schedule and supplementation of newborns and puerperant women with vitamin A during the first 8 weeks after delivery);
- Expand qualification of health workers at primary care level concerning the issues of family planning, management of pregnant women, timely recognition of complications and re-referral; health workers at secondary care level – on management of delivery and delivery of emergency care on the basis of evidence-based principles; and health workers at tertiary care level – on provision of methodic and consultative assistance;
- Increase population awareness about the issues of family planning, reproductive choice and safe motherhood.

MDG 6. Fight with HIV/AIDS, malaria and other diseases

Target 7: Stop dissemination of HIV/AIDS and initiate reduction in incidence rate by 2015

Taking into account the fact that recent years were marked with increased frequency of sexual transmission of HIV along with intravenous transmission of HIV infection, it is planned to undertake targeted activities on increase of awareness of population and target groups on measures of prevention and implement programs on reduction of sexual and intravenous transmission of HIV/AIDS among high risk groups. In this connection it is planned to implement the following inter-sectoral activities:

- Ensuring safety of medical procedures;
- Reduction of HIV/AIDS transmission among intravenous drug users including in penitentiary system institutions (expansion of units on needle exchange for drug users, free dissemination of condoms among groups of drug users, extension of programs on drug-replacement methadone therapy);
- Provision of health care for STIs including in penitentiary system institutions;
- Further realization of information-educational programs on prevention of HIV/AIDS/STIs and drug addiction on the basis of sector-wide approach;
- Ensuring medical and social support to people that have HIV/AIDS and people that suffered from HIV/AIDS;
- Efficient coordination of international projects and programs working on HIV/AIDS prevention.

Target 8: Stop dissemination of malaria and other infectious diseases

Target 8a: Stop dissemination of TB by 2015 and initiate downward trend of incidence rate

Further implementation of DOTS and PAL strategies everywhere in the Kyrgyz Republic and synergism of these programs will contribute to the achievement of MDG on reduction of TB incidence rate:

- Improvement of detection rate of TB patients based on implementation of strategy on practical approach to lung health (PAL) countrywide with further integration of anti-TB service into general medical network, training of health staff (diagnostics, treatment and prevention of respiratory diseases and TB), improvement of supply of health organizations with basic
equipment for adequate management of respiratory diseases, development of referral system for patients with respiratory diseases and TB (criteria of referral, re-referral and feedback at different levels of health care);

− Introduction of DOTS in penitentiary system, improvement of material and technical base, development of mechanisms of rehabilitation of TB patients before release from places of detention and improvement of interaction with civil health care network;

− Phased implementation of DOTS+ for multi-drug resistant TB;

− Provision of all TB patients including extra-pulmonary TB with anti-TB drugs;

− Implementation of preventive activities and explanatory work with population aimed at enhancement of rate care seeking in case of respiratory diseases;

− Creation of immune layer among children population;

− Monitoring and coordination of all services of health care including extra-departmental services on TB issues.

Target 8b: Stop dissemination of brucellosis by 2015 and initiate downward trend of incidence rate

Changed structure of husbandry/agriculture with organization of small stock-farms and poor veterinary service resulted in drastic increase on brucellosis incidence rate. Largest danger is posed by involvement of young people in work at the period when cattle gives birth without compliance to safety conditions. In 2004, slight reduction in brucellosis incidence rate was registered as a result of implemented activities. However, this rate still remains very high and requires implementation of efficient inter-sectoral activities and explanatory work with population. In this relation it is planned to:

− Strengthen inter-sectoral collaboration with Ministry of Agriculture, Water Industry and Processing Industry on the issues of universal vaccination of small cattle stock with vaccines, efficiency of which is proved by corresponding evidence-based methods;

− Enhance responsibility of livestock owners for timely vaccination of animals;

− Strengthen information-explanatory work with population on prevention of brucellosis;

− Introduction of effective methods of treatment on the basis of evidence-based medicine.

Target 8c: (for ECA regions) Reduce CVD mortality rate to European Union level by 2015

Growth of mortality rate from cardio-vascular diseases especially in young age people able to work and premature loss of ability to work cause significant economic damage both to families as well as economy of the country. Implementation of active preventive activity at population level, introduction of modern efficient technologies of prevention, diagnostics, treatment and rehabilitation of patients with the most wide-spread and socially significant diseases of cardio-vascular system will contribute to reduction of mortality rate from cardio-vascular diseases among young people able to work, improvement of quality of life of patients with cerebrovascular conditions and minimization of their development. In this relation the following activities are planned for implementation:

− Implementation of active preventive work with population aimed at formation of healthy lifestyle, prevention of cardio-vascular diseases and reduction of risk factors of their development (activities on early detection of cardio-vascular diseases and their risk factors on the basis of population screening; identification and introduction of tactics of curative and preventive interventions depending on family gradation: healthy, relatively healthy, with availability of risk factors, with detected cardio-vascular diseases and risk factors, with complicated disease course; development and introduction of educational programs on activities of prevention of cardio-vascular diseases aimed at reduction of risk factors);

− Publication in general circulation of popular brochures for population on measures of control and prevention of cardio-vascular diseases;

− Rendering assistance to creation of outpatient “Clubs of arterial hypertension”, “Coronary-lipid clubs” and others locally for training of patients and their family members;

− Development and introduction of modern efficient technologies of prevention, diagnostics, treatment and rehabilitation of patients with most wide-spread and socially significant cardiovascular diseases;
− Improvement of training of medical staff, first of all, for primary health care in the area of cardiology and prevention of cardio-vascular diseases (development and introduction of addressed continuous training programs on primary and secondary prevention of socially significant CVDs, introduction of methods of distant learning for health workers);
− Strengthening of material and technical base, provision of cardiology health facilities with modern medical and laboratory equipment.

5.4. Promotion of health policy

It is possible to protect interests of the society through involvement of politicians, representatives of state governance, local governments, non-governmental and community based organizations into solving of problems related to health promotion and health protection.

To promote health policy at the highest governmental and inter-sectoral levels it is required to ensure constant provision of information to stakeholders on changes occurring in health sector, their involvement into solution of problematic issues and support at the highest governmental level. This will also help to improve understanding and support of reform processes by the government, parliament, health workers and population.

In this connection it is planned to:

− Conduct regular round table meetings with health specialists to discuss burning issues of health care and sector reform implementation process, and, in necessary, introduce corrections to reform process with involvement of politicians, representatives of the government, local governments and administrations, NGOs and public;
− Conduct regular public hearings focused on health reform with broad involvement of representatives of all branches of power and civil society;
− Publish and discuss summary reports on health sector performance with inclusion of key indicators that allow for assessment of performance efficiency of health sector, reform implementation process and interventions oriented at achievement of MDGs;
− Improve work of MOH Press-Center and ensure regular mass media coverage of the health reform process, publication of materials of patient rights, access to health care services in the context of SGBP and issues related to changing stereotypes in formation of healthy life style and health culture;
− Increase efficiency of work of coordination councils and boards in the area of health care.

5.5. Ensuring transparency of purchasing process in health sector

In the context of lack of financial resources required for adequate functioning of health sector, significant role belongs to balance of government obligations and financial provision of them as well as efficient management of system of purchasing of both health services and goods and services that ensure sustainable functioning of health sector.

Previously, health reform projects used to be realized through project implementation units of corresponding international institutes. Since further health reform is planned to be implemented on the basis of sector-wide approach (SWAp) and clear separation of political and regulatory functions from service delivery functions, thus purchasing will be done through corresponding structures of the Ministry of Health. This will require strengthening of MOH potential in the area of financial management and procurement.

Transparency of purchasing process will be ensured on the basis of publicity and improvement of mechanisms of tender procedures, equitable and equal participation of all providers of goods and services for health sector in competitive bidding, public control over bidding procedures, introduction of mechanisms of corporative management and improvement of distribution processes both at central level as well as the level of providers of health care services.

In this relation, it is planned to:

− Improve system of purchasing of health care services through introduction of unified rules of payment for health services and shift to strategic purchasing which entails analysis of structure, scope and types of service with consideration of population needs;
• Improve system of purchasing of goods and services for health sectors on the basis of recommendations derived from fiduciary analysis done by WB;

• Change procurement procedure through operative division of purchasing process and ensuring objectiveness at the stage of assessment of tender applications by introducing coding of providers of goods and services;

• Bring system of financial management of the Ministry of Health into compliance with international standards, strengthen potential of financial-economic workers of MOH, improve system of registration and reporting and develop functions of financial projection and analysis as well as fund-raising.
6. Key factors of success/risks

There are objective and subjective factors influencing the success of further implementation of health reform. It is important to undertake certain actions and measures to ensure minimization of risks and successful realization of strategies in the context of “Manas Taalimi” program (Tab. 4).

<table>
<thead>
<tr>
<th>Critical success factors and key risks</th>
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<tbody>
<tr>
<td>1. Stable political environment, political support at the highest governmental level and from Jogorku Kenesh of the KR, favorable legal ground</td>
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<tr>
<td>What needs to be done to minimize risk/raise and secure success</td>
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<td>Policy dialog, conduct of Round Table meetings, public hearings, broad coverage of strategy and health reform process by mass media, annual summits with participations of donors</td>
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<td>2. Adequate and sustainable public funding allocated for health sector as priority sector contributing to poverty reduction and sustainable economic growth</td>
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<tr>
<td>Mid-term budget framework (MTBF) reflecting priorities of public financial policy</td>
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<td>Approval of annual budget in compliance with MTBF</td>
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<td>Improved budget execution (by level and timeliness)</td>
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<td>Refuse sequestering practice as control mechanism of public expenditures</td>
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<td>3. Efficient work of Ministry of Health focused on development of policy on health protection and health promotion and evidence-based decision making</td>
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<tr>
<td>Rationalization and optimization of MOH structure aimed at proper execution of key functions</td>
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<td>Enhancement of MOH potential</td>
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<td>Improvement of motivation system</td>
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<td>4. Willingness of other ministries and agencies, local public authorities and local governments to collaborate with Ministry of Health and support health reform</td>
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<tr>
<td>Development of sustainable links with other ministries and agencies at policy-making and executing levels</td>
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<tr>
<td>Information exchange</td>
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<td>Mutually beneficial collaboration</td>
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<td>5. Understanding and support of health reforms by population, non-governmental organizations and communities, increased population interest in own health promotion and maintenance</td>
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<tr>
<td>Broad information campaign with use of various methods</td>
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<td>Development and introduction of various models of involving population and local communities</td>
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<td>6. Support and assistance from international donor organizations</td>
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<tr>
<td>Involvement of all donor organizations in all stages of development, implementation and monitoring of health reform</td>
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<tr>
<td>Improved coordination of donors and donor assistance</td>
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7. Monitoring and evaluation

This section describes main principles of monitoring and evaluation of implementation of National Health Care Reform Program “Manas Taalimi” for 2006 – 2010 oriented at analysis and assessment of impact of specific activities on operative decision making aimed at increase of strategy realization efficiency.

7.1. Monitoring structure

Conceptually, monitoring structure is based on collection of process indicators and outcome indicators that allow to observe history of realization of the four objectives of “Manas Taalimi” National Program (section 3.2.). These objectives in aggregate contribute to achievement of the main goal which is improvement of population health status.

Monitoring (Fig. 41) will be based on indicators reflecting (i) progress on implementation of strategies presented in reform plan (section 4) and allowing for analysis of process of strategies implementation at the initial stage, implementation stage and outputs on the basis of process indicators (inputs, process, outputs); (ii) achievement of goals identified by “Manas Taalimi” National Program (section 3.2.) based on outcome indicators. Indicators will reflect the following changes:

1. population health status;
2. equity and access to health care services;
3. population protection from financial burden;
4. efficiency of health service delivery;
5. quality of health care services;
6. responsiveness/transparency of health system

Fig. 41. Monitoring structure

The most important global indicators related to both process indicators and outcome indicators will be separated individually and called dashboard indicators. They will help the politicians to assess overall situation related to health care and make proper decisions.

7.2. Dashboard

A. Main indicators of human development and Millennium Development Goals

All indicators will reflect average values for the country and by regions based on gender break-down and rural-urban break-down.

- Average life expectancy;
- Population growth rate;
• Under 5 child mortality rate
• Infant mortality rate.
• Maternal mortality rate
• TB morbidity and mortality rates;
• HIV/AIDS incidence and mortality rates;
• CVD mortality rate in 30-39 and 40-59 age groups.

B. Accessibility and Equity of Health Services
• Share of population that didn’t seek necessary health care due to lack of money and remoteness of health care facility.
• Number of visits to FGP doctors per 1 citizen.
• Share of FGP located in rural area, where a doctor serves more than 2000 people.
• Hospital admission level per 1000 people
• Number of villages with FGP, but without pharmacy, involved into Additional MHI Benefit Package.
• Number of served ambulance calls per 1000 people.

C. Protection of population from financial burden
• Health expenses of people the poorest quintiles as a share of total household expenses
• Ratio of co-payment level to average monthly salary size.
• Deviation of health expenses distribution per 1 insured citizen across the regions from the mean value for the Republic.

D. Effectiveness of health service delivery system
• Share of direct expenses on patient (drugs, food) in total hospital costs;
• Share of primary care expenses in total health sector spending.

E. Quality of health services
• Share of delivered women who received the entire package of antenatal services
• % of women admitted for delivery with anemia
• Vaccination level (diphtheria, whooping-cough, tetanus, measles, hepatitis B, poliomyelitis, rubella, epidemic parotitidis) in children of the first life year

F. Responsiveness/ transparency of health system
• Level of patients’ informal out-of-pocket payments for hospital care
• Level of population awareness on patients’ rights when receiving health services under State-Guaranteed Benefit Package.
• Patients’ satisfaction with quality of treatment

G. Health Financing. Indicators will include the dynamic of public spending on health.
• Public health expenditures share within the structure of public spending on health
• Budget execution per sources of financing

List of indicators, included into the management model maybe added or modified in the process of “Manas Taalimi” Program Implementation.

7.3. Collection of data for monitoring and evaluation
Indicators developed by the Ministry of Health together with Health Policy Analysis Project (WHO/DFID) during implementation of Health-2 project funded by the World Bank will be taken as the basis for development of new indicators.
Indicators will be based on health-statistical data collected by Republican Health-Information Center under the Ministry of Health. Indicators on health financing will be based on existing databases and financial reporting of MHIF and MOH including data on external financial assistance.

7.4. Evaluation

Analysis and evaluation of indicators will be done by Health Care Development Center which will include institutionalized work of Health Policy Analysis Project (WHO/DFID). Data generalized from previous year will be provided to the Ministry of Health, the Government and Jogorku Kenesh of the Kyrgyz Republic as well as to donors during Health Summit.

Assessment of impact of reform on population will require implementation of studies most of which can be included as individual health module in household survey executed by National Statistical Committee once in two years.

Additional evaluation studies of “Manas Taalimi” National Program implementation may be undertaken in the process of health reform and topics for these studies will be identified in health summits.
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