

**STATE PROGRAMME F"DENSAULYK" FOR HEALTH CARE SYSTEM
DEVELOPMENT IN REPUBLIC OF KAZAKHSTAN 2016 - 2019**

**Approved
by the President of Republic of Kazakhstan
Decree #176
January 15, 2016**

Name of program	STATE Programme "Densaulyk" for Health Care System Development in Republic of Kazakhstan 2016 - 2019 (further ó Programme)
Reasons for development	The Decree of the President of the Republic of Kazakhstan dated February 1, 2010 922 "On the Strategic Development Plan of the Republic of Kazakhstan till 2020"; Message from the President of the Republic of Kazakhstan Nazarbayev NA the people of Kazakhstan of December 14, 2012 "Strategy" Kazakhstan-2050 ": a new policy established state"; Message from the President of the Republic of Kazakhstan Nazarbayev N.A. the people of Kazakhstan from November 11, 2014 "NurlyZhol - Path to the Future"; National Plan of the President of the Republic of Kazakhstan Nazarbayev N.A. Plan "100 concrete steps to implement the five institutional reforms"
State agency responsible for the development of the Program	The Ministry of Health and Social Development of the Republic of Kazakhstan
Government agencies responsible for the implementation of the Program	The Ministry of Health and Social Development of the Republic of Kazakhstan, the Ministry of Internal Affairs of the Republic of Kazakhstan, the Ministry of Culture and Sports of the Republic of Kazakhstan, Ministry of National Economy of the Republic of Kazakhstan, the Ministry of Defence of the Republic of Kazakhstan, the Ministry of Education and Science of the Republic of Kazakhstan, the Ministry of Investment and Development of the Republic of Kazakhstan, the Ministry of Agriculture of the Republic of Kazakhstan, the Ministry of Finance of the Republic of Kazakhstan, the Ministry of energy of the Republic of Kazakhstan, the Ministry of Justice of the Republic of Kazakhstan, akimats (city halls/local governments) of Astana and Almaty, other regions/oblasts/districts
The purpose of the Program	Strengthening of people health to ensure sustainable socio-economic development of the country
Objectives of the Program	The development of the public health system; the improvement of the prevention and management
Terms of realization	2016-2019 years

The target indicator	By 2020, the level of life expectancy will reach 73 years
Source and funding	For the implementation of the Program in 2016-2019 the state budget funds and Fund of compulsory social health insurance will be sent, as well as other means not prohibited by the legislation of the Republic of Kazakhstan. The total spending of the state budget for implementation of the program will amount to 1,969,729,500 thousand tenge.(1\$=337 tg)

Funding for the program will be updated with the approval of the republican and local budgets for the relevant financial years in accordance with the legislation of the Republic of Kazakhstan and on the basis of the possibility of a profitable part of the republican and local budgets, Fund of compulsory social health insurance, as well as involving other alternative sources.

1. Analysis of the current situation

According to the report of the Global Competitiveness Index (hereinafter - GCI) for 2015-2016, Kazakhstan took the 42nd place in the ranking among 140 countries, rising to 8 seats compared with the results of last year's rating. According to the indicator "Health and primary education" Kazakhstan ranked 93rd out of 140 countries. According to the Human Development Index in 2014, the republic joined the group of countries with high levels of development, taking 70th place out of 187 countries.

Reducing maternal, infant and child mortality to validate the interdepartmental group of United Nations agencies (hereinafter - the UN) has allowed Kazakhstan to reach the fourth and fifth (child and maternal mortality), the Millennium Development Goals.

Out of the total deaths are the leading cause of cardiovascular disease (22.3%), the most frequent - ischemic heart disease, vascular brain damage, which kills about 30,000 people annually. The growth of the primary disease of the circulatory system diseases accounts for nearly 15% (2010 - 2086.7 per 100 thousand population, 2014 -. 2394.7).

The second reason is the death rate from malignant neoplasms (12.1%), from which about 17 thousand people die each year, of which 16.9% of lung cancer. The incidence of malignant neoplasms increased by 9.7% (in 2010 - 181.2 per 100 thousand population, 2014 -. 198.7).

In third place - the death rate from accidents, injuries and poisoning (11.3%), which kills about 16,000 people annually. Every year more than 3,000 people die from intentional self-harm, surpassing deaths from road traffic accidents (hereinafter - RTA).

Among the causes of the burden of chronic diseases in 87.5% are 4 risk factors

(High blood pressure, high cholesterol, smoking and alcohol consumption).

A stable majority of the epidemiological situation of infectious diseases. There has been 95% immunization coverage against vaccine-preventable diseases in all 11 to be the child population. In 2012, WHO recertified Kazakhstan a country free of polio and malaria.

The efforts helped contain the HIV epidemic in the Republic of Kazakhstan at the concentrated stage. The GIC in terms of "HIV prevalence in the 15-49 age group" Kazakhstan has entered the group of countries with low, occupying the 1st place.

Despite the significant reduction in morbidity and mortality from tuberculosis (incidence reduction of more than 9% annually, mortality - more than 2 times in 5 years), according to the 2014 Kazakhstan among the 18 European countries of the region with high prevalence of tuberculosis is 7th place on the level of primary resistant tuberculosis - second, and in the GIC on the prevalence of tuberculosis - 102 th place.

The sanitary-epidemiological service introduced a system of forecasting, risk assessment and management, organized 5 zonal virologic laboratories, set up specialized laboratories for monitoring food safety, meeting the requirements of the World Trade Organization, in the immunization schedule included vaccination of children against pneumococcal disease.

Health and health care system

The following measures have been taken in order to strengthen the preventive orientation in primary care:

- 1) in 2011 introduced the National screening program for 11 types of diseases;
- 2) an institute of social workers (2014 - 1.2 per 10 000 population);
- 3) increase in the number of general practitioners (hereinafter - GP) 30%;
- 4) in 2014 introduced aintegrated capitation index(hereinafter - ICI), the financing of primary health care (hereinafter - PHC) in the total amount of funding the guaranteed volume of free medical care (hereinafter - GVPMC) increased to 28% (2010 - 23, 4%), as a result of the level of financing of PHC aligned between the regions with the increase in the tariff per 1 inhabitant (from 169 to 486 tenge).

Thanks to the measures marked slowdown in demand for inpatient services, more differentiated referral of patients for further examination and consultation.

However, primary care a priority in terms of funding is not achieved. The amount of funding primary health care per 1 inhabitant amounted to US \$ 95 Kazakhstan, Estonia - 231, Slovenia - 369, OECD - 558. There is a slow pace of transition PHC organizations on the principle of family medicine. Not fully provided the motivation for the formation of GP services. No economic incentive mechanisms developed state of health of the population control attached at the level of primary health care, is insufficient work to inform the population about the new model with wider competences and functional GPs.

Integration of primary care and specialized vertical services (tuberculosis, cancer, HIV / AIDS, and others.) is also insufficient. Issues to be addressed to improve the continuity between outpatient, hospital level and ambulance service.Saved overconsumption consultative and diagnostic services. It is not enough used for these purposes, the potential of hospitals, which causes dissatisfaction of the population in the availability and quality of medical services.

Public health organizations have expanded autonomy status by going to the organizations on the right of business (hereinafter - ORB) from the Supervisory Board. Introduced new payment methods, focused on the end result in the outpatient and inpatient sectors in oncological service and medical organizations of the village - the global budget.

In the health care system with all the departments currently employs more than 68,800 doctors (2014 - 39.5 per 10 thousand population, OECD - 42.0), and more than 160 thousand nurses (2014 - 91.9 per 10 thousand population), including, without accounting departments 124 900 (71.7 per 10 thousand population, OECD - 91 to 10 thousand people)..

In the structure of the share of medical staff physicians with qualification category amounted to 46.5%, while the share of the urban doctors categorized above personnel than rural (city - 48.0%, the village - 39.3%).

The proportion of doctors close to retirement and retirement age was 22.7%, which is most pronounced in rural areas.

At the same time in Kazakhstan there is an imbalance in staffing between levels of care (primary health care at the level of the deficit and the village, the surplus - at the hospital level). On average, 1 physician PHC serves about 2,200 people attached, whereas in the OECD load on it is significantly lower countries - less than 1,500 people. There is a lack of nurses at PHC level (1.1 nurses per 1 GP at the optimum ratio 2-3).

Despite the introduction of a stimulated component of integrated capitation index (ICI), the ratio of the average wage in Kazakhstan GP to the average wage in the economy was 1.0. The indicator in the UK - 1.9; Turkey - 2.0; Slovenia - 2.5; Hungary - 1.4; Estonia - 1.7.

In order to ensure the quality of medical education in 2012 in the Republic of Kazakhstan introduced the procedure of accreditation of educational organizations (institutional accreditation) and education programs (specialized accreditation), an independent examination is graduates. Institutional accreditation thus far received 6 medical schools began to take the procedure of accreditation of medical colleges. Since 2014 began a specialized accreditation of higher education programs.

Continue to be relevant issues of low competitiveness of research and their practical significance unsatisfactory, insufficient funding of applied research in the field of health research and the shortage of personnel with advanced degrees (more than 650 professionals).

Equipped medical institutions with medical equipment increased by 25.5% (2010 - 43.2%, 2014 - 67%): rural - 72.6%, urban - 74.1%. Started implementation of financial leasing for medical technology mechanisms.

However, there are facts idle and inefficient use of medical technology, equipment standards are not developed based on evidence-based medicine is not resolved questions after-sales service.

In order to create an information structure of the Republic of Kazakhstan of Health continues the health care industry informatization, developed and implemented a Web application on relevant areas (registers of socially significant diseases, the Bureau of hospitalization portal for HR and others.).

Independent experts of the International Bank for Reconstruction and Development in December 2014 published a report on the implementation of the State Program "Salamatty Kazakhstan", according to which the implementation of the 6 major areas evaluated by international experts as follows:

- 1) 1st line "Improving the efficiency of inter-sectoral and inter-institution cooperation on the protection of public health" - a very successful;
- 2) 2nd direction "Strengthening of preventive measures, screening, diagnosis, improvement, treatment and rehabilitation of basic socially significant diseases and injuries" - a fairly successful;
- 3) The third direction "Improvement of sanitary-epidemiological service" - a fairly successful;
- 4) 4th line "Improving the organization, management and financing of health care in the Unified National Health System" - a very successful;
- 5) The 5th direction "Improvement of medical, pharmaceutical education, development and introduction of innovative technologies in medicine" - successful;
- 6) 6th line "Improving the availability and quality of medicines for the population, improvement of medical technology healthcare organizations equip" - successful.

SWOT-analysis of health system

Strengths:

- 1) the political support of the state at the highest level and guarantee fulfillment of social obligations undertaken;
- 2) stable epidemiological situation of the majority of infectious diseases with a high coverage of childhood immunization;
- 3) an effective system of sanitary protection of the borders of the introduction and spread of dangerous infectious diseases and dangerous goods;
- 4) infrastructure organizations providing medical care;
- 5) The successful experience of modern medical technology transfer;
- 6) implementation of quality management systems of medical care on the basis of standardization and accreditation;
- 7) tariff modern health financing system;
- 8) creation of conditions for development of domestic manufacturers of drugs, medical devices and medical equipment.

Weaknesses:

- 1) low life expectancy, high levels of total mortality compared to the average level of OECD countries;
- 2) the low level of health care financing;
- 3) high level of private expenditure on health;
- 4) Inadequate funding primary health care;
- 5) old health system infrastructure;
- 6) lack of logistical support agencies and organizations of sanitary-epidemiological service;
- 7) low level of informatization in the industry;
- 8) lack of shared responsibility for the health of the mechanisms;
- 9) lack of private sector participation in the provision of the guaranteed volume of free medical care (GVFMC);
- 10) lack of quality training of undergraduate and postgraduate education;
- 11) the low level of management in the health care system;
- 12) low labor motivation of health personnel;
- 13) lack of provision of medicines on an outpatient basis.

Opportunities:

- 1) The positive dynamics of the basic demographic indicators;
- 2) the creation of a single market within the framework of the Eurasian Economic Space;
- 3) attraction of direct investments (including foreign) in the health and development of public-private partnerships;
- 4) the localization of the production of medicines, medical devices and medical equipment;
- 5) the introduction of social health insurance based on the introduction of market mechanisms (to create a single payer, introduced modern payment methods on the basis of the final result);
- 6) support of international financial institutions;
- 7) improving the competitiveness of the regional health care market;
- 8) transfer of technology, knowledge and best practices through intensive cooperation with international partners.

Threats:

- 1) further deterioration of the global and regional economic situation;
- 2) the emergence of new and return previously known infectious diseases;

- 3) the existence of natural foci of especially dangerous infections in the country;
- 4) the growth of non-communicable diseases;
- 5) the increase in demand for medical services;
- 6) increase in imports of medical goods and services;
- 7) the growing public and private health care costs;
- 8) obsolete inefficient management technology;
- 9) wear faster and aging infrastructure and medical equipment;
- 10) development and inefficient use of human resources industry;
- 11) increase the frustration and dissatisfaction of the population quality and access to care.

The main directions, achieving goals and appropriate measures

The main areas of this program are:

- 1) the development of public health as the basis for the protection of people health;
- 2) the integration of all health services around the needs of the population on the basis of modernization and priority development of primary health care;
- 3) ensuring the quality of medical services;
- 4) implementation of the National Policy of drug supply;
- 5) improving the health care system through the introduction of solidarity and enhance its financial sustainability;
- 6) improving human resource management in the health care industry;
- 7) To ensure further development of infrastructure based on the health of public-private partnerships, and modern information and communication technologies.

The development of public health protection as a basis the prevention of people health

Formation of the public health service (PHS)

Strengthening and protection of public health requires not only the development of appropriate strategies and mobilization of resources in various spheres of life, but also the creation of a stable and effective framework for the integration of activities of the state, the community and the population in this area. In accordance with international best practice basis for the further development of the health care system will be the formation of the public health service (PHS).

The main activities of PHS will be the management of public health, changes in the direction of health and behavioral patterns of the population through education, counseling, advocacy,

promotion of a healthy lifestyle based on interagency cooperation Primary health care (PHC) with the interested state bodies (sanitary-epidemiological, ecological, veterinary services).

The main functions of the PHS will:

- 1) Increasing public awareness and involvement in activities to prevent and reduce the harmful effects of various environmental factors, unhealthy eating habits and risk behaviors;
- 2) provision of epidemiological monitoring of infectious and major non-communicable diseases (NCDs), including mental health and injuries;
- 3) the provision, coordination and expansion of inter-sectorial collaboration aimed at protecting and promoting the health of the population;
- 4) ensure the monitoring of compliance with laws and other legal norms in the field of health;
- 5) implementation of international systems of long-term modeling and prediction of disease development at the regional and national levels.

PHS activities will be closely integrated with the provision of health care to the population, especially in primary care, specialized research organizations and programs.

At the national level will be carried out epidemiological monitoring of risk factors function of communicable and non-communicable diseases (NCDs), as well as:

- 1) development and implementation of public policies and cross-sectoral programs for the development of public health;
- 2) research in the field of public health, including measures to promote healthy lifestyles;
- 3) monitoring the health status for the establishment of public health problems and predict their dynamics;
- 4) evaluation of the effectiveness, accessibility and quality of services and public health programs.

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Within the framework of PHS at the local level will be provided by the development, planning, implementation and monitoring of measures for the prevention of communicable and non-communicable diseases, including screening and clinical examination together with PHC.

One of the key objectives of PHS at the local level will increase informed public responsibility for their health, based on the rationalization of supply and encouraging a healthy lifestyle, the development of health and physical education. This will be achieved activities to inform and educate citizens, their empowerment in the promotion of personal health, public health, the promotion of good nutrition.

To this end, the PHS will be introduced innovative social marketing techniques on the basis of evidence-based research in the field of behavioral psychology and economics, with the active involvement of traditional media and modern social media resources and networks.

The priority will be the SPHs activation measures for the prevention and monitoring of the main socially important non-communicable diseases (NCDs).

At the same time, the fight against NCDs will be based on international proven technologies in accordance with the Global Action Plan for NCDs prevention and control for 2013-2020, the WHO Framework Convention and the European Strategy for Tobacco Control, WHO Action Plan for Food and power to the 2015-2020 years concept of providing healthy school nutrition, enhanced promotion of the consumption of healthy foods (fresh and eco-friendly, low in fat, salt, sugar) will be developed. It will be carried out continuous monitoring and supervision of the risk factors, reduce occupational, environmental and social risks.

Particular attention will be paid to the prevention of infectious diseases through the organization and coordination of all work on the immunization of children and adult population in the country in line with WHO recommendations.

This direction is possible if PHS interaction with the authorized body in the field of sanitary and epidemiological welfare of the population.

In the medium term the public health system will be the basis for inter-sectoral collaboration for protecting and promoting public health. To this end, the division of responsibilities in the field of public health authorities together with the interested state bodies will be carried out. As a result, in the Ministry of Health and Social Development of the RK and the health departments of Astana and Almaty cities, and regions, structural units will be formed to engage the implementation of public health policies that will contribute strengthening of public health for sustainable social and economic development of the country.

The development of inter-sectoral cooperation

In accordance with international standards, cross-sectoral cooperation of various state and public institutions should be aimed at reducing risk factors for infectious and non-communicable diseases, and provide comprehensive measures aimed at :

1. raising the education level of the population, including knowledge of healthy lifestyle ;

2. the formation of new behaviors that reduce the prevalence of risk factors (smoking, alcohol abuse, low physical activity) ;
3. healthy balanced diet ;
4. increase the number of regular physical training and sports ;
5. reduction of road accidents ;
6. creating a safe working and living conditions ;
7. providing safe housing conditions
8. providing people with disabilities equal access to health services ;
9. ensuring sustainable access to safe drinking water, reducing air pollution, water and soil pollution, noise reduction, based on monitoring data of their effect on the population incidence.

Protecting and promoting human health will focus on preventive measures to reduce external and behavioral risk factors of diseases and their consequences, taking into account age and social characteristics of a person that will start from the first days of life, and will be continued in all age periods. Measures will be taken for the maintenance of healthy aging, to preserve labor activity, the redistribution of work over a lifetime, and social support.

As a part of inter-sectoral collaboration development, a coherent policy of protection and promotion of public health at all levels will be conducted, including the integration of goals and objectives of this program with other government and industry programs, strategic plans of development of the regions and industries.

Effective methods of planning, financing, mechanisms of interaction with the population, organized groups, educational institutions will be introduced to solve the problems, the system of ministries responsibilities will be formed for health indicators of activity, integration of social services, primary health care and social protection.

As a part of collaboration with other sectors and departments unified management of risk factors will be created, affecting health population; area of responsibility of each ministry for the indicators on the health activities will be defined.

In addition, in conjunction with local authorities, comprehensive measures for social mobilization developed and implemented, involving the introduction of mechanisms for interaction with the population, especially young people, organized groups, educational institutions for the implementation of health promotion programs; measures taken for the transfer of School's health faculty of the education system in the health care system, will be conducted as well.

Priority in inter-sectoral cooperation will be the realization of complex measures for maternal and child health, including reducing child injuries, strengthening the mental and reproductive health of children and youth .

Measures focused at formation of physical and mental health of children and adolescents will be identified and implemented, including training parents and teachers to recognize signs of mental

instability, threatening suicidal behavior in children and adolescents, the tactics of further work with them with the assistance of social workers, specialized health services (TB, Drug, psychiatric) with representatives of the precinct Interior Ministry officials and other interested state bodies (psychologists and trainers on juvenile the Interior Ministry and others.).

Measures for accident prevention will be pursued through the provision of systematic prevention and information work with the population about road safety; improvement the level of compliance with rules and regulations in traffic, including the use of automated systems, commit violations of traffic rules, elimination of dangerous sections on roads. Further development of the system of emergency points on dangerous sections of the republic roads will be provided en-route.

Within inter-sectoral collaboration the implementation of comprehensive measures will be ensured, aimed at providing the public with comprehensive services of housing and communal services (providing permanent public access to potable water, sanitation systems, waste disposal, heating, power supply, etc.).

An active implementation of measures aimed at reducing the harmful effects of environmental factors on human health, will be continued, including air pollution, soil and natural water reservoirs. The map reflecting the impact of environmental risks to health of population, will be designed, with the future possibility of monitoring the health of the population by region.

In PHS together with PHC organizations and local authorities and employers, comprehensive approaches will be developed and implemented, protecting human health at workplace, fight against occupational diseases based on today's standards and advanced technology, improving the accessibility and care quality at the professional pathology.

One of the most important tasks of a cross-sectoral cooperation will be creation of conditions and fair opportunities for balanced diet, healthy and safe lifestyle, including the promotion of physical activity and sports, especially among the working population, through a broad involvement of employers, through the school system based on youth sports schools - the involvement of children and adolescents in physical culture and sports.

Recommendations will be developed and implemented, monitoring and quality and safety control of produced and imported food products, including counterfeit and genetically modified foods, will be conducted.

Within the interdepartmental work will be ensured the implementation of system of measures aimed at reducing the extent of emergencies, injuries, accidents and poisoning, violence and crime, including proper infrastructure planning, regulation and state control, control over alcohol products circulation and active counteraction to illegal circulation of narcotics.

The long-term objective of inter-sectoral collaboration is a gradual integration of public policy into health system, labor and social protection, based on common goals, objectives and performance indicators.

The integration of all health services around patient needs through the modernization and priority development of PHC

PHC will become a central link in the system of medical care to the population changing its interaction with the horizontal (outpatient) and vertical (psychiatric, drug treatment, TB, cancer and others) specialized services.

Medical care at PHC level will be expanded with the possibility of a phased increase of list of free medicaments for outpatient treatment.

The planned specialized care will depend on the needs of the people attached to the PHC, rehabilitation services and long-term care will be developed, including involvement of the private sector.

Further development of transport medicine will be carried out, including air sanitation, ambulance and telemedicine .

These listed measures will be based on effective management of the consumption of health care services .

The improvement and implementation of standards organizations, clinical protocols of medical care based on evidence-based medicine, scientific research, are still in progress.

Modernization and priority development of PHC

Further development of PHC envisages deepening of measures aimed at the development of a universal , integrated , socially oriented , affordable and quality health care at primary care .

The universality of primary health care will be provided through further transition to the family principle of service , which would include monitoring of human health throughout his life, taking into account the characteristics of the organism in each age period , with an emphasis on prevention.

Family principle requires preventive , diagnostic, therapeutic , rehabilitative and recreational activities , palliative care and home care based on the needs of each family .

Family principle of service will be carried out by physicians (general practitioner (GP), district doctors (general practitioner, a pediatrician) and multidisciplinary teams of specialists with the coordination by PHC doctors . With the growth of GPs and their competencies , they will gradually replace district doctors.

Of excellence centers (centers of best practices) will be created on the basis of the existing clinics / PHC.

Family Health complex measures will include family planning, disease prevention, treatment and rehabilitation of chronic diseases of female, male population and children.

The priority of the work of PHC will be the strengthening of maternal and child health. PHC will be the base level of regionalization of medical assistance programs for various diseases, including perinatal care. There will be measures of improving the organization of andrology services, improving the effectiveness of prevention and treatment of modern diseases of the male reproductive system.

Development of gerontological assistance will be continued .

In order to ensure continuity of medical care full integration of PHC with other levels of health services will be provided .

Thus, primary care professionals will coordinate the provision of health care at all levels of health care, including diagnostics and service specialists, the direction of the hospital, rehabilitation, palliative care and home care (routing). They will monitor the completeness and quality of service at all stages of care.

Also the forms of palliative care and home care will be improved, taking into consideration the needs of families by placing state orders for Non-Government Organization (NGO), in rehabilitation centers, day hospitals, home hospitals, establishment of centers, departments of palliative care, etc.

Further development of rehabilitation and restorative treatment in a day hospital will be continued. Close relationship of specialized services with PHC organizations will be carried out (psychiatric, drug treatment, TB, cancer and others.)

The work for improvement the respective standards of medical care will be continued to ensure its completeness and continuity. The integrated disease management program (IDMP), based on the diagnosis and treatment protocols at all levels and monitoring with the central coordinating role of primary health care workers, will be implemented.

For this IDMP for three diseases (hypertension, diabetes mellitus, chronic circulatory failure) will be introduced in all regions. This will improve the system of indicators in the mechanism of financial incentives for primary health care outcome. This will create incentives for the transfer of emphasis on early detection and treatment of diseases, reducing the incidence of complications and reduced hospital admissions level of effective medical and social rehabilitation .

Social orientation of primary care will be provided by integrating the work of primary health care, social protection and public health services, the active involvement of PHC professionals in the activities of the inter-sectoral cooperation on public health .

Accordingly, primary care would be considered as a primary health and social care, including the provision of integrated health and social services with the involvement of psychologists, social workers, nurses, paramedics, midwives and support staff. In cooperation with the social security authorities a social and psychological support and multiprofile patronage will be provided.

To ensure maximum service availability, PHC organizations network will be developed taking into account the demographic, geographic and infrastructural conditions in the regions. Preference will be given to small and compact forms of organizations, as close as possible to the places of public accommodation.

Following measures will be provided:

- 1) the gradual downsizing of patients on responsible territory of GPs ;

- 2) support for the creation of group and individual family practices;
- 3) improvement of primary health care equipment medical equipment as well as special vehicles;
- 4) the further development of mobile (transport) medicine, remote monitoring of patients *;
- 5) state support of private sector development, small and medium-sized enterprises in the system of primary health care;
- 6) the development of public-private partnership (hereinafter - PPP), primary health care network, the transfer state assets into trust management with the possibility of privatization on the condition of permanent preservation activity profile.

In order to improve the quality of PHC the measures will be taken to ensure and promote the full and free choice of the PHC organization and physician, including ensuring the simplicity and transparency of the attachment public to PHC.

In order to improve service quality, reduce queuing and congestion of personnel the PHC management will be improved and based on improvement of operational management, the establishment of regional and local call-centers, the introduction of Internet appointment, modern queue management technology.

Activities for the development of PHC personnel potential will be conducted, including optimization of job descriptions and qualification requirements for prioritization, effectiveness and attractiveness of PHC in the health system,

Training of GPs under the new state standards of higher education will lay the foundation for the formation of broad specialists which possessing modern knowledge, practical, communication skills and ability to work in a team. Theoretical and practical training of GPs on the prevention, diagnosis and treatment of childhood diseases will be enhanced.

As a part of PHC development, some functions such patients monitoring, management of chronic diseases and patient care at home will be gradually transferred to specially trained general nurses-practitioners.

Nurses training courses (NTC) will be conducted in consideration with priority, versatility and flexibility of PHC. It will require greater autonomy of nurses activities than in other health sectors. NTC standards will also be brought into line with the established professional standards .

To ensure the sustainable development of PHC, to improve its completeness and attractiveness, the motivational mechanisms will be improved to attract specialists; the list of drugs provided by the government for outpatient will be gradually expanded. Further development of key screening programs for early detection of diseases with the highest burden of the impact on public health, will be ensured, as well as continuous monitoring and evaluation of their effectiveness.

Modernization of medical education

The basis for continuing professional development of human resources for health systems will become the National Qualifications Framework. NQF formation needs :

- 1) improvements in selection and admission approaches at medical and pharmaceutical education organizations;
- 2) optimization of the list of medical and pharmaceutical professions; the review of the principles and mechanisms of human resources statistics formation for health in accordance with the European Directive on the recognition of qualifications;
- 3) development of professional standards in the field of public health, regulating the level of qualifications of graduates and active professionals with practical public health organizations, physicians' associations, scientific organizations;
- 4) implementation of educational programs of basic training of health workers based on an integrated model based on the competent approach and professional standards ;
- 5) improvement of residency programs in accordance with professional standards ;
- 6) development and implementation of standardized certification courses for each specialty and qualifications in accordance with professional standards, and through the introduction of international approaches (Maintenance of Certification procedure) ;
- 7) improvement of undergraduate and post-graduate pharmacy programs; it will increase the level of personnel qualification in the field of pharmaceutical production and quality control of medicinal products, including biologicals, and specialists in the field of pharmaceutical market regulation as well.

To assess the level of theoretical knowledge and practical skills of graduates, will be introduced a system of independent assessment of competence, based on professional standards and international best practice .

Further development of the medical and nursing education will include the trinity of - clinical practice, medical education and research activities, which will provide :

- 1) effective management of academic and industrial processes based on unity of the strategic goals and objectives ;
- 2) qualified medical education based on advanced theoretical knowledge and practical skills in real-world conditions at university clinics ;
- 3) sustained improvement of health care quality based on access to advanced technologies and scientific developments ;
- 4) extensive clinical and laboratory base for relevant scientific research with immediate transfer of results into practical health care ;
- 5) financial stability increase and efficiency of the system based on integration and sharing of resources .

For this purpose the concept of integrated academic medical centers (university hospitals) will be developed based on the functional (consortia) and organizational (holdings) combining scientific organizations, medical schools, hospitals and ambulatory organizations with full cycle of medical services and training. Creation of new clinical sites, and university hospitals will be

carried out in a strategic partnership with leading international universities and medical organizations. The practice of attracting leading foreign experts, managers, scientists and teachers in the academic process will be widely developed.

In addition, the best practice professionals will be motivated and involved into educational and research processes, and scientists and teachers will be able to practice and conduct clinical research. This will allow the efficient use of medical staff (a doctor, a teacher, a scholar - three in one), to provide a high material and professional staff motivation and form a model of scientific and pedagogical career development of medical staff, which is by far the best standard of professional development in global health.

The joint Kazakh- Finnish scientific and pedagogical magistracy for teachers of nursing will be introduced at universities and colleges of the Republic of Kazakhstan with the issue of Kazakhstan's Master of Nursing diploma and the University Master of Health diploma, JAMK (Finland).

Increase the capacity of medical and pharmaceutical universities managers and teachers will be available in the educational program of the Higher School of Education " Nazarbayev University" .

A prerequisite for further development of medical education will become its full computerization with the creation of online services, libraries, auditoriums, personal electronic accounts of students and faculty with a transparent and efficient control of knowledge and skills, unlimited expansion of educational and scientific information base. Will be introduced remote technology in the education system for specialists in the regions that are unable to be in the long-term local universities deployment, retraining and advanced training.

In order to improve medical education programs, a phased compulsory mastery of modern ethical standards and communication skills will be provided for students, as well as English language proficiency at sufficient level to obtain and maintain knowledge.

Nurses education will be conducted in consideration with priority, versatility and flexibility of PHC. It will require greater autonomy of nurses activities than in other health sectors. NTC standards will also be brought into line with the established professional standards .

The basis of improved governance in education will be measures aimed to increase the autonomy of medical schools, the development of publicóprivate partnership (PPP or 3P) with the construction and reconstruction of university infrastructure, implementation of best corporate governance principles .