

A.A.AKANOV, T.S.MEIMANALIEV, A.KUMAR
 S.D.Asfendiyarov Kazakh National medical university,
 School of Public health

DEVELOPMENT OF THERAPEUTIC SERVICE IN KAZAKHSTAN: SOCIALLY SIGNIFICANT DISEASES

Due to the extreme urgency of the problem of therapeutic service improvement and therapeutic diseases treatment worldwide, research is currently being conducted to develop effective medical and preventive programs, and preventive measures in case of chronic noninfectious diseases. According to the expert forecasts, no substantial reduction in the case rate of socially significant therapeutic pathologies should be expected in the Republic of Kazakhstan (RK) in years to come, on the contrary, the case rate trends to increase twice each 10 years.

Keywords: therapeutic service, therapeutic diseases, socially significant diseases

Introduction

A share of therapeutic diseases in the total morbidity patterns is 46,3% (48,2% in 2001). Over the last ten years, the highest mortality in the RK population mortality patterns was caused by therapeutic diseases (in 2007 - 635,0 cases per 100 000) and in its course it had a constant tendency to some increase while the total mortality rate in RK is 8,71 per 1000 population [1].

Therapeutic diseases rank first according to the mortality and disability level constituting an immediate problem not only for the public health system by reason of a high cost of treatment procedures, clinical course duration, and a high invalidization of the population, but also for the social & economic systems of the branch, as consequently labour resources decrease and are lost, social allocations increase, and there occurs loss of human labor resources and material labour resources.

The circulatory, respiratory and digestive diseases are the principal ones among all therapeutic diseases with respect to the population morbidity, mortality and invalidization rates [1,2]. Over the last 10 years, the total morbidity rate per 100000 population in view of the said diseases changed as follows: there was a slight decline in the respiratory diseases rate from 31050,3 in 2001 to 29840,1 in 2011, in the digestive diseases rate - from 10144,4 in 2001 to 9189,5 in 2011, and a multiple increase in the circulatory diseases rate from 2605,2 in 2001 to 11751,1 in 2011 (Figure 1).

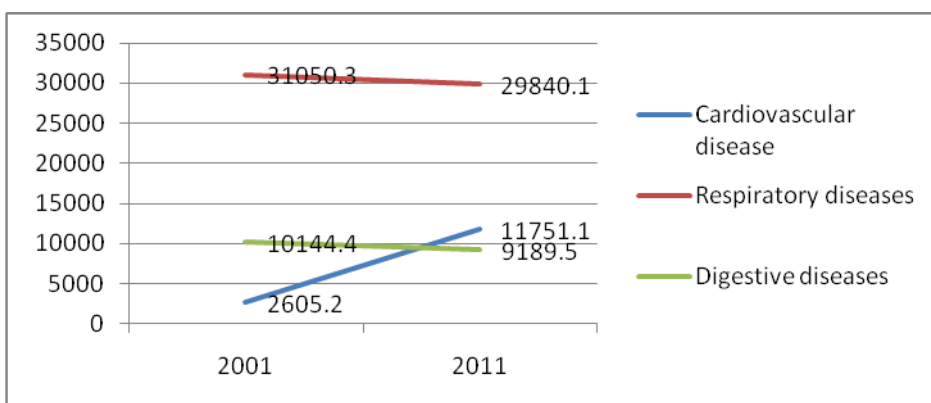


Figure 1 - RK population total morbidity (per 100 000 persons) as per therapeutic diseases classes (cardiovascular, respiratory and digestive diseases) over 2001-2011.

The Cardiovascular diseases rank first among the causes of disability and mortality of the population in the Republic of Kazakhstan, in which respect this problem is urgent and socially significant. Over the last 10 years, the total morbidity rate for the RK population suffering from circulatory diseases had a tendency to a steady increase. In general, the total number of patients suffering from circulatory diseases is currently over 10 % of the total population in the Republic of Kazakhstan.

The dynamics of the total morbidity rate from cardiovascular diseases in RK showed a steady increase over 2001-2011. The statistically average data on the total morbidity rate from circulatory diseases increased by 451% (or 4,5 times more). The total number of registered patients in RK by 2011 was 1 945822. Such increase might be connected not only with the enhancement of diagnostic possibilities of cardiological service by Regulation No. 102 of the RK Government «On approval of development program for cardiological and cardiac surgery service in the Republic of Kazakhstan for 2007-2009» dated February 13, 2007, but the actual increase in the «army» of cardiological patients. In turn, that may be indicative of insufficient efficiency of medical and preventive measures currently being taken [3,5].

The maximum increase among the principal nosologies of circulatory diseases was observed in relation to hypertension (Figure 2). Among the circulatory diseases, 63,6% was accounted for a share of hypertension and coronary disease over 2011. During 2001-2011, the rate was comparatively higher in rural areas of the Republic than in regions on the whole, that may indirectly testify that the real rates, especially as regards hypertension, were even higher in rural areas than in urban ones.

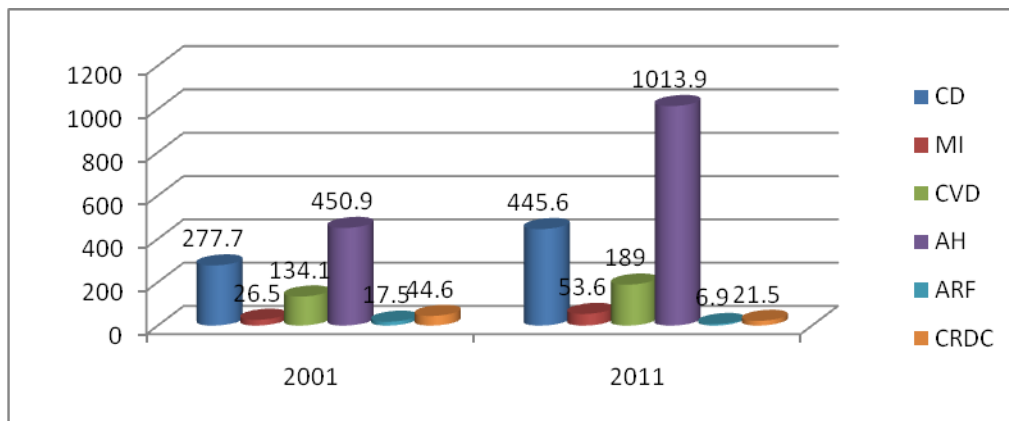


Figure 2 - Morbidity rates from the basic groups of circulatory diseases (Coronary Diseases, Myocardial Infarction, Cerebrovascular Disease, Arterial Hypertension, Acute Rheumatic Fever, Chronic Rheumatic Heart Disease) over 2001-2011.

The high rates of the total morbidity from circulatory diseases still remain due to more patients in urban areas of the Republic, and the morbidity rate mostly increases due to the expansion in the number of villagers' references to doctors [2,4]. The threatening primary incidence rate from circulatory diseases was noted both in regions and in rural areas in all the regions of the Republic exceeding 1,5 - 3,5 times more in 2011 as compared with 2001.

For today, 534 accident-assistant squads deliver acute medical care to the population, of which 127 (23,7%) are cardiological ones (Figure 3).

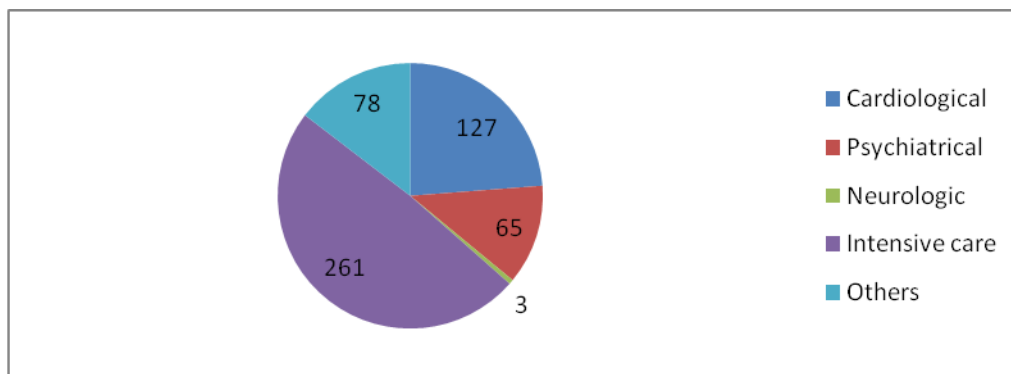


Figure 3 - The number of specialized accident-assistant squads in 2011

The analysis of the emergency call service performance shows that each 3rd call of an accident-assistant squad is due to an acute chronic cardiological disease, or the acerbation thereof.

According to the World Health Organization (hereinafter – "WHO"), the standardized mortality rate for the population of the Republic of Kazakhstan subject to circulatory diseases is twice as high as the same in the countries of the European region (867,9 against 448,0 per 100000 population, respectively). Besides that, the absolute number of patients, who died from circulatory diseases, is 81,1 ths. of persons. More than 80 ths. of persons die from circulatory diseases in the country annually [2]. In the nosological spectrum of the causes of the population disability, circulatory diseases ranked first. The disability rate from circulatory diseases among all diseases is much higher than the same as applied to the total population of the Republic in general [5].

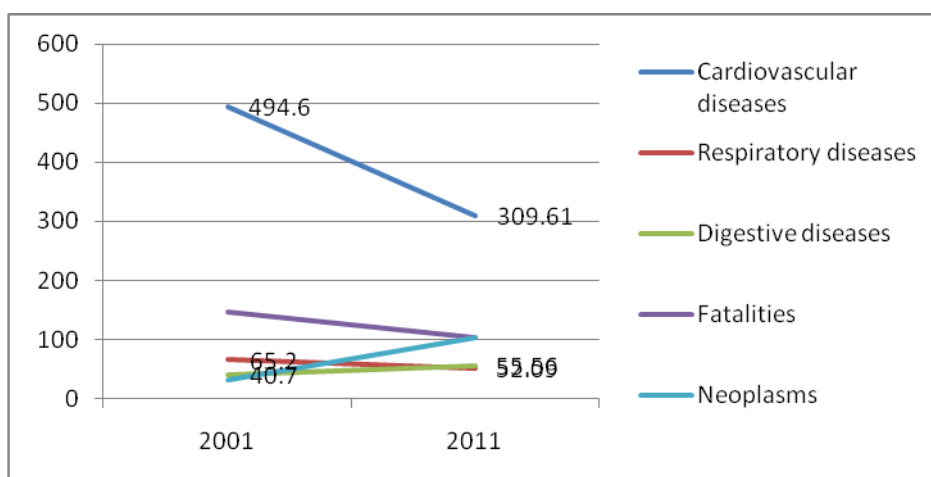


Figure 4 - Mortality rate for RK population (per 100 000 persons) according to classes of principal causes of death (cardiovascular diseases, respiratory diseases, digestive diseases, fatalities and neoplasm) over 2001-2011.

As shown in Figure 4, in spite of the decrease rate from 494,6 in 2001 to 309,61 in 2011, the mortality from circulatory diseases among all the existing classes of diseases ranks first as before, which share was 49 – 52 % of the total mortality rate over 2001 – 2011. From among them, only Coronary diseases caused from 30 to 60% (over 2001-2011) of cardiovascular mortality. The most cases of circulatory diseases are related to life styles and modifiable psycho-physiological factors. According to the Research Institute of Cardiology & Internal Diseases (2006-2008), the risk factors modification clearly demonstrated some reduction in morbidity and mortality with persons, who had both diagnosed and undiagnosed circulatory diseases. [1]. The said data determines the necessity of an active approach to preventive measures against circulatory diseases.

The feature of cardiological diseases consists in the morbid affection of the adult employable population. For example, in Russia, if under the age of 40 years old the population mortality rate from circulatory diseases varies from 6,4 to 105,25 per 100000 population concerned, then at the age of over 40 years old the said rate varies from 294,5 to 4748,7 per 100000 population concerned. Circulatory diseases are the “crown” of pathologic affection of the organism, and the final pathologic state of the organism. It is no mere chance that the major cause of therapeutic mortality is Myocardial infarction and Cerebrovascular diseases [4].

Myocardial infarction ranks first among the causes of hospital lethality, which is 13,6% (in 2001 – 14,0%). It is known that Myocardial infarction and Cerebrovascular diseases are complications of the most common cardiological diseases – Hypertension and Coronary diseases. Approximately in a half of the said cases death occurred within the first hour of the onset of myocardial infarction symptoms at a level of administering primary medical care before patients are delivered to in-patient clinics.

Coronary diseases is at the top among the circulatory diseases with respect to the lethality level, which percentage increased from 35% in 2001 to 48% in 2011. The cause of fatalities from Coronary diseases in more than 60% of cases was Myocardial infarction where in more than a half of cases death occurred during the first hour, in which respect an early detection of pathology is required to deliver an effective health care just at the said stage.

Circulatory diseases as a cause of disability retirement among the other forms of diseases rank first, which share is 26-27% in the disability patterns leaving behind disability from malignant neoplasms, tuberculosis, fatalities, injuries and intoxication.

The highest percentage in the disability patterns is accounted for Cerebrovascular diseases (35%), then for Coronary diseases (28%), and Hypertension (22%). All that results in social and economic damages, provided such costs are taken into consideration as associated with treatment and rehabilitation (costs for emergency call service, medicaments, equipment, expenses for the upkeep of medical personnel, depreciation of fixed assets, hospital service and post - hospital service etc.) of cardiological patients, and in the loss of employable population owing to both disability (1/4 of all the causes of disability) and mortality (51,3% of all the causes of mortality). One may say that cardiovascular diseases are the provoked diversion of funds [5].

The cardiological service of the Republic of Kazakhstan is gradually guided by the applicable international standards, of which such requirements are currently complied with as applied in the surgical treatment of cardiac failure of development, great vessel diseases, CABG, in the stenting of coronary arteries, in the installation of Amplatzer’s occluders and cardiostimulators, and in the radio frequency ablation of arrhythmogen zones. The applicable international standards are introduced in the acute coronary syndrome treatment including acute myocardial infarction, chronic cardiac failure, arterial hypertension, and cardiac rhythm and conduction disturbance.

And some matters of developing outpatient treatment of the cardiological service remain unsolved. A low level of knowledge of the population about those factors, which enhance a risk of cardiovascular death, insufficient preventive measures and periodic health examination at an ambulatory care level, shortcomings of medical care prior to the hospitalization, the lack of modern high-technology methods for diagnostics and treatment of circulatory diseases, an insufficient qualification of physicians (especially at the primary level), the lack of infantile cardiology, a rehabilitation system etc. are still the major reasons of high mortality and disability from circulatory diseases in the Republic of Kazakhstan.

The actual therapeutic practice shows that each medical patient should be examined and given advices by a wide range of specialists.

In 2011, provision of the population with cardiologists in the system of the RK Ministry of Public Health was 0,7 (in 2001 – 0,4) per 10000 adult population subject to the profiled ward beds in the republican, town and regional medical institutions including urban population – 1,2 (in 2001 – 0,6), and rural population – 0,1 (in 2001 – 0,08) [2]. Provision of cardiologists in the outpatient &

polyclinic network is 0,21 on actual basis (0,39 on the staff) (attending physicians– 426,25, individuals – 231) per 10000 adult population where the requirement of the outpatient & polyclinic network is 0,4 by RK MPH Order No. 979 dated 30.12.2003. Throughout the Republic, the total staff of cardiologists (766,25) is completed with individuals just by 65,9% (505 physicians). The said data shows an insufficient staffing with cardiologists, a physical shortage of human resources, and a staff deficit. That may be caused by not only weak social and economic attractiveness and the result of loss of professional personnel, but also the existing demographic problem [2].

It should be noted that the therapeutic profile of beds in Kazakhstan is represented by both general therapeutic and cardiological, gastroenterological, allergic, endocrinologic, hematologic, nephrological, rheumatologic and pulmonological beds. The number of cardiological beds in 2011 was 3196 (in 2001 – 2212). For the last 10 years, the rate of provision of the population with therapeutic beds increased from 5,5 in 2001 to 9,5 in 2011, and with cardiological beds – from 1,5 in 2001 to 1,9 in 2011 (Figure 5).

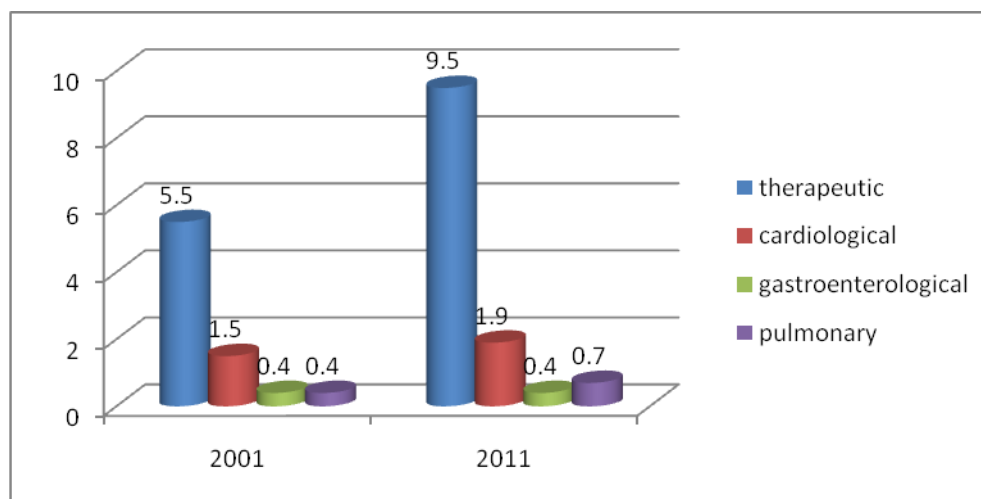


Figure 5 - Provision of the population with therapeutic beds over 2001- 2011.

Conclusions

The above-mentioned statistical data cannot fully reflect the existing situation as morbidity and disability cases are registered after references to doctors, there is no disease intelligence at an early stage, a lot of patients just do not visit doctors and remain untreated and unobserved, and there is even no fact of registration of a disease.

When analyzing the percentage of morbidity, morbidity, mortality and lethality from circulatory and other diseases in the Republic over 2001-2011 where the primary morbidity from circulatory diseases ranked fourth, morbidity – 2nd and mortality ranked first, and comparing it with clinical features of cardiologic diseases, the following features of patients suffering from circulatory diseases may be noted. There is a lot of reasons of that, patients, who suffer from circulatory diseases, see a doctor more often than other patients, they are ill for a longer period, there is a great number of them that enhances operating stress on the cardiologist. Moreover, one should note the fact that despite the development of the world pharmacological industry, the traditional medicinal treatment of circulatory diseases is inefficient, and the traditional preventive control being currently carried out is insufficiently effective.

The problems of development and further improvement of therapeutic service are always pressing in the health-care reform generally. An emphasis laid on the socially significant diseases, in particular, on the circulatory ones, should be of considerable importance in the health system basis.

Reference

- 1 World Health Statistics, 2012, WHO. – Geneva: 2012
- 2 Statistic Database “Health of RK Polulation and activities of public health organizations” over 1985-2011.
- 3 Ministry of Health. Structure of the Ministry of Health. Astana, Ministry of Health. http://www.mz.gov.kz/index_, accessed 13 June 2011)
- 4 OECD HealthData, 2011; WHO Global Health Expenditure Database. - 2012
- 5 A.Katsaga, M. Kulzhanov, M. Karanikolos, B. Rechel. Kazakhstan: Health system review. Health system in Transition. – 2012. - 14(4). – P. 1-154.
- 6 Campbell J. Inappropriate admissions: thoughts of patients and referring doctors / J. R. Soc. Med. – 2001. - №94.

А.А. АҚАНОВ, Т.С. МЕЙМАНАЛИЕВ, А.Б. ҚҰМАР.

С.Д.Асфендияров атындағы Қазақ ұлттық медициналық университеті,

Х.Досмұхамедов атындағы Қоғамдық денсаулық сақтау мектебі

ҚАЗАҚСТАНДА ТЕРАПИЯЛЫҚ ҚЫЗМЕТТІҢ ДАМУЫ: ӘЛЕУМЕТТІК МАҢЫЗДЫ АУРУЛАР

Түйін: Терапиялық қызметті дамыту маңыздылығына орай, дүниежүзінде тиімді емдеу-профилактикалық, алдын алу бағдарламалары қарастырылуда. Денсаулық сақтау жүйесі мамандарының болжамынша, жақын уақытта Қазақстан Республикасында әлеуметтік маңызды терапиялық аурулардың азаюы күтілмейді, керісінше, ол әр 10 жыл сайын жоғарылауда.

Түйінді сөздер терапиялық қызмет, терапиялық аурулар, әлеуметтік маңызды аурулар

А.АКАНОВ, Т.МЕЙМАНАЛИЕВ, А.КУМАР

Казахский Национальный медицинский университет им. Ж.Асфендиярова,

Школа общественного здравоохранения им. Х.Досмұхамедова

РАЗВИТИЕ ТЕРАПЕВТИЧЕСКОЙ СЛУЖБЫ В КАЗАХСТАНЕ: СОЦИАЛЬНО-ЗНАЧИМЫЕ ЗАБОЛЕВАНИЯ

Резюме: В силу чрезвычайной актуальности проблемы совершенствования терапевтической службы, а также лечения терапевтических заболеваний во всём мире усиленно ведутся исследования по созданию эффективных лечебно-профилактических программ, превентивных мероприятий при хронических неинфекционных заболеваниях. По прогнозам специалистов системы здравоохранения, в ближайшие годы существенного снижения заболеваемости социально-значимыми терапевтическими патологиями в Республике Казахстан (РК) ожидать не следует, напротив, она имеет тенденцию увеличиваться в 2 раза каждые 10 лет.

Ключевые слова терапевтическая служба, терапевтические заболевания, социально-значимые заболевания.