▪ Global Social Sciences Review (GSSR) ▪ Vol. VII, No. II (Spring 2022) ▪ Pages: 184 – 195
▪ DOI: 10.31703/gssr.2022(VII-II).18 ▪ URL: http://dx.doi.org/10.31703/gssr.2022(VII-II).18
▪ L- ISSN: 2520-0348 ▪ p- ISSN: 2520-0348 ▪ e-ISSN: 2616-793X
▪ Citation: Nazakat, S., & Sajjad, M. (2022). Comparison and Analysis of Health Care Delivery System: Pakistan Versus Russia. *Global Social Sciences Review, VII*(II), 184–195. https://doi.org/10.31703/gssr.2022(VII-II).18

Cite Us

Comparison and Analysis of Health Care Delivery System: Pakistan Versus Russia

Shaheen Nazakat [*] Muhammad Sajid [†]

Contents:

▪ Introduction
▪ Demographics of Pakistan and Russia
▪ Healthcare Delivery System
▪ Russian Health Care
▪ Medical Products
▪ Finance Department
▪ Recommendations
▪ Conclusion
▪ References

Abstract: *Health Care Delivery System, also abbreviated as HCDS, is a system devised by the state for the proper delivery of health care for their populations. This is a service providing system in which society's health is determined and steps are taken to maintain it. The aim of this article is to compare the health care delivery system (HCDS) of Pakistan and Russia. This research article presents the basic concept behind the health care delivery systems of two countries to take notice of the importance of human beings and take steps to maintain and promote the healthy life of the people of the community. Findings show the efficacy of this HCDS varies with the resources, demands and needs of the individuals along with the availability of finances. All the participants of a community receive the healthcare services continuously including health promotion, prevention of diseases, diagnosis and disease management, followed by rehab with palliative care. All of these are delivered at different levels of the system, at different sites of care as per the requirement of the users.*

Key Words: Delivery System, Health Care, Pakistan, Russia

Introduction

Demographics of Pakistan and Russia

Pakistan is an Asian Country and is located in the South of continent Asia. It is surrounded by Afghanistan and Iran on the west, India on the east and China on the north and the Arabian Sea on the south. With its area of about 881,913 km^2, it comes in the first 40 largest countries in the world. And with its population of about 190 million, it comes in the top six populous countries of the world. According to an estimate, in about the next 20-25 years, Pakistan will become the fourth largest populated country in the world (National Institute of Population Studies, 2012).

The organization that grades various countries regarding human resource (HR) development programs named as United Nations Development Programme (UNDP), ranked Pakistan at 146th slot out of the total 187 countries on the list on the scale called Human Development Index (HDI). Currently, our country, Pakistan has a Gross-Domestic-Product (GDP) constant of about 4.7%. Our country's Gross National Income (GNI) per-capita is around US$ 1500 and it is labeled as one of the low income countries in the world. Our country

[*] College of Nursing, Faisalabad, Punjab, Pakistan. Email: shaheennazakat1@gmail.com *(Corresponding Author)*
[†] Faisalabad Institute of Cardiology, Faisalabad, Punjab, Pakistan.

was positioned at the 65th slot among all the developing populations of the world. There is a rise in the literacy rate of Pakistan from around 50% to around 60%. It is an Islamic country and more than 90% means the majority of the people are Muslim; the remaining population is Christian, Hindu, etc. (Nehru et al., 1995).

Russia, also called Russian Federation, is located in the East of Europe, reaching up to the north of Asia. It has a population of around 150 million, with a life expectancy of 72 years and a rate of the fertility of 1.75 births-per-woman, with around 11 births per 1000 population. This ends up in the growth of the population by around 0.1% annually, but some reports tell that the the population of Russia will decline in the next 10 years. The reason being each year, there are unexplained deaths in Russia along with a rising trend of abortions. Officials say that the birth rate is also falling and this will be the cause of the decline in the Russian population. The official language is Russian (Laruelle, 2020).

Healthcare Delivery System of Pakistan and Russia

In Pakistan, the system of healthcare involves the public as well as a private organization along with some philanthropist persons and companies or NGOs contributing and donating for the betterment of the healthcare and for the country. Our delivery system comprises four steps prevention, followed by health promotion and then the achievement of cure, along with rehabilitation services. The private sector receives and entertains more than 70% population through their trained health personnel and team makers, to some local less trained health service providers and the traditional faith healers (Book, 2007).

Our health care step-up in Pakistan runs vertically as well as horizontally. A summary of this is shown in figure no 1. The major strength of this system is the extensive peripheral outreach program of the primary healthcare system. This delivered health service at the door steps with the help of the Lady Health Workers(LHWs), Lady Health Visitors (LHVs), and Community Midwives (CMWs). These are actually focals of each of the respective service delivery units with strong footings in the community and have earned trust while living inside the community.

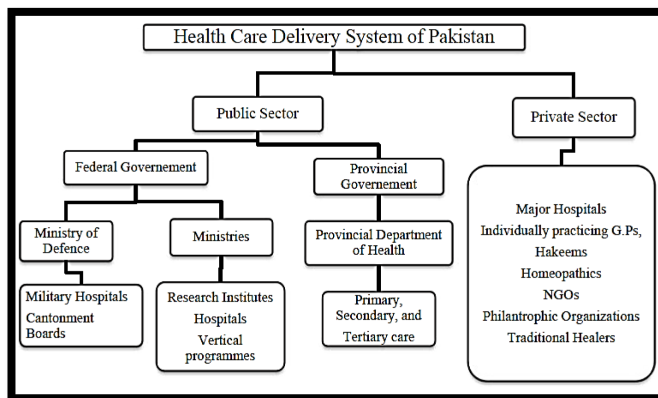

Figure 1: Levels of Working in the Health Care Delivery System of Pakistan

In our country, Pakistan all these service delivery personnel of primary level including LHVs, LHWs and CMWs, work under the supervision of basic health government facilities. These centers train their service personnel, and they work together with their supervisors to achieve proper outcomes. In Pakistan, an ordinance was passed which made the health care delivery system the obligation of the provincial government. The public-health-

delivery-system performs its functions on three levels:
primary, secondary, and tertiary. (Figure 1)

Russian Health Care Delivery System

After the independence of Russia from the Soviet Union, Russia inherited the centralized system for health care delivery. Soon Russia did reforms in its system and developed mandatory health insurance (MHI) system after 2 years of independence. This system also led to a system streamlining funding for the health care system in adverse circumstances Russia was facing. With the evolution of this system in the 1990s, the main system of basic health care still remained the same. With the development of the country's economy and overall improvement in the poverty rate, the healthcare system evolved but still a demarcation of urban and rural populations exists. With the improvements in the overall conditions of Russia, it moved to an insurance-based health system (Popovich, et al., 2011). The Federal Compulsory Medical Insurance Fund of Russia is regulated by the Health Ministry of Russia. It was free initially for all citizens till 1996. Doctors and staff for health care delivery are more relatively in the urban areas as compared to the rural areas. With the worsening of the Russian financial crisis, health care didn't receive much final attention which resulted in the decline of the quality of healthcare service system (Khwaja, 2017).

All the nurses, assistant physicians, dentists, pharmacists, midwives and laboratory technicians are named Middle Medical Workers. These are the people trained to provide health care services at ground level. They are low paid and under-represented in most the areas of the country, except for nurses.

The Russian health insurance system providing health care service to the citizens is more oriented towards larger organizations. Insurance organizations sell policies and insurance plans to the citizens. Each policy is explained to the individual or the company of individuals buying a policy for the employees. The cost of the policy varies with the age of the individual. These companies provide services including emergency hospitalization, clinic services, and dental work as well. Only one clinic or hospital is attached with the individual taking the policy (Wennberg, 1984).

Most the people in Russia have health insurance covered by employer-sponsored schemes. Only about 2% of all the policies are owned by individuals (Carrasquillo, et al., 2000). Fertility and Maternity-clinics are a major part of the healthcare system of Russia. These are around 10% of all the infertility clinics in Russia.

Major companies providing healthcare insurance in Russia include state-owned Rosgosstrakh and Ingosstrakh and others like Sogaz, Allianz, RESO-Garantia, AlfaStrakhovanie (Sembekov, et al., 2016). Some companies have major hospitals and clinics on the panel while some actually own clinics and centers. After 2011, many companies are now giving services to state-insured individuals (Gogitidze, 2014).

Health Problems and Key Indicators

With the start of the 21st century, Pakistan's health sector has improved and the key indicators showed significant improvement. These were possible with the efforts of the public sector and private sector health care providers programs and along with the efforts of many NGOs; although Pakistan is still having a higher growth rate and infant & maternal mortality along with a huge burden of communicable diseases (Meghani, et al., 2014). With the advancement in the 21st century, revolutionizing on the social, environmental, and economic grounds, the health sector couldn't flourish at the same pace. Pakistan is still facing problems like malnutrition in Sindh and Baluchistan; having more than 20% of children of less than 5 years growth retarded and malnourished, as reported by (Nishtar, et al., 2013). This is becoming the main cause behind high Infant mortality along with other conditions like infections (diarrhea, pneumonia). About half of the total deliveries are received by untrained birth attendants leading to significantly rising maternal mortality. Inadequate emergency services in the peripheral areas and downtowns along with non-availability of skilled birth attendants, contribute to

this high mortality of infants as well as a mother (Collins, et al., 2002). Key indicators are compared in Table no. 1.

The timeline of the health care system shows that with the passage of time, reforms were seen in the Russian health system. During the period 1922–1991, the Soviet Russian health system was totally a socialist health model named as Semashko system. In this model, all the services were centralized and integrated with a proper system of hierarchy, managed by the government. And all the affairs were under the direct control of the state. All the health service providers including the doctors were state employees. More concern was given to the control of communicable diseases in order to avoid epidemics. With advancement system was managed at the primary care level, supervised by the consultants in the main hospitals. Later, healthcare became universal after the mid of 20th century with the rapid industrialization around the globe. Later during the period 1991–2000 after the dissolution of Soviet Union, like all other state affairs, healthcare system also went into crisis. Male life expectancy also fell to <60 years. Spread of infectious diseases after the collapse of the child-immunization program further made the healthcare condition worse (Cook, 2015).

In the period 2000–2010, healthcare system revived in terms of performance and organization. With the exponential growth in the economy public health system also developed (Bussolo, et al., 2015). The life expectancy improved and the infant mortality decreased from 18 in 1995 to 8 in 2008; by the end of this decade, all the health indicators had improved (Frejka & Zakharov, 2013). And till today, the healthcare system recovered from all the crises faced in the late 90s but still having low efficiency and can improve further as well. In the year 2016, life expectancy was lower than Nepal and Bangladesh (Howse, 2006).

The overall disease percentages in Pakistan and Russian populations are shown in Table 2.

Table 1. Comparing the Demographic Indicators of the Two Health Care Systems

Indicators	Pakistan	Russia
Gross national income per capita, taking into account purchasing power parity in 2018, (US $) c	5840	26470
Population density (people per sq. Km of arable land)	698	119
Percentage of population under the age of 15 years (%)	36%	18%
Percentage of population aged 65 and over (%)	4%	15%
Share of urban population,%	37%	74%
Population Forecast in 2035 (million people)	293.9	144.1
Migration growth rate (per 1000 inhabitants)	-1	1
Infant mortality rate/1000	42/1000	4.9/1000
Under-5 mortality rate per 1000 live births		7.4/1000
Maternal Mortality Rate	170/100,000	17/100,000
Natural growth rate (%)	2.2	-0.2
Crude birth rate	29/1000	11/1000
Mortality rate (per 1000 inhabitants)	7/1000	13/1000
Total fertility rate (average number of children per woman)	3.6	1.6
Immunization coverage	65%	
Life expectancy	75.5 years	72.9 years
Percentage of married women aged 15-49 using all types of contraception (%)	34%	68%
The proportion of married women 15-49 years old using modern methods of contraception	25%	51%

Table 2. Comparing Various Diseases in Two Countries

Diseases	Pakistan	Russia
Communicable, maternal, perinatal, and nutritional diseases	41%	11%
HIV prevalence among population aged 15-49		1.2%
Non-communicable diseases	59%	64%
CVDs	21%	
Injuries	16%	25%
Cancer	6%	
Diabetes	2%	
Respiratory diseases	7%	
Other Chronic diseases	7%	
TB incidence (per 100,000 people)		59

Goals and Expectations of Pakistan and Russia Healthcare System

Pakistan became independent in 1947; since then, HCDS has undergone many reforms. These include National Health Policy, Primary Health Care services, TB control, and an extended programme of Immunization (Shaikh et al., 2010). Although the health system has proper goals and targets, but it showed poor achievement of the outcome, according to a review done in 2008. The targets of the program "Health for All" and those of the Millennium Developmental Goals (MDGs) of 2015 couldn't be achieved as well.

Now the health department, in collaboration with the State, has planned Sustainable Development Goals (2025) and National Health Vision (2016-25) to facilitate the population and achieve better healthcare outcomes. Women and children are the main focus of these programs.

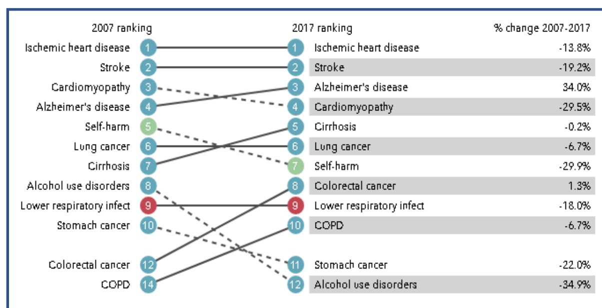

Figure 2: Showing the Top 10 Causes of Death in 2017 and Percent Change, 2007-2017 in Russia.

Comparison and Analysis of Healthcare Systems of Pakistan and Russia

Leadership and Governance

The Healthcare system is very vast as it includes not just the major elements discussed earlier but also relationships between them (Frenk, 1994). A model or working plan for the proper functioning of this system was designed by de Savigny & Adam showing the various domains of this system. It is shown in the figure.

HCDS of Pakistan is very versatile, as many different types of service providers exist within the same working unit. As the health care delivery in Pakistan is the responsibility of the local government with the help of the federal government, the Ministry of National Regulations and Services is responsible for policy making, followed by strategic planning for the implementation of policies.

The ministry of health in Russia is also responsible for the implementation of the policies regarding the healthcare made by the state. Most of the programs are run by the federal government

including programe for diabetics, tuberculous patients, health promotion, health education and disease prevention. The federal government also owns some medical units in Russia but their monitoring is done by the health ministry (Muntyanu, et al., 2020). Monitoring of the agencies coming under the health department including: the Federal Supervision Service for Healthcare, the Federal Medical-Biological Agency, the federal state institutions is also done by the ministry. Ministry of health Russia also coordinates with the Federal Mandatory Health Insurance Fund for proper service delivery at controlled cost.

Figure 3: Showing the Pillars of a Healthcare System

Service Delivery and Type of Hospitals

Like other organizations, the Health care delivery service (HCDS) coordinates targeted oriented activities for the achievement of collective goals. At the local baseline level, the Primary healthcare services are delivered through Government Dispensaries (GD), Basic Health Units (BHU) and Rural Health Centers (RHC). GD and BHU cover a few villages and RHC covers a town. Above RHCs come the secondary healthcare service providers through Tehsil Head Quarters (THQs), and District Head Quarter (DHQs) hospitals. In most of the units, the personell of the Maternity & Child Health Centers (MCHCs) provide obstetrical services in collaboration with the LHWs. The statistics of the health care facilities in Pakistan are shown in

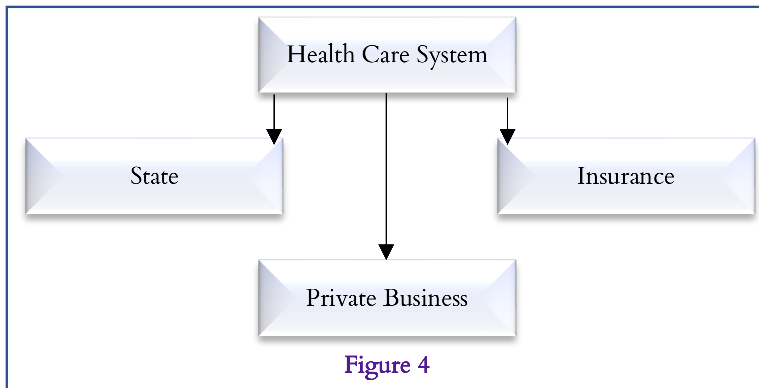

Figure 4

The health care system of Russia involves four institutions: public, "parallel," private and NGOs. The polyclinics, hospitals and research units are controlled by the federal as well as regional authorities. Many public sector institutions including in-door facilities as well as out-patient units were closed in the 90s. The 'parallel' system is run by some other government ministries including polyclinics, hospitals and sanatoria. These small units provide services to the privileged ministry personnel and their families and some people on payment (Popovich et al., 2011).

The Russian health care system has three levels: federal level, regional level and Municipal level. At the local level or municipal level, all the civilized districts of Russia have city hospitals, one for adults and one for pediatric patients having 250 beds each. Specialized hospitals with around 700 beds for managing emergencies and separate for infectious diseases as well as separate for maternal issues and mental diseases. At the rural level or primary level, the Russian health system constitutes a central polyclinic with around 200-250 beds and various small ambulatory clinics with 100 beds equipped with all the staff and health care professionals.

Private sector hospitals are mostly located in urban areas. In 2010, Russia had 124 private hospitals in 120 cities. Mostly these hospitals are accessed by wealthy Russian citizens. Mostly the high income group travels abroad and avail the health care facilities of Germany or Finland (Budiansky, 2013).

The NGO sector of the healthcare system of Russia works mainly for the control of infectious diseases like HIV/AIDS. These NGOs follow programs with communication of WHO and other International Organizations. These help in the prevention and control of communicable diseases.

Human Resource (HR) Department

Although Pakistan is one of the most populated countries in the world, still the human resources required are insufficient as per the requirement of the system of service delivery. The deficiency of workforce in the health department made Pakistan reach the list among the 57 countries with poor human resources in the health department. Doctor-patient ratio in Pakistan is about 1:1300, doctor-nurse ratio 1:2.7, and nurse-patient ratio 1:20. According to the recommendation of the world health organization the ideal working of the health department need doctor-patient ratio of around 1:1000 and a doctor-nurse ratio of around 1:4. Similarly, the Pakistan Nursing Council also made recommendation of a nurse-patient ratio ideally for a better working environment and for the ideal outcome should be 1:10 in the primary health care setups and a ratio of 2:1 in the specialized health care department (Rana, et al., 2016).

Table 3. Types of Hospitals in Pakistan

Numbers of Hospitals	In Pakistan	In Russia
Public Hospital	924	5100
Private hospitals		357
Dispensaries	4916	
Basic Health Units	5336	
Rural Health Centers	595	
MCH Centers	1138	
TB Centers	371	
First Aid Points	1080	
Population per bed	1515	
Population to health facility ratio	11413	

Table 4. Types of Health Care Providers in Pakistan Versus Russia

Types of Health Care Provider	Pakistan	Russia	Russia (Number per 1000 population)
Doctors	139,555	614183	4.0
Dentists	9,822	45628	0.3
Nurses	69,313	1148755	8.6

Types of Health Care Provider	Pakistan	Russia	Russia (Number per 1000 population)
Midwives	26,225	65537	
Medical Technologists	7,891	No data	No data
Health Visitors	10,731	No data	3.0
Registered Vets	4800	No data	No data

Information and Medical Technology

The Pakistan healthcare system, with its infrastructure, relies on the resources provided by the government for the achievement of the outcomes. These resources include the supply of medicines and instruments. Medicines are often out of stock and instruments are of old technology. The use of old technology machines with poor expertise in the field of information technology related to record maintenance, are the factors differentiating the advanced healthcare systems of the world. The HIMS system (Health Management Information System) used in the private sector and in other healthcare systems of the world is the advanced form of record maintenance, along with the practice of medicine through telemedicine. Medical, educational institutions attached to the health system of Pakistan are also not many advances with the use of tools and technology to train the undergrad health professionals. Licensing process is also weak and there is no system to evaluate the performance of these professionals. No advanced system of reporting diseases spreading at the national level exists, although some organizations in the private health sector use advanced technology with the proper operating system including the use of HMIS. The medical institutes of the armed forces are well-maintained and have proper infrastructure, HMIS with latest technology. Some private organizations are providing e-health services all across the country including the rural and out-reached areas including hill stations.

The late adoption of medical technology in the Russian Health care system was due to the poor decision making of the authorities and poor coordination between the hospitals and the authorities (Shishkin & Zasimova, 2018).

Medical Products

In Pakistan, the health care system is spending >80% of the expenses on the availability of medical products and medicines (Azhar, et al., 2009). In 1947, Pakistan became independent. There was no medicine industry; with the development in the other fields, Pakistan has developed in the field of pharmacy as well and is developing still now with adequate speed. It has been documented that Pakistan has 411 registered manufacturing divisions with around 30 multinational organizations/companies. More than 80% of the medicine demand is met by the local industries while around 20% of the medicines are imported from various other countries (Book, 2007). In Pakistan, all matters regarding the pharma industry and its regulations are managed by the Drug Regulatory Authority of Pakistan (DRAP). DRAP is responsible for making and implementing the policies and rules regarding control of the pharmaceutical industry. In the year 2010, most of the affairs of this authority were shifted to the provincial government by the state. The main purpose of this authority is to make sure that the quality of medicine is maintained while ensuring drug safety and implementing the policies and guidelines. Prices of the medicines are controlled under the Drug Act 1976 by the Ministry of National Regulation and Services.

In Russia, the authority managing medical products and medical devices licensing is named GOST-R. Products are classified on the basis of their risks to the patients and safety requirements similar to those noted in Europe (Kalbasko, et al., 2013).

Finance Department

The government of Pakistan used around 0.4% of the GDPs on health PKR. Funding is dominated by government revenues, developmental partners, private insurance, and external resources to NGOs. Out-of-pocket funding is done by the person himself or by the organizations or state. About 80%

of the funding is done through out-of-pocket methods while the tax income of the government is the source of finance for the health care system (Islam, 2009).

As the healthcare units come under the district government, more than 60% of the expenditure is done by the district budgets. Many donor companies and NGOs contribute financially to improve healthcare service delivery. Foreign aid also contributes to this expense. Main NGOs include HANDS, Shiffa Foundation, and Aga Khan Health Services Pakistan (AKHSP). USAID contributes as an external funding organization for the health department. Programs like Tuberculosis Program and EPI and diagnostic kits for AIDS and Hepatitis are contributed by donations from various organizations.

In comparison, the Russian health system is financed by the general budget, health insurance funds, out-of-pocket funding, and VHI. Some NGOs and private organizations also contribute (Cook, 2015). Total expenses of the healthcare system reach to a total of about 6 percent of the GDP. Reports have shown that the private expenses are more than the public health units; this could be one of the factors leading to the Russian health system's poor efficiency.

Challenges Faced by Pakistan and Russia

The HCDS is accessed by the quality of service delivery. Pakistan, with its basic health services and primary infrastructure for delivery of health services, is trying to promote health but still goals couldn't be achieved probably due to poor availability of resources and lack of human force. The health systems in Russia are facing issues regarding the cost of service and deficiency in human resources (Book, 2007). Pakistan, with its high population, could not balance the doctor-patient ratio, as the number of professionals is far less than the ideal number for that respective population. Other issues include the poor transport facilities from secondary to tertiary care hospitals. Pakistan is also lacking in the field of research due to poor resources and lack of technology and funding.

HCDS in both countries hugely rely on private organizations but the cost of advanced treatment is much more costly in Russia but covered by insurance companies. No system is available to change the significant inequality in services for poor people and rural areas as compared to urban areas (Hall & Taylor, 2003).

Healthcare Development Concept 2020 of Russia

For better service delivery and achievement of goals, the new development plan was made to reduce mortality in working communities with control of alcohol use and lowering the chances of accidents and injuries. Controlling infant and maternal mortality and effective actions to the reduction in smoking, sexually transmitted diseases, tuberculosis, are also now included in the new plan.

The Russian government is planning to raise the premium of the mandatory medical insurance system (MMI) for all individuals. This will raise funds to meet the expenses of the healthcare system. A single-channel financing system will be developed for the effective buying of new service takers.

Recommendations

It is recommended that for significant improvement in the health system, state and ministry of health should allocate available resources of health among the various population. These include doctors, nurses, and well-trained lady health workers. Proper communication with the citizens for planning and implementation of healthcare programs is important.. Modern technology should be used with the increase in the annual budget can make the system more effective and achieve goals and expectations.

Conclusion

The outcome of the Healthcare system of Russia from 1980 to 2016 is associated with complicated patterns of behavioral risk factors and with the economy and social system. To achieve significant improvements in the disease burden and to improve the accessibility of health care services, health care

goals and expectations should be achieved. Reduction in the mortality and disability from causes and risks amenable to healthcare service providers can improve the health status of the Russian.

References

Azhar, S., Hassali, M. A., Ibrahim, M. I. M., Ahmad, M., Masood, I., & Shafie, A. A. (2009). The role of pharmacists in developing countries: the current scenario in Pakistan. *Human Resources for Health*, *7*(1). https://doi.org/10.1186/1478-4491-7-54

Basov, A., Fedulova, L., Vasilevskaya, E., Trofimova, E., Murashova, N., & Dzhimak, S. (2021). Sus Scrofa immune tissues as a new source of bioactive substances for skin wound healing. *Saudi Journal of Biological Sciences*, *28*(3), 1826-1834.

Book, P. S. Y. (2007). Federal Bureau of Statistic Government of Pakistan.

Budiansky, V. (2013). Short analysis of a market of medical tourism from Russia.

Bussolo, M., Koettl, J., & Sinnott, E. (2015). *Golden aging: Prospects for healthy, active, and prosperous aging in Europe and Central Asia*. World Bank Publications.

Carrasquillo, O., Carrasquillo, A. I., & Shea, S. (2000). Health insurance coverage of immigrants living in the United States: differences by citizenship status and country of origin. *American journal of public health*, *90*(6), 917.

Collins, C. D., Omar, M., & Tarin, E. (2002). Decentralization, health care and policy process in the Punjab, Pakistan in the 1990s. *The International Journal of Health Planning and Management*, *17*(2), 123–146. https://doi.org/10.1002/hpm.657

Cook, L. J. (2015). Constraints on universal health care in the Russian Federation: Inequality, informality and the failures of mandatory health insurance reforms. *Journal of Self-Governance and Management Economics*, *3*(4), 37-60.

Frejka, T., & Zakharov, S. (2013). The Apparent Failure of Russia's Pronatalist Family Policies. *Population and Development Review*, *39*(4), 635–647. https://doi.org/10.1111/j.1728-4457.2013.00631.x

Frenk, J. (1994). Dimensions of health system reform. *Health policy*, *27*(1), 19-34.

Gogitidze, R. (2014). Voluntary health insurance development problems and improvement main trends in Georgia. *International Journal of Social Sciences and Entrepreneurship*, *1*(11), 300-306.

Hall, J. J., & Taylor, R. (2003). Health for all beyond 2000: the demise of the Alma-Ata Declaration and primary health care in developing countries. *The Medical Journal of Australia*, *178*(1), 17-20.

Howse, K. (2006). Increasing life expectancy and the compression of morbidity: a critical review of the debate. *Oxf Inst Ageing*. http:www.ageing.ox.ac.uk

Islam, A. (2009). Bangladesh health system in transition: selected articles.

Kalbasko, A., Heemstra, L., & Nijhuis, T. (2013). Analysis of Published Health Technology Assessments (HTA) in Russia and Its Place in Russian Reimbursement System. *Value in Health*, *16*(7), A481. https://doi.org/10.1016/j.jval.2013.08.919

Khwaja, B. (2017). Health Reform in Revolutionary Russia. *Socialist Health Association. September, 16*.

Laruelle, M. (2020). Russia's Arctic Policy. *A Power Strategy and its Limits, Russie. Nei. Visions*, (117).

Meghani, S. T., Sehar, S., & Punjani, N. S. (2014). Comparison and Analysis of Health Care Delivery System: Pakistan Versus China. *International Journal Of Endorsing Health Science Research (Ijehsr)*, *2*(1), 46. https://doi.org/10.29052/ijehsr.v2.i1.2014.46-50

Muntyanu, A., Savin, E., Ghazawi, F., Alakel, A., Zubarev, A., & Litvinov, I. (2020). Geographic Variations in Cutaneous Melanoma Distribution in the Russian Federation. *Dermatology*, *236*(6), 500–507. https://doi.org/10.1159/000507617

Nehru, V., Swanson, E., & Dubey, A. (1995). A new database on human capital stock in developing and industrial countries: Sources, methodology, and results. *Journal of Development Economics*, *46*(2), 379–401.

https://doi.org/10.1016/0304-3878(94)00054-g

Nishtar, S., Boerma, T., Amjad, S., Alam, A. Y., Khalid, F., Haq, I. U., & Mirza, Y. A. (2013). Pakistan's health system: performance and prospects after the 18th Constitutional Amendment. *The Lancet*, *381*(9884), 2193–2206. https://doi.org/10.1016/s0140-6736(13)60019-7

Rana, S. A., Sarfraz, M., Kamran, I., & Jadoon, H. (2016). Preferences of doctors for working in rural Islamabad Capital Territory, Pakistan: a qualitative study. *Journal of Ayub Medical College Abbottabad*, *28*(3), 591-596.

Sembekov, A. K., Serikova, G. S., Lukpanova, Z. O., Ulakov, N. S., Utebayev, M. S., & Aitbek, S. K. (2016). Risk Analysis of National Insurance Markets in Eurasian Economic Union Countries. *Indian journal of science and technology*, *9*(14).

Shaikh, B., Rabbani, F., Safi, N., & Dawar, Z. (2010). Contracting of primary health care services in Pakistan: is up-scaling a pragmatic thinking. *Journal of the Pakistan Medical Association*, *60*(5), 387.

Shishkin, S., & Zasimova, L. (2017). Adopting new medical technologies in Russian hospitals: what causes inefficiency? (qualitative study). *Health Economics, Policy and Law*, *13*(1), 33–49. https://doi.org/10.1017/s1744133116000347

Wennberg, J. E. (1984). Dealing With Medical Practice Variations: A Proposal for Action. *Health Affairs*, *3*(2), 6–33. https://doi.org/10.1377/hlthaff.3.2.6