

Has China's Health Sector Development Matched the Rapid Growth in the Country?

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Abstract

China is the world's largest country by population, the third largest by territory and the second largest world's economy by GDP. Therefore it is important to follow the successes and failures of China in the field of health, because they affect the health area and processes in the world. This article includes retrospective analysis of empirical data to analyze the main inputs and outputs of China's health policy in order to identify the main problems and highlight the major challenges. In the article is concluded that main problems are related with insufficient and unequal access to health care.

Keywords: China, health policy, inequality, challenges

Introduction

Health improvement is a precondition for promoting all kinds of society's development. The population is ageing, however, extent of human and social resources, opportunities are available to each of us but as we age, it will heavily dependent on one key characteristic – health. Improvement of people health and provision of the right to medical care is the goal to which aspires the world as a whole and each country separately. In the world is more than 7.5 billion people and China is the world's largest country by population. China already has nearly 1.4 billion people, which is more than 18% of the world's population (Worldometers.info, 2017). China is also the third largest country in the world by territory after Russia and Canada and like the USA covers approximately 9.6 million square kilometers of the world's territory. China is the second largest world's economy by GDP after the USA and there are forecasts that China may also become the world's leading economy by GDP (The World Bank, 2017). For the world it is important to follow the Chinese successes and failures in the field of health because China continuously searches the best health care system solutions for the large number of people and Chinese health sector because of the large population affects health sector in the world. Therefore, the research of

Chinese health sector is essential. Important is to learn from good practice, avoid failures and follow-up as it can affect the health of the world. This article includes retrospective analysis of empirical data to analyze the main inputs and outputs of China's health policy in order to identify the main problems and highlight the major challenges.

Description of the situation

Protection of health in China has a substantial role and it is also stated in the constitution: “The state develops medical and health services, promotes modern medicine and traditional Chinese medicine, encourages and supports the setting up of various medical and health facilities by the rural economic collectives, state enterprises and institutions and neighborhood organizations, and promotes health and sanitation activities of a mass character, all for the protection of the people's health” (Hong Kong Human Rights Monitor, 1993; People's Republic of China, 2014). The Chinese government argues that China's health policy focuses on prevention in order to improve the health of the whole Chinese population by 2020 (Xinhua News Agency, 2009). As in most countries of the world with the general development, also in China the health of population has improved. The improvement of the health is associated with different preconditions of national and societal development but mainly with direct and targeted impact of policies on infant, child mortality reduction, reduction of communicable diseases and also with the general improvement of the economic conditions (World Health Organization, 2016).

China has also one of the world's oldest medical development histories, medical theory and practice of China exists more than two thousand years. The Western medical traditions in China have emerged only in the nineteenth and twentieth century (Gulick, 1975). Chinese ancient development of medical history has contributed formation of persistent traditions and nowadays, Chinese medicine tries to combine the Chinese traditional and Western approaches (Gale Encyclopedia of Alternative Medicine, 2017).

Since the 1970's with the economic reform and market liberalization policy China's health care system was also transformed. Health care system transformation was the shift from pure government delivery model to a hybridized model, where government funding is limited and local governments rely on providers of independent market service (Blumenthal & Hsiao, 2005). China's rapid economic growth has created a middle class and significantly reduced poverty in the country. However, wealth is not equally distributed among all population and it has also increased inequality between people in terms of income, education and health (The World Bank, 2013).

China is divided into eastern, middle and western regions, in accordance with the geographical location and economic development. Comparatively the eastern region is most developed, but the western region is the least developed (Li and Fumin, 2010). Because of regional differences China continue to face many health challenges. Distribution of health care resources over the country is unequal because in wealthier towns and areas usually are better hospitals, more and better qualified health care personnel than in rural areas (Fang, 2017). The country as a whole lacks an effective primary care that is why patients often have difficulties to receive health care (The World Bank, 2016). Those who can get and pay for health care services often are dissatisfied with the service quality, stating that the services are too expensive, health care infrastructure and equipment is in poor condition and the services received are poor quality (McKinsey & Company, 2010). In China are aging population trends and growing morbidity with modern chronic diseases. Also in China there are a lot of challenges in the health sector. Therefore, in this article is an attempt to analyze China's health sector, summarizing the situation, examples of good practice and main problems.

Methods of analysis

Health is multidimensional – it is influenced by many factors and it affects many different factors and processes. Therefore reduction of health inequalities and health improvement in policies is a challenging goal. It is difficult to determine the impact direction and causality between policies, health and health influencing factors and it makes this goal even more challenging. For example, it is difficult to establish causal links between policy inputs and health impact. Therefore, it was carried out retrospective analysis of empirical data and used a number of research methods. First of all it was carried out literature review, where was analysed policy documents, strategies, programmes and plans, as well as scientific literature. Secondly it was carried out review of quantitative data, where was analysed data and statistics from population based surveys, international databases, data systems and other sources. Thirdly individual observations in health care institutions, conversations with the people. It allowed verifying the validity of observations and conclusions in accordance to the real environment, knowledge and experience. This study analyzed the main inputs and outputs of China's health policy in order to identify the main problems and highlight the major challenges.

China's health care system – main problems and major challenges

The Chinese health care system is complex because of the large population number, area, variety, and many involved parties. Primarily

Chinese central government is responsible for the public health protection justice, policy and administration. Local governments are responsible for the provision of basic health care services according to the local conditions and specifics. Health authorities are National Health and Family Planning Commission and local Health and Family Planning Commissions or Bureaus of Health. Health authorities are primary responsible for organization and delivery of health care and for supervision of providers, basically hospitals (The Commonwealth Fund, 2016). In the meaning of provision of services mostly in China is a hospital-based delivery system managed by the commission and the local governments. Traditional Chinese medicine is an integral part of the national health care system (China Joint Study Partnership, 2016).

China's rapid economic growth has not contributed the equally rapid health care sector development. In fact, the rapid economic development and the transition from a planned economy to the market oriented economy has created a number of problems in the public health field. It is projected that health care spending in 2018 will reach 9,5% - 11,8%, reaching around 892 billion dollars. It mainly will be contributed by the rapid consumer income growth and implemented national health care reform (Deloitte, 2015).

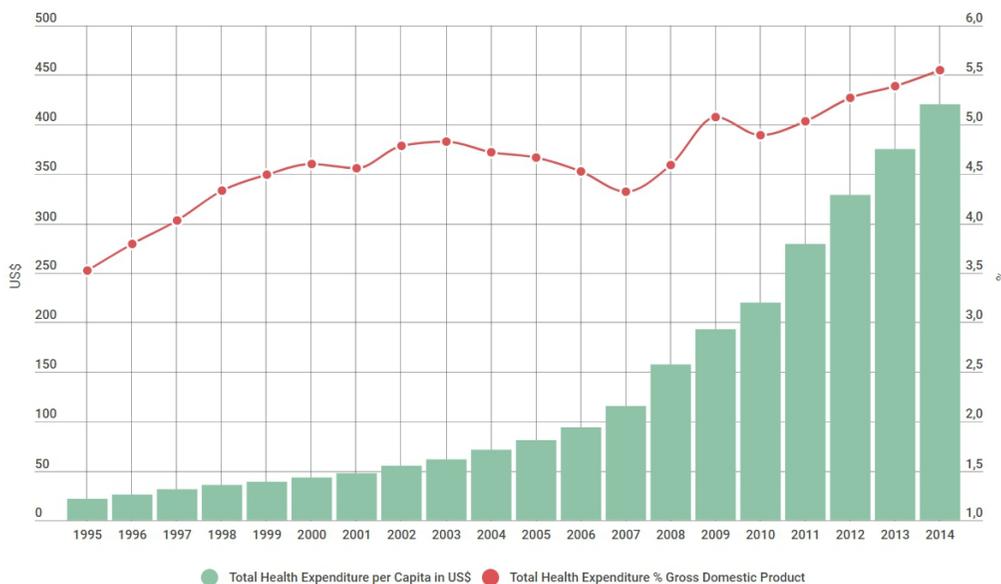


Figure 1: Total health expenditure and total health expenditure per capita.

China's total health expenditure (% of the GDP) and total health expenditure per capita in US\$ has increased. China's total health expenditure as % of the GDP increased from 4,6% in 2000 to 5,6% in 2014. Total health

expenditure per capita in US\$ increased from 43,6 US\$ in 2000 to 419,7 US\$ in 2014. Although total health expenditure per capita in US\$ rising seemingly rapidly but total health expenditure as % of the GDP indicates that the increase is not so significant, taking into account a country's rapid economic development and health expenditure in other countries (World Health Organization, 2017). Expenditure is still comparatively lower than in many developed countries and lower than in some developing countries. For example, in 2014 China invested in health care 5,6% of GDP but in comparison Brazil 8,3%, South Africa 8,8%, Japan 10,2% and USA 17,1%. China's health care expenditure over the last 20 years is increasing, but as the percentage of GDP it almost has not changed World Health Organization, 2017 (World Health Organization, 2017). China is the second largest global economy by GDP and is the largest Asian economy by GDP, but among the world's leading countries according to GDP and the leading Asian countries in China there is a negative statistical trends (see table no.1). Although the Chinese birth rate is one of the highest, total health expenditure (% of GDP) and total health expenditure per capita (US\$) is the second lowest among 15 of the world's leading countries according to GDP and the second lowest among the leading Asian countries. Also total life expectancy at birth (years) is the fourth lowest among the world's leading economies (World Health Organization, 2017; The World Bank, 2017).

Table 1: Main data of 15 of the world's leading countries by GDP.

Countries	GDP (current US\$ million), 2014	Total health expenditure, % Gross Domestic Product (GDP), 2014	Total health expenditure per capita in US\$, 2014	Birth rate, crude (per 1,000 people), 2014	Life expectancy at birth, total (years), 2014
United States of America	17 393 103,00	17,14	9402,54	12,50	78,74
China	10 482 371,33	5,55	419,73	12,37	75,96
Japan	4 848 733,42	10,23	3702,95	8,00	83,59
Germany	3 879 276,59	11,30	5410,63	8,80	81,09
United Kingdom	2 998 833,56	9,12	3934,82	12,00	81,30
France	2 849 305,32	11,54	4958,99	12,40	82,67
Brazil	2 455 993,20	8,32	947,43	14,64	74,96
Italy	2 151 732,83	9,25	3257,75	8,30	83,09
Russian Federation	2 063 662,28	7,07	892,85	13,30	70,74
India	2 035 393,46	4,69	74,99	19,57	68,05
Canada	1 792 883,23	10,45	5291,75	10,90	81,95
Australia	1 459 597,91	9,42	6031,11	13,20	82,30

Republic of Korea	1 411 333,93	7,37	2060,25	8,60	82,16
Spain	1 375 856,06	9,03	2658,27	9,20	83,23
Mexico	1 298 398,65	6,30	677,19	18,84	76,70

China has comprehensive three-tier medical and health service network, with province, prefecture and county hospitals. All hospitals provide basic health care services and response for emergencies. Primary care is provided in rural township and urban community hospitals, and secondary and tertiary hospitals. Village doctors, who are not licensed, can work only in village clinics and it contributes the inequality in health care access and quality. There are public, private, non-profit and for-profit hospitals. The quality of hospitals varies and the best are Western-style medical facilities with international staff and they are much more expensive than public hospitals. Public hospitals are available in all cities and their quality also varies by location, the best usually are public city level hospitals. Traditional Chinese medicine is widely used and there are also Chinese medicine hospitals throughout the country. Hospitals are paid by out-of-pocket payments, health insurance compensation, and public hospitals also receive government subsidies. A large part of the patients fully pay out-of-pocket, because they receive out-of-network services. Mental health is not integrated in primary care, basically patients with mental health illness are treated at home or in the community, only severe are treated in psychiatric hospitals (The Commonwealth Fund, 2016; China Joint Study Partnership, 2016). Absence of skilled mental health professionals currently is one of the most critical issues in Chinese mental health system. At the same time only 2,35% of the total health budget is spent on mental health and less than 15% of the citizens have health insurance that covers psychiatric disorders (World Health Organization, 2005). This improves the possibility of inequality because it is evident that people with the greatest socio-economic disadvantages are more often those with the higher mental health care needs (Saxena, Thornicroft & Knapp, 2007). Basically long-term care is provided by family at home and it is because of Chinese tradition. There are only few formal long-term care providers but conditions in long-term care facilities are poor, and there are long waiting lists. Family does not receive any financial support or tax benefits and expenses in long-term care facilities are paid out-of-pocket. This points the development, availability and quality problems of mental health care and long-term care that could be associated with the national historical and cultural traditions (The Commonwealth Fund, 2016).

Following figure reflects the number of health care institutions and distribution percentage. In China in 2015 were 983528 different health care institutions. Most part of the health care institutions were health care

institutions at gross- root level, reaching 93,6% of the total number. From them 65,1 % where village clinics and 21,2% outpatient departments. Despite the country's high fertility rates, only 0,3% from the total number of health care institutions are specialized public health institutions, women and children care agencies. Hospitals are only 2,8% of the total health care institutions number, of which only 1,8% is general hospitals (National Bureau of Statistics of China, 2016).

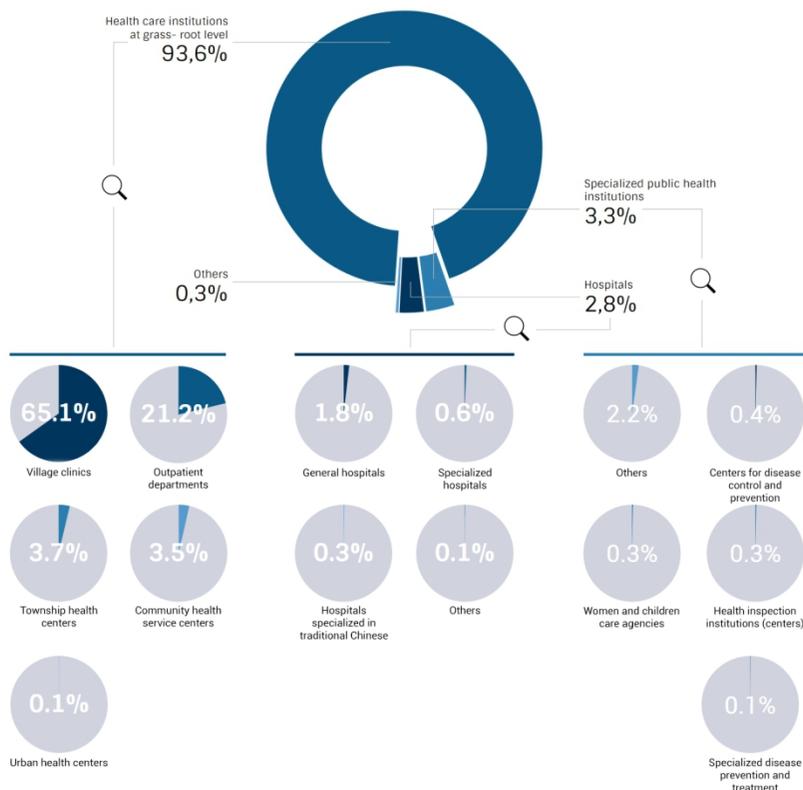


Figure 2: Number of health care institutions in 2015.

In 2009 China launched an ambitious health care system reform, where were planned health policy development goals for the next 20 years and as a result already in 2014 96,9% of the total population had health insurance (International Labour Organization, 2016); National Bureau of Statistics of China, 2016). In China there are both publicly financed insurance and private health insurance. There are three main types of publicly financed insurance: 1.urban employment-based basic insurance (from 1998), 2. urban resident basic insurance (from 2009), 3. new cooperative medical scheme for rural residents (from 2003). Urban employment-based basic insurance covers only employed persons and it is

financed from payroll taxes and small government funding. Urban resident basic insurance is voluntary, mainly government financed and it covers self-employed individuals, children, students, and elderly adults. The new cooperative medical scheme is also voluntary, also mainly government financed and it covers rural population (Zhao, 2014; Yu, 2015; Liu, Wong & Liu, 2016; National Bureau of Statistics of China, 2015). Coverage of publicly financed health insurance is almost universal, 96,9% of the population from 2014 has at least basic health insurance coverage (International Labour Organization, 2016; National Bureau of Statistics of China, 2016). This shows that China has built the world's largest basic medical security network. However publicly financed health insurance cover only about half of all medical costs, with lower proportion for serious and chronic illnesses. Private health insurance is provided by for-profit companies and it is purchased to cover deductibles, copayments, and other cost-sharing. Private health insurance often enables people to receive better quality of care or higher reimbursement (Zhao, 2014; Yu, 2015; Liu, Wong & Liu, 2016; National Bureau of Statistics of China, 2015).

The main problems of China's health care provision and system are associated with insufficient and unequal access and quality to the health care. There are also good practices, policies examples of inequality reduction in health care availability and quality. For example, healthcare access inequalities are also affected by the income and solvency differences of the population. This was partly addressed with health care reform and health insurance accessibility, ensuring almost universal health insurance coverage in the country. Almost universal, because health insurance coverage still does not provide absolute equality in service accessibility and quality. The existing health insurance system still contributes inequalities because of the differences in insurance benefit packages. For example, urban employment-based basic insurance provides a broader benefit package than the other two insurance schemes and it is only available for part of the population, in addition, contributes inequalities in urban and rural areas. These aspects are in agenda of policies because in both national and local level are discussions, initiatives and also pilot projects for the consolidation of insurance schemes. Inequality is also contributed by the health care infrastructure and its accessibility because most part of the biggest and best hospitals with higher skilled health care personnel are located in urban areas. To reduce that, government and local governments offer support training programmes for rural doctors in urban hospitals and new medical graduates should work as residents in health care facilities in rural areas, in order to ensure at least the number of professionals. However, in general it has not solved inequalities in health care accessibility and quality between rural and urban areas (The Commonwealth Fund, 2016; Yang, 2013; Barber and Yao, 2010).

One of the most important problems in accessibility of health care services is large out-of- pocket spending, which exists despite the large number of people who have health insurance. In 2011 out-of pocket spending of urban population in total health expenditure was 36% and out-of pocket spending of rural population was 50%. Out-of pocket spending of urban population each year is declining much faster than out-of-pocket spending of rural population. In addition, the out-of-pocket payment, as a percentage of annual household living consumption, has continued to rise, this particularly applies to people living in deprived rural areas (Long, Xu, Bekedam & Tang, 2013). As shown in the figure below, out-of-pocked health expenditure basically decrease, in 2015 reached 29,27% and still it is a third of total health expenditure (National Bureau of Statistics of China, 2016). In addition, when we analyze out-of-pocket health spending per capita as a percentage of household final consumption expenditure per capita, then we can see that it is not decreased because in 2012, 2013 and in 2014 consistently amounted more than 10% (see in the table below) (OECD, 2017; The World Bank, 2017).

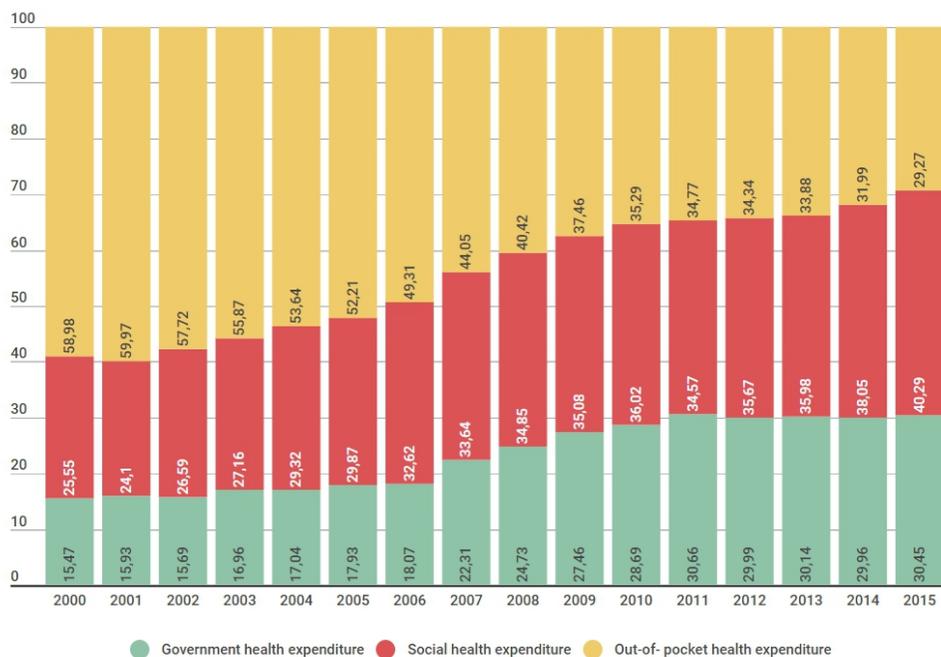


Figure 3: China’s health financing structure.

Table 2: Out-of-pocket health spending per capita as a percentage of household final consumption expenditure per capita.

Indicat or Name/ Year	Household final consumption expenditure per capita (constant 2010 US\$)	Out-of-pocket health spending per capita (US\$)	Out-of-pocket health spending per capita as a percentage of household final consumption expenditure per capita (%)
2000	661,6	78,6	11,88
2001	711,5	87,3	12,27
2002	781,8	97,1	12,42
2003	834,3	105,7	12,67
2004	903,0	111,8	12,38
2005	1003,6	122,7	12,23
2006	1093,1	130	11,89
2007	1230,6	129,3	10,51
2008	1332,6	140,2	10,52
2009	1473,9	157,3	10,67
2010	1612,7	158,9	9,85
2011	1797,6	179,1	9,96
2012	1944,8	202,1	10,39
2013	2075,2	222,1	10,70
2014	2234,7	234,5	10,49

World Health Organization determined basic ethical principles of health resource allocation: equity, efficiency and utility (World Health Organization, 2004). The unequal allocation of health resource is a global problem, not just a phenomenon in China. But in China, the inequalities increase because of unequal distribution of health resources between urban and rural areas. Traditionally, most part of health care resources is concentrated in the major hospitals, particularly in urban areas. As indicated in the data from the China Statistical Yearbook in 2014 71,6% of total health expenditure were in urban areas and only 28,4% were in rural areas, although in 2014 in urban areas lived 54,7%, and in rural areas 45,23% of the population (National Bureau of Statistics of China, 2015; National Bureau of Statistics of China, 2016). This indicates that the health expenditure is disproportional to the population of urban and rural areas. The expenditure difference is associated with comparatively greater hospital number, bed number and staff number in health care institutions of urban areas. Comparatively smaller number of hospitals, beds and number of health care staff in rural areas only increases the health care accessibility and quality inequities between rural and urban areas. For example, in 2015 beds of medical institutions per 1000 population in urban areas was 8,27 but in rural

areas it was 3,71. Moreover, the number of beds in urban areas each year has been increasing significantly but in rural areas the increase has been very small (National Bureau of Statistics of China, 2016). Also, for example, in 2015 medical technical personnel in health care institutions per 1000 persons in urban areas was 10,2 but in rural areas it was 3,9 and number of medical technical personnel in urban areas are increasing faster than in rural areas (National Bureau of Statistics of China, 2016). It also indicates that Chinese social security and health care systems are with urban-oriented focus. In 2013 over 76% of primary care practitioners at community health facilities in urban areas obtained a postsecondary diploma or a higher degree but in township health centres in rural towns only 55%. In rural village clinics were worst situation with only 20% being licensed doctors serving half of the country's population (Wu and Pong Lam, 2016). In addition, the accessibility of health care services is a national problem, not just the issue of inequalities in accessibility between urban and rural areas (see in the table below). As the statistics show, the increase of licensed doctors per 1000 persons is around 4% per year and increase of registered nurses is around 9% per year. Statistics indicate the restrictions of health care service accessibility because, for example, in 2015 on each licensed (assistant) doctor and on each registered nurse were almost 500 persons. Beds per 1000 persons increase about 7% each year, but actually per 1000 persons it is just around 5 bed places in medical institutions (National Bureau of Statistics of China, 2016).

Table 3: Number of employed and beds in medical institutions per 1000 persons.

	2010	2011	2012	2013	2014	2015
Licensed (assistant) doctors	1,8	1,83	1,94	2,06	2,12	2,2
Registered nurses	1,53	1,67	1,85	2,05	2,2	2,4
Beds in medical institutions	3,58	3,84	4,24	4,55	4,85	5,11

Inequalities in allocation of health care resources have contributed unequal distribution of demand of health care services because comparatively a larger number of patients are in the largest hospitals in urban areas, despite the population distribution in urban and rural areas (National Bureau of Statistics of China, 2016).

Insufficient and unequal health care quality in patient care is contributed by a number of reasons. As a result of financial pressure, without clear government guidelines, many hospitals primarily do not focuses on the quality of health care, but on extraction of financial resources. This is because of hospital's income sources, in most cases the hospital from the government receives around 7% of the income, bigger hospitals receive more. Other income hospitals provides from the health care services and medication sales. Therefore, prescription of unreasonably many and expensive medicines is the widespread problem. Approximately 40% of hospitals income is derived from drug sales and around 50% from health care

services (Barber, Borowitz, Bekedam & Ma, 2014). As there are no clear guidelines that determine the boundaries of service delivery and medication sales according to actual health condition needs of patients, therefore hospitals can be primarily focused on extraction of financial resources, rather than on patient-oriented health care.

Essential problem of promoting equal and qualitative health care is absence of unified and integrated national health care system. Laws and regulations which determine the provision of health care services mainly are decentralised. Therefore supervision and governance of health care services is mainly decentralised and implemented by different involved parties: National Health and Family Planning Commission, local governments, different companies etc. The diversity of involved parties, decentralized supervision and governance creates a very segmented and complex environment of the health care quality monitoring. As the health care quality monitoring is a complex and often may not be consistent, therefore, the quality of health care may decline or be unequal in different territories (China Joint Study Partnership, 2016).

The continuous changes in social and economic environment not only point the problems and actualities of China's health care system but also at least partly create view of future perspective. Demographic profile of patients is constantly changing because of the social environment changes and continuous development of health area. Also in China, as in a large part of the countries of the world there are an ageing population trends and urbanization. 10,1% of Chinas total population in 2016 was 65 years old or above (The World Bank, 2017). It is predicted, that in 2030 the share of people aged 60 years or over is projected to increase to 25 % of total population (United Nations, 2015). The aging population creates significant social and economic pressure on the health care system. For example, increase of older people number creates increase of health care demand and more topical becomes the question of how to pay for health care services. Implemented "one-child" policy in 1979 will make this question even more topical and the government and individuals will need to find the solutions for health care provision.

In China are rapid urbanisation trends, in 2015 56,1% of population lived in urban areas and each year number of people living in the urban areas increases by about 1% (National Bureau of Statistics of China, 2016). It is expected that by 2050 around 76% of China will be urbanized (United Nations, 2014). Urbanisation will create significant pressure on the health care system because will become more topical the issue of access to health care and the inequalities between urban and rural areas. Also changes in the place of living, diet, lifestyle will make more topical the issue of health influencing negative factors, for example, environment, diet, sedentary

lifestyle can make even more important the issue of morbidity and mortality from noncommunicable diseases. World Health Organization notes that in China, 87% of all deaths are caused by noncommunicable disease (World Health Organization, 2015). The health insurance system needs to be integrated in accordance with the urbanization changes (The World Bank, 2010; Wang, Zheng, He & Jiang, 2014). Currently health insurance coverage is functioning at a local level; people who move from rural to urban areas lose opportunity to use insurance because options of use are linked to the previous living place. This situation may affect the social stability and certainly will affect access to health care and will contribute the inequality.

Conclusion

China's rapid economic growth has not contributed the equally rapid development of health care sector. Health care expenditure is lower than in many developed and in some developing countries. Almost universal health insurance coverage still does not provide absolute equality in accessibility and quality of services and cover only about half of all medical costs. The main problems are related with insufficient and unequal access to health care. Most part of the biggest and best hospitals with higher skilled health care personnel is located in urban areas. Still is a problem with large out-of-pocket payments, unequal allocation of health resource between urban and rural areas that has contributed unequal demand distribution of health care service. As a result of financial pressure, many hospitals are primarily not focused on the quality of health care, but on the extraction of financial resources. Important problem in promotion of equal and better quality health care is absence of unified and integrated national health care system. There is an ageing population trends and urbanization that may affect social stability, access to health care and promote inequalities.

In 2009 China launched an ambitious health care system reform, were planned health policy development goals for the next 20 years and as a result coverage of publicly financed health insurance is almost universal and China has built the world's largest basic medical security network. Reforms have five key focus areas: 1. accelerating development of the basic health security system, 2. establishing an essential-medicines system, 3. improving the grass-roots health care system, 4. promoting equitable access to basic health services, 5. advancing pilot projects in public hospitals. The main reform future challenges are related to the system integration in all health care services to ensure continuity of the services, as well as with the need to make a stronger primary health care, ensuring people-oriented health care system. Still the topical issues of reform are the need of public hospital reform, improvement of medication access and management and extension

of health insurance compensation by reducing the individual out-of-pocket payments.

Despite the China's development and population health improvements, China is faced and will be faced with significant health challenges – the need to tackle the significant health inequalities and to ensure preparedness for the fight with noncommunicable diseases, whose importance is growing because of the changes in diet and lifestyle. The rapid economic development has created unequal socio-economic conditions among the population. Health inequalities will be one of the most important health challenges, for example, already there are inequalities in availability and quality of health care services between urban and rural areas, between different population groups (migrants, ethnic groups, etc.) and in different geographical regions (east, west, etc.). Already around 87% of the population mortality is associated with noncommunicable diseases.

In October of 2016 the Chinese government and party issued a high-level political directive “Healthy China 2030”. In accordance with this directive, health is recognized as a precondition for further Chinese growth (“necessary for promoting the all-round development of human beings and the fundamental conditions for economic and social development”). Health improvement is a precondition for promoting all kinds of society's development and this how healthy we will be each individually or all together will affect our opportunities in social and economic environment, our opportunities to live and how to live. Healthier society is not only the goal of the China but also should be a goal in every country and in the world, learning from good practice and avoiding failures, from which it is possible to avoid.

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