

# *Comparison and Research on Basic Modern Medical Systems in China and America*

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**Abstract:** Since entering the 21st century, China's progress in modern medical systems is very obvious, and it has gradually narrowed the gap with developed countries. However, in the field of modern medicine, China's start is decades later than Western countries, so there are still some gaps. This report will start from three aspects: Sino-US modern medical system structure, medical insurance system, and medical supervision, comparing and analyzing some primary data, the following three suggestions are put forward: further, diversify the medical and health system with Chinese characteristics; improve the basic medical unit based on the community construction to reduce the waste of medical resources; simplify and improve the drug registration and approval process, to apply it to the grassroots as soon as possible. This report aims to conduct a comparative analysis of the modern medical systems in China and the United States, find solutions that can be improved, and improve the modern Chinese medical system.

**Keywords:** medical insurance, medical system structure, medicine structure

## 1. Introduction

Thes In 2009, China launched a new round of medical and health system reform round, initially achieving full coverage of urban workers, farmers, urban non-employed residents, and other citizens with medical insurance [1]. By 2018, China's National Medical Security Administration was established, and China's medical and health system has taken a big step forward [2]. On March 23, 2023, the General Office of the Central Committee of the Communist Party of China and the General Office of the State Council issued the "Opinions on Further Improving the Medical and Health Service System" [3], "Promote the comprehensive establishment of a high-quality and efficient medical and health service system with Chinese characteristics, and provide Provide all-round and full-cycle health services for the people", strive to improve the medical and health system, and achieve further progress in the medical insurance system. However, the problem of complicated and expensive medical treatment for ordinary people still needs to be properly resolved.

At the same time, the reform of the modern American medical system was carried out almost simultaneously. In 2010, the Obama administration promulgated the Obamacare Reform Act, and in the same year signed a new healthcare reform plan - the "American Public Health Act" to expand the scope of medical insurance. Reduce and control medical expenses. The two bills are a big step forward in America's decades-long health care reform program. Beginning in 2017, the Trump administration

began to gradually improve the ACA Act. In order to gain insight from the US healthcare reform bill, it is imperative to conduct a thorough comparison of the healthcare systems in both countries. The following will make a basic elaboration from the three aspects of the medical system structure, medical insurance structure, and medicine supervision of the two countries.

## 2. Methodology

This paper mainly adopts the method of literature research. The data and theoretical basis in the paper come from official and proven research results, and a comparative analysis is carried out.

Argument

## 3. Comparison of Modern Medical System Structures in China and the United States

### 3.1. Chinese Healthcare System

#### 3.1.1. Basic Composition

China's medical and health system is mainly composed of health system administrative institutions and medical and health service institutions. The health administrative organization system is divided into four levels from central to local, including the National Health and Family Planning Commission, provincial health departments, municipal health bureaus, and district health bureaus. [4] Townships generally do not have independent health administrative departments. Health service institutions are generally composed of hospitals, primary medical and health institutions, and professional public health institutions. Its primary responsibilities are to undertake essential public health services and provide functions such as prevention, health care, and health supervision.

Figure 2.1 Organization of Chinese health system

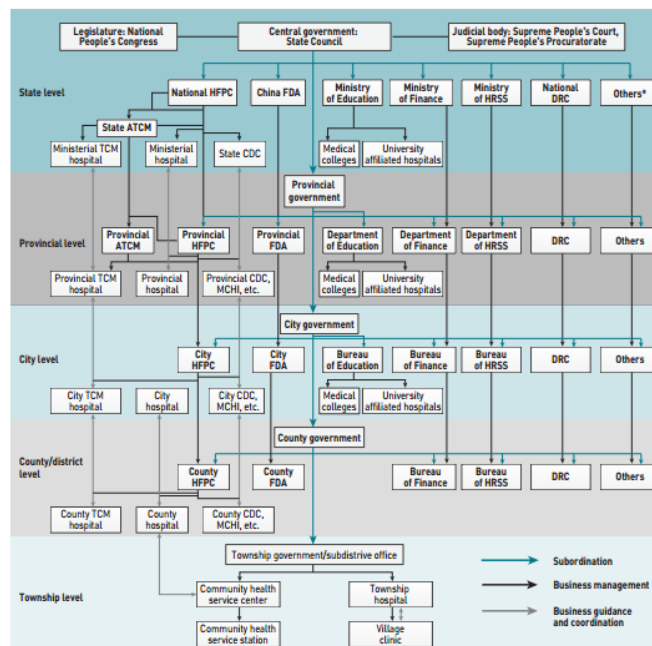


Figure 1: Organization of Chinese health system [5].

#### 3.1.2. China's Characteristic Medical System

In China, traditional Chinese medicine are also important parts of the medical system. This unique cultural background determines that China must build a health system with Chinese characteristics.

At present, the integration of traditional Chinese and Western medicine is a critical path. It is one of the basic working principles of China's medical and health services, and it is also a basic national policy that China needs to implement for a long time [6]. At the National Congress of Traditional Chinese Medicine in 2019, President Xi Jinping once again made an important instruction to "emphasize both Chinese and Western medicine". By 2021, the total number of medical and health institutions of traditional Chinese medicine in the country will reach 77,336, showing a continuous growth trend, and the level of medical services and the level and number of medical personnel will continue to increase [7].

Table 1: Number of TCM medical and health institutions and beds in China.

Institutional category	Number of institutions (individual)		Number of beds (zhang)	
	2020	2021	2020	2021
<b>amount to</b>	<b>72355</b>	77336	1432900	1505271
<b>Traditional Chinese medicine hospital</b>	<b>5482</b>	5715	<b>1148135</b>	1197032
hospital of traditional Chinese medicine	4426	4630	981142	1022754
hospitals of traditional Chinese and Western medicine	732	756	124614	132094
Ethnic medical hospital	324	329	42379	42184
<b>Outpatient Department of Traditional Chinese Medicine</b>	3539	3840	438	947
Outpatient Department of Traditional Chinese Medicine	3000	3276	294	590
Outpatient department of integrated Traditional Chinese and Western Medicine	508	529	142	303
Ethnic medical outpatient department	31	35	2	54
<b>Traditional Chinese medicine clinic</b>	<b>63291</b>	67743		
Traditional Chinese medicine clinic	53560	57695		
Integrated traditional Chinese and Western medicine clinic	9090	9424		
Ethnic medical clinic	641	624		
<b>Traditional Chinese medicine research institutions</b>	43	<b>38</b>		
Traditional Chinese Medicine (Pharmaceutical) Research Institute (Institute)	34	32		
The Institute of Integrated Traditional Chinese and Western Medicine	2	1		
The Institute of Ethnic Medicine (Pharmaceutical) Science	7	5		
<b>TCM clinical departments of non-TCM medical institutions</b>			<b>284327</b>	<b>307292</b>

Note: The clinical departments of Traditional Chinese medicine include various specialties of traditional Chinese medicine, departments of integrated Chinese and Western medicine, and ethnic medicine.

### 3.2. US Healthcare System

For the modern medical system in the United States, the medical and health system in the United States is a diversified and market-oriented system. It includes hospitals, insurance companies, state and federal governments, pharmaceutical manufacturing, and more. The U.S. Department of Health and Human Services (DHHS) coordinates health care in the United States. Its main responsibilities include allocating health funds, setting health goals, and supporting research and higher education. The power of medical and health management is mainly concentrated in the states, and the district health bureaus are jointly established by two or more cities based on economic zones to directly provide health services within their jurisdiction [8].

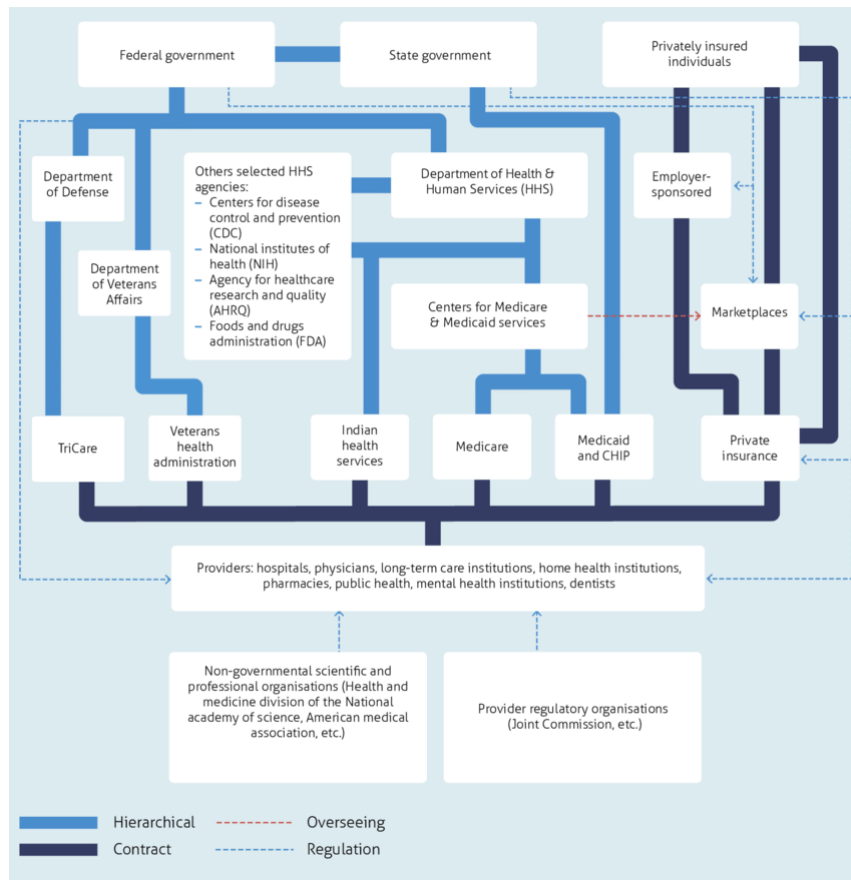


Figure 2: US healthcare system [9].

### 3.3. Comparison of the Healthcare Systems of the Two Countries

#### 3.3.1. Ownership

China's medical system is mainly built on medical institutions with the background of the government and also includes a small number of private hospitals and non-profit hospitals [10].

The medical system in the United States is diversified. Except for public hospitals established by the government and not allowed to be converted into profit-making hospitals, private hospitals account for more than 80% [11], which is unimaginable in China. While China's relatively fixed medical system ensures its stability, it also sacrifices convenience and more opportunities for advancement.

### 3.3.2. Management System

In China, hospitals usually implement the dean responsibility system. That is, the dean, as the legal person of the hospital, controls the entire hospital. The dean generally has an administrative status and often does not stay in the hospital. The daily affairs are generally handled by the supervisors in charge of various departments. The advantage of this system is that the transmission of information is strictly understood by the person in charge at each level, and inappropriate instructions or applications are easily pointed out.

American hospitals are often managed by the board of directors, who are responsible for legal, security, and other issues while in charge of personnel and finance [12]. In such a mode as managing an enterprise, the speed of information transmission and decision-making will undoubtedly be faster. When applying for an appeal, it can be processed more conveniently without the need to report to each level of the government agency and wait for approval and response from the hospital. Although this management decision-making model may have problems such as leapfrog reporting, it is more efficient and it is worth learning from its advantages.

### 3.3.3. Medical Staff

Doctors in China are severely limited in their ability to practice in multiple locations. Strictly speaking, if a doctor leaves the hospital to which he belongs, he loses his qualifications to practice medicine, even if he is in another hospital in the same city [13]. According to the "Law of the People's Republic of China on Practicing Physicians", Chinese doctors are only qualified to practice medicine in non-practicing places when they are dispatched by government departments.

In this regard, the policy of the United States towards doctors is much better. Doctors are usually qualified to practice medicine in their state after obtaining a medical license. A license is required to practice medicine across state lines.

## 4. Medical Insurance Structure

### 4.1. Medical Insurance Structure in China

Chinese President Xi Jinping pointed out at the Nineteenth National Congress: "The main contradiction in our society has been transformed into the contradiction between the people's increasing demand for a better life and the unbalanced and insufficient development [14]." The inadequacy of medical insurance The balance makes it difficult to meet the needs of Chinese residents. Therefore, optimizing the medical insurance system to meet the demand for higher quality has become the goal of China's medical reform.

China's medical security system takes basic medical security as the main body, and other forms of supplementary medical and commercial health insurance are supplemented. Basic medical insurance in China includes two systems: employee medical insurance and resident medical insurance. The former covers the urban employed population, while the latter covers the urban non-employed population and the rural population. In 2021, China's basic medical insurance will be insured to 1.36424 billion people, and the insurance coverage rate will remain above 95% [15].

But in fact, the management systems of the three major social medical insurance delineate the targets of participation according to the social status of the population, operate separately, and have different levels of insurance protection. For example, in terms of financing, urban employee medical insurance has the highest amount of financing per capita, and the proportion of state financial subsidies is relatively small. As for the new rural cooperative medical system, farmers participate voluntarily, and central finance, local finance, and farmers jointly raise funds. The difference between

the rich and the poor determines that this policy with rough positioning is relatively unfair, and those urban workers with a lower average income will incur more personal costs in paying premiums than wealthy farmers. Also, even for urban residents, the amounts may not cover all costs if expensive treatments are needed.

## **4.2. Hospital Medical Reform in China**

Already mentioned, in China, the system design of social medical insurance affects the fairness of the system [16]. Furthermore, hospitals may hold back medical insurance reform. As a non-profit institution, hospitals can only meet 50% of their needs with national financial allocations to maintain their daily operations, and the other 50% mainly depends on selling medicines. As far as the current stage is concerned, the new medical insurance is eager to pursue rapid reforms to solve the problem of expensive medical treatment for the common people and includes more drugs and higher insurance coverage. However, the reform of the hospital system failed to keep up with the speed of the medical insurance reform, which led to some hospitals making ends meet by requiring more government financial subsidies. This is very difficult in the current economic downturn.

## **4.3. Medical Insurance Structure in America**

The current medical insurance system in the United States is mainly composed of public insurance and commercial insurance. Public health insurance accounts for about 43 percent of the total cost of health insurance, and financing programs include Medicare and Medicaid. Its main spending and governing agencies are the federal and state governments [17].

Commercial medical insurance mainly consists of work-related injury insurance purchased by employers for employees (Often medical insurance is also received through, and partly paid for, by an employer) and self-paid medical insurance purchased by individuals [18]. At present, more and more attention is paid to the managed medical insurance model. Medical insurance institutions and medical service providers form a relatively close cooperative service chain through contracting and other forms to provide medical services for the insured. Other managed care insurance models include preferred provider organizations, dedicated provider organizations, and point-of-service plans.

Obamacare has increased the coverage of public insurance, providing insurance options to more people by establishing a health insurance market and expanding Medicaid coverage. At the same time, the bill also encourages commercial insurance companies to participate in market competition, provide more coverage plans, and lower insurance costs. Therefore, Obamacare supports the coexistence of public insurance and commercial insurance to meet the needs and choices of different consumers.

## **4.4. Comparison of the Medical Insurance Structure of the Two Countries**

### **4.4.1. Basic Structure Comparison**

One difference in the organizational structure of the Chinese and American healthcare systems is the proportion of government and private institutional participation. Affected by the different national conditions of the two countries, private insurance companies in the United States play an important role in its medical insurance system. That will be difficult to achieve in China, but there are still lessons to be learned from the way healthcare is financed and the freedom of healthcare programs in the United States.

At present, China has state-owned insurance companies and some joint-stock insurance companies, which also compete with each other. The American system is more market-based. China could ease its restrictions and encourage insurers to compete with each other to incentivize better plans. On the

other hand, the freedom of the medical insurance scheme can be enhanced, so that the insured can choose the proportion of their expenses within a set range, rather than simply dividing them according to household registration, to meet the needs of different groups of people.

#### **4.4.2. The Reforms from Obamacare and Affordable Care Act**

It seems that Obamacare is very beneficial to most poor people, but many people still resist it. This is because, despite the introduction of Obamacare, premiums and deductibles have also risen year after year. Even if many Americans have purchased insurance, they still cannot accept huge medical expenses. About 46 million Americans still do not have health insurance. At the beginning of the enactment of Obamacare, the government once introduced a fines system. The main reason for the fines was to solve the adverse selection problem. Without it, healthy people might not sign up while unhealthy people would sign up. This would create problems for the insurance firms. That policy was repealed when Trump took office.

The Affordable Care Act created long-term health insurance plans called mental plans that cover basic medical services. There are mainly four different underwriting schemes. The better the insurance, the less you need to pay after seeing a doctor, but when you are not sick, you need to pay more premiums every month. If you purchase the lowest-grade insurance, if the medical expenses within one year do not reach the prescribed figure, not only will the insurance company not pay, but it will be emptied in the second year. For the lowest scheme, because of its low cost, people are not willing to buy. But for most high-end insurance, the monthly premium amount is beyond the reach of many people. Therefore, many people are unwilling to buy insurance even if they choose to pay a fine.

In China, the penetration rate of medical insurance is already high, but the quality of various kinds of insurance is uneven. Similarly, many poor people are reluctant to take out insurance, even though the government has given them high subsidies, but their insurance is usually the lowest tier. The government should pay attention to the proportion of premiums and deductibles, and appropriately provide more suitable insurance for low - and middle-income people.

## **5. Medicine Supervision**

### **5.1. Chinese Medicine Supervision**

In today's society, drug safety has become a focus of people's attention. But there are also some subjective or objective problems in the Chinese drug supervision system. In 1998, China established the Drug Administration. Since then, the safety of my country's drug supervision and management has rapidly improved. China has now established a relatively complete pharmaceutical supervision system and has established a complete framework including pharmaceutical research and development, raw materials procurement, production and transportation, and safety monitoring [19]. However, as the reform continues to deepen, the shortcomings of the drug regulatory system and regulatory capabilities have become increasingly prominent, affecting the people's sense of gain in drug regulatory reform [20].

China's drug quality supervision mainly uses the means of drug quality inspection and random inspection. The main purpose is to supervise and evaluate listed drugs to ensure the quality and safety of drugs circulating on the market, and strictly handle counterfeit and inferior drugs to ensure the safety of public medication [21]. However, since 2016, a series of pharmaceutical safety accidents have occurred in China, with some false drug advertisements, unreasonable drug prices, and the use of drugs in violation of regulations [22]. Therefore, China promulgated the "Administrative Measures for the Inspection and Inspection of the Quality of Drugs" in 2019 and updated the sampling monitoring plan in 2020 [23].

## 5.2. American Medicine Supervision

Therefore, China promulgated the "Administrative Measures for the Inspection and Inspection of the Quality of Drugs" in 2019 and updated the sampling monitoring plan in 2020 [24]. Similar to China, drug safety supervision in the United States is also responsible for the management department of the country. U.S. Food and Drug Administration's Supervision Section Office. The room is responsible for planning the overall organizational work, and the Quality Evaluation Department of the Drug Evaluation and Research Center of the Food and Drug Administration is responsible for specific matters [22]. Next, the medicine will be submitted to each working group to further test the laboratory.

## 5.3. The Other Medicine Supervision Areas of the Two Countries

### 5.3.1. The Introduction of New Drugs [25]

In China, the introduction of new drugs (The positioning of the international is slightly different) requires strict and long tests. All listed drugs need to be authenticated after NMPA certification to flow into the market. However, in the actual environment, some drugs cannot be introduced in time because it is listed later than the bidding date, or some radioactive drugs. In addition, as Chinese modern medicine started late, many new drugs have matured in developed countries such as the United States. Taking anti-tumor drugs in 2019 as an example, compared with developed countries, there are fewer new drugs in the world [26].

Table 2: The listing of new anti-tumor drugs in China in 2019 [26].

Drug Name	American listing year	Japanese listing year
Apalutamide	2018	2019
Camrelizumab	Unlisted	Unlisted
DabrafenibMesylate Capsules	2013	2016
Dacomitinib Tablets	2018	2019
Daratumumab Injection	2015	2017
Denosumab	2010	2013
Durvalumab	2017	2018
Enzalutamide	2012	2014
EribulinMesylate	2010	2011
FlumatinibMesylate Tablets	Unlisted	Unlisted
Niraparib	2017	2020
Tislelizumab Injection	Unlisted	Unlisted
TrametinibTablets	2013	2016
Trifluridine and Tipiracil	2015	2014

As far as the current form is concerned, China has strongly supported the introduction and research, and development of new drugs in some policies. However, the current development of Chinese medicine is uneven, and the research and development of new drugs are importantly affected by clinical value. In addition, timeliness also exists.



### **5.3.2. The Role of Traditional Chinese Medicine**

Traditional Chinese medicine is an ancient inheritance medicine that originated in China. Chinese medicine also has a history of thousands of years. However, in modern society, because modern medicine is mainly composed of the Western medicine system, traditional Chinese medicine does not have a systematic standard, so traditional Chinese medicine has gradually declined. In this case, Chinese patent medicines have emerged, playing an important bridge role in traditional Chinese medicine and modern medicine. In the 2015 version of the Chinese Pharmacopoeia, the standards, and specifications of Chinese patent medicine have been formulated in detail, making its positioning in science and academics becomes clearer [27].

At present, China also attaches great importance to the development of traditional Chinese medicine and Chinese medicine.

## **6. Results**

Through the comparative study of the above three aspects, this article describes the differences in the Basic Modern Medical Systems of China and the United States, and puts forward corresponding suggestions. It shows that although the fundamental national conditions of the two countries are different, the Basic Modern Medical Systems in the United States has started for decades early. Among them, there are still many systems worthy of the present China to learn from and absorb their experience.

Conclusion and suggestions:

Combining the medical and health system of the United States with the actual situation in China, China should pay attention to the following issues in the future

### **6.1. Launch a Healthcare System with Chinese Characteristics**

Because the national conditions of China and the United States are different, although the practice of public and private medical insurance in the United States is worth learning, China has to provide basic medical insurance for all residents. However, China can try to change the proportion of fund allocation, encourage enterprises and individuals above the middle class to undertake commercial health insurance, save more money, share the pressure of basic medical insurance, and use this part of the fund where it is more needed.

### **6.2. Establish a More Diversified Medical System**

China should further refine the respective roles of public hospitals, private hospitals, and non-profit hospitals. For the establishment of private hospitals, the standards should be appropriately relaxed, investment in the medical system should be encouraged, and private hospitals should be allowed to charge higher service fees within a certain range. Some support should be given to non-profit hospitals, and public welfare activities aimed at vulnerable groups should be encouraged. For ordinary public hospitals, the price of technical services should be moderately increased to ensure that the hospital receives a certain amount of reasonable compensation while reducing drug revenue. In addition, China should learn from the United States to moderately expand the qualifications of doctors to practice medicine and encourage more academic exchanges.

The community hospital system in the United States is already very developed. However, China has just started to build in this area. Many people still don't trust small hospitals in the community. They may also go to large public hospitals for minor diseases, wasting a lot of doctor resources. Due to China's huge population base, solving this problem is even more crucial. Therefore, China should

vigorously promote the development of community hospitals, and allow doctors from public hospitals to visit community hospitals in combination with the suggestion of expanding the location of doctors' practice, and provide some support.

### 6.3. Promote the Information Construction of the Pharmaceutical Industry

After entering the 21st century, big data has developed rapidly, and drug supervision can also be linked to it. Regardless of the introduction or development of new drugs, or supervision of the quality of drugs, big data can bring great convenience to drug supervision. In addition, the government can also build a unified drug information system to make the speed of drug circulation more convenient and transparent, reducing the possibility of fake drugs being harmful to people. In addition, the complexity of traditional Chinese medicine has always been one of the reasons for the difficulty of developing Chinese medicine. The reasonable use of big data can also help Chinese medicine to alleviate the defects in this area.

## 7. Conclusion

This research aims to find an effective improvement plan for China's modern medical system. By conducting a qualitative analysis of the medical system of China and the United States, medical insurance, and drugs, we can obtain a medical and health system with Chinese characteristics, and improve various hospital systems, insurance systems, and improvement of the pharmaceutical industry. Essence This study conducted a comparative analysis of the three main aspects of the Chinese modern medical system, but the details of the entire modern medical and health system needed more data and suggestions on other aspects. The modern medical and health system is related to people's life and health, and countries around the world attach great importance to it. This research has made a simple comparative analysis of the modern medical and health systems of China and the United States, putting forward some suggestions and hopes to help improve the improvement of the Chinese modern medical system.

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