A Comprehensive Analysis and Comparison of the U.S.' and China's Healthcare System

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Abstract. In an era of rapid globalization, understanding healthcare financing systems across diverse nations can offer crucial insights. This research project delves into the inner workings of the United States Medicaid and Medicare program and China's state-sponsored healthcare insurance schemes. Each represents a unique model of public health investment, shaped by distinct political philosophies and social contracts. The analysis reveals that the U.S. Medicaid program, despite its broad reach and comprehensive services, grapples with issues of equitable access and sustainable financing. In contrast, China's multi-tiered system offers a more standardized, although less comprehensive, form of coverage and faces challenges related to service quality and rural-urban disparities. Both nations, however, are in the continuous process of adapting their healthcare models to meet changing demographic and economic needs. By critically examining these two healthcare funding mechanisms, this study contributes to the ongoing dialogue on public health financing, offering recommendations for future policy interventions and reforms in both countries and potentially others.

Keywords: Healthcare, Medical Insurance, National Health Expenditure, Medicaid, Medicare.

1. Introduction

Ensuring accessible and quality healthcare is a concern shared by governments around the world, but the strategies employed can vary significantly depending on a country's economic, social, and political circumstances. The United States and China, two nations that wield enormous influence on the world stage, have adopted distinct pathways in their healthcare financing models. While the U.S. depends largely on Medicare and Medicaid to offer subsidized health services to specific age and low-income groups, China utilizes several different healthcare schemes with the intent to cater to its population's diverse needs. These respective models arise from unique historical, social, and economic contexts, making their comparison a fertile ground for academic inquiry.

The significance of this research lies in its comparative approach, which provides a clearer understanding of how different socio-political contexts influence public healthcare financing. In doing so, the study aims to facilitate knowledge transfer and policy innovation, potentially benefiting millions of individuals who rely on state-sponsored healthcare.

This study aspires to conduct an in-depth comparative analysis of American Medicaid, Medicare and China's state-run health insurance programs. Beyond surface-level descriptions, we delve into their funding mechanisms, coverage scope, eligibility criteria, and inherent challenges. The goal is to identify what each system does well and where improvements could be made. In synthesizing these insights, this research contributes to the broader academic conversation on how to optimize public health financing mechanisms and aims to be a resource for policymakers in both countries.

2. U.S. and Chinese Public Healthcare System Overview

2.1. The U.S. Healthcare System

The United States remains the only developed country without universal healthcare coverage. However, this hasn't prevented the country from developing one of the most advanced healthcare systems globally. Specifically, the U.S. healthcare framework operates on two major tiers. The first consists of government-provided medical coverage like Medicare and Medicaid, along with state-

sponsored health insurance programs for children. These government programs primarily serve as safety nets for seniors over 65, individuals with disabilities, and children. The second tier is composed of private health insurance plans accessible to the general population. As of 2008, approximately 85% of Americans had some form of health insurance coverage. Within this, nearly 29% were enrolled in social healthcare programs, while a substantial 66.7% were covered by private insurance. These statistics illustrate that the American healthcare system is predominantly driven by private insurance offerings [1].

The largest shares of total health spending were sponsored by the federal government (34 percent) and the households (27 percent). The private business share of health spending accounted for 17 percent of total healthcare spending, state and local governments accounted for 15 percent, and other private revenues accounted for 7 percent, as shown in Table.1.

Table 1. 2021 National Health Expenditure (NHE) Categories [2].

Expenditure Type	Amount (in billions)	Growth	Percent of NHE
Medicare	$900.8	8.4%	21%
Medicaid	$734.0	9.2%	17%
Private Health Insurance Spending	$1211.4	5.8%	28%
Out-of-Pocket Spending	$433.2	10.4%	10%
Other Spending	$596.6	-20.7%	14%
Total (NHE)	$4300.0	2.7%	100%

2.2. China's Healthcare System Overview

In stark contrast to the U.S., which predominantly relies on private health insurance, China has developed a social healthcare system aimed at broader inclusivity. This system is a composite of various initiatives such as rural and urban medical aid, a new type of cooperative medical care in rural areas, and separate medical insurance programs for urban residents and employees. Specifically, the rural and urban medical aid program is government-funded and supplemented by social donations to assist impoverished rural residents and low-income urban households. The new cooperative medical scheme for rural areas is a voluntary, government-organized program where individuals, collectives, and the government contribute to a fund primarily used for severe illnesses. Lastly, urban residents are covered under different medical insurance plans based on their employment status. Over the past decade, continuous efforts to refine and promote these programs have resulted in a healthcare coverage rate in China that now exceeds 95% [3].

3. Comparisons of Nation Health Expenditure (NHE)

3.1. Total NHE Comparison:

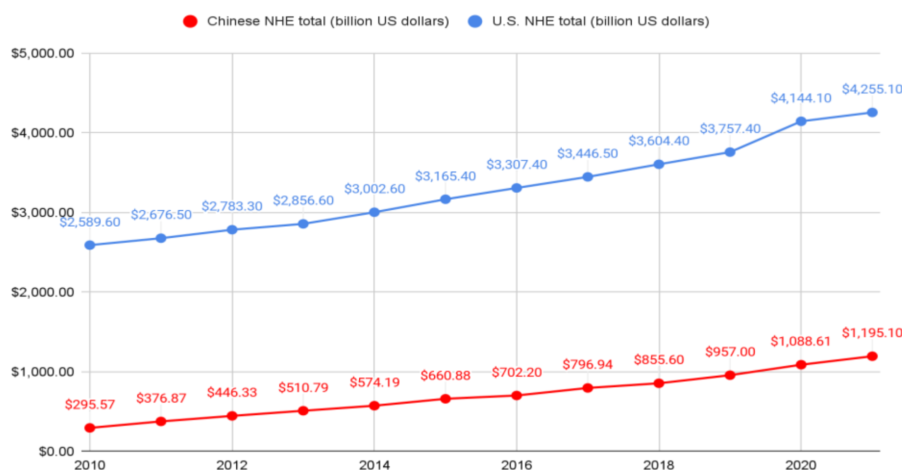

Figure 1. Total NHE Comparison [3-6]

According to Figure 1, the United States spends more than China on healthcare consistently. The U.S. NHE increased from $2,589.60 billion in 2010 to $4,255.10 billion in 2021. This persistent high expenditure reflects the complex nature of the U.S. healthcare system. China's NHE has exhibited remarkable growth, surging from $295.57 billion in 2010 to $1,195.10 billion in 2021, which is a remarkable 304% increase. This consistent expansion underscores China's commitment to strengthening its healthcare sector, driven by factors especially an aging population, increased demand for quality healthcare services, and government investments in healthcare. The COVID-19 pandemic notably impacted both countries' healthcare spending, resulting in a significant upswing in 2020 and 2021. In the coming years, China's escalating healthcare investment aims to enhance healthcare access and quality. Monitoring these investments' impact on health outcomes will be pivotal. Meanwhile, the United States faces the enduring challenge of healthcare affordability and accessibility, necessitating ongoing policy efforts to ensure sustainable healthcare spending.

3.2. NHE Per Capita Comparison

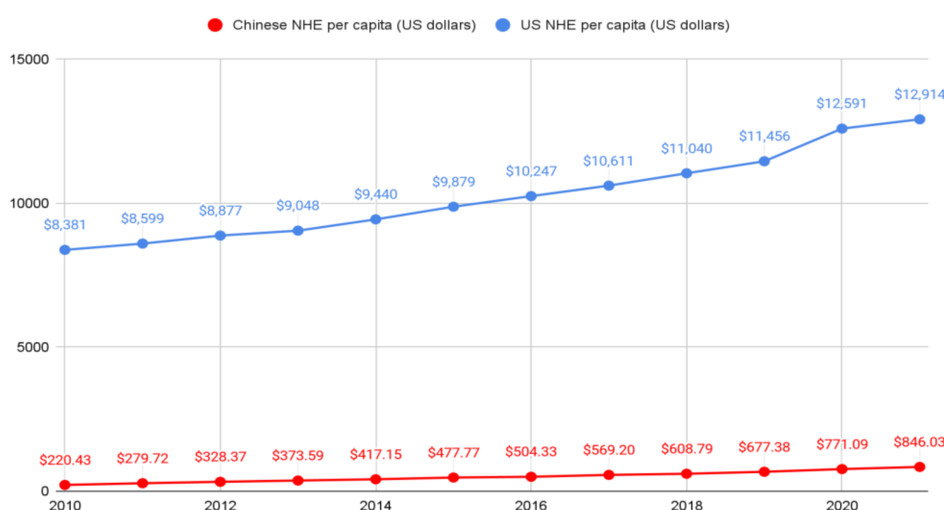

Figure 2. NHE per Capita Comparison [3-6]

As shown in Figure 2, Analyzing the National Health Expenditure (NHE) per capita for the United States and China over the past decade reveals striking disparities and intriguing trends. NHE per capita is a critical metric that provides insight into a nation's healthcare system, its affordability, and the financial burden on individuals. Figure 2 suggests that, in 2010, the US boasted an NHE per capita of $8,381, compared to China's modest $220.43. This colossal gap persisted until 2019, where the US expenditure per capita reached a staggering $11,456 while China had made significant progress, reaching $677.38. However, 2020 and 2021 saw dramatic shifts. China's NHE per capita saw remarkable growth during these years, climbing from $677.38 to $771.09 in 2020 and further to $846.03 in 2021. This upward trajectory can be attributed to China's increased focus on healthcare infrastructure development, expansion of insurance coverage, and investment in research and development.

The United States, on the other hand, also experienced an uptick, but at a slower rate compared to China. In 2020, the US recorded an NHE per capita of $12,591, which jumped to $12,914 in 2021. This increase was partially influenced by the COVID-19 pandemic, which strained healthcare resources and drove up costs. Additionally, the US has been grappling with rising pharmaceutical prices and the challenges of balancing public and private healthcare systems. China's ability to substantially improve its NHE per capita, even amidst a global health crisis, underscores its commitment to enhancing healthcare access for its citizens. The US, while maintaining a significantly higher NHE per capita, faces ongoing challenges in achieving equitable healthcare for all. It's important to note that the comparison isn't apples to apples due to vast differences in population size, healthcare systems, and economic circumstances between the two nations. However, China's

impressive growth in healthcare spending per capita, relative to the US, highlights its ambition to bridge the healthcare divide.

In conclusion, the NHE per capita figures for the US and China reveal a complex interplay of economic factors, healthcare policy decisions, and the impact of a global pandemic. While the US maintains a much higher per capita expenditure, China's consistent growth in this metric showcases its commitment to improving healthcare access and outcomes for its citizens, marking a noteworthy trend to monitor in the years to come.

3.3. NHE as a Percent of GDP Comparison

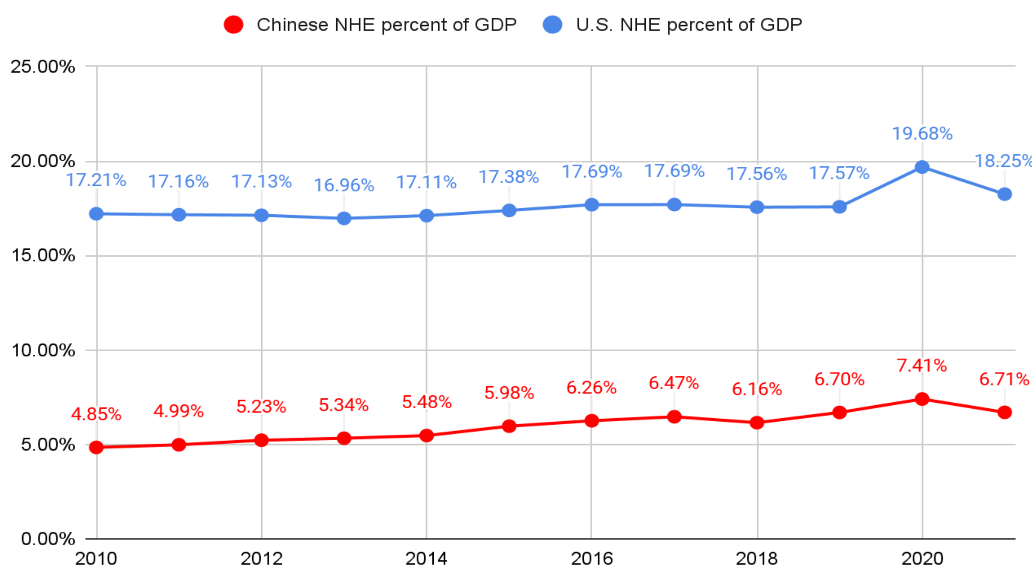

Figure 3. NHE as Percent of GDP [3-6]

The National Health Expenditure (NHE) as a percentage of GDP, serves as a critical metric for understanding the fiscal commitment of a nation to healthcare. As in Figure 3, this data presents a glaring disparity between China and the U.S. from 2010 to 2021, showcasing two fundamentally different approaches to healthcare spending and policy. In the U.S., NHE as a percentage of GDP has been consistently high, hovering around the 17% mark for the past decade. However, there was a noticeable spike in 2020, jumping to 19.68%, likely influenced by the COVID-19 pandemic. It then moderated slightly to 18.25% in 2021. Despite having one of the most expensive healthcare systems in the world, the U.S. does not necessarily enjoy corresponding gains in healthcare outcomes, which opens up questions about efficiency and distribution within the American healthcare system [7].

China, on the other hand, has shown a relatively modest but incrementally rising trend in its NHE percentage of GDP. The increase can be partly attributed to the nation's growing middle class demanding better healthcare services. However, China's drop in 2021 indicates that the rise is not as straightforward or uniformly upward. It's worth noting that even though the percentage is low, China’s large population means that in absolute terms, the expenditures are still substantial [8]. What is most striking is the wide gap between the two countries. The U.S. NHE is almost three times higher as a percentage of GDP compared to China. This gap signifies different healthcare priorities and possibly inefficiencies in the U.S. system. It also reflects cultural attitudes toward healthcare: Americans are more accustomed to a high-cost, high-intervention medical culture, while Chinese policies, despite increasing expenditure, aim for frugality and broad coverage. The trends in the NHE percentage also serve as indicators for potential future trajectories. The U.S. may face sustainability challenges if healthcare costs continue to balloon, particularly without a commensurate increase in healthcare outcomes. Meanwhile, China’s rising expenditure suggests increasing attention to healthcare, but its own challenges lie in making sure that the investment translates to equitable healthcare access for its vast and diverse population.

4. Comparisons of Government Sponsored Medical Insurance Spending

4.1. Medicare & Medicaid

Medicare and Medicaid are two major public health insurance programs in the United States, each serving distinct populations and with different benefits, limitations, and reimbursement rates.

Medicare is a federal health insurance program primarily aimed at individuals aged 65 and older. It also serves people under 65 with certain disabilities and those with End-Stage Renal Disease (ESRD) or Amyotrophic Lateral Sclerosis (ALS). The targeted group is primarily adults 65 and older, along with younger individuals who meet specific medical criteria. The rates are predetermined and vary by service, region, and other factors. Physicians are paid according to a Physician Fee Schedule, while hospitals are often reimbursed through a prospective payment system based on diagnoses.

Medicaid is a joint federal and state program that provides health insurance to low-income individuals and families. The program is administered at the state level, which means eligibility and benefits can vary significantly from state to state. Medicaid targets Low-income families, pregnant women, children, elderly in nursing homes, and people with disabilities are the primary beneficiaries. These lower rates have sometimes been a point of contention, as they may discourage providers from accepting Medicaid patients.

Both Medicare and Medicaid are crucial in providing access to healthcare for different vulnerable populations in the U.S. Reimbursement rates in both programs are generally lower than those from private insurers, which has implications for healthcare access and quality. Over the years, various policy proposals have aimed to modify these programs, but they remain pillars of the U.S. healthcare system [5-6].

4.2. Insurance Spending Comparison

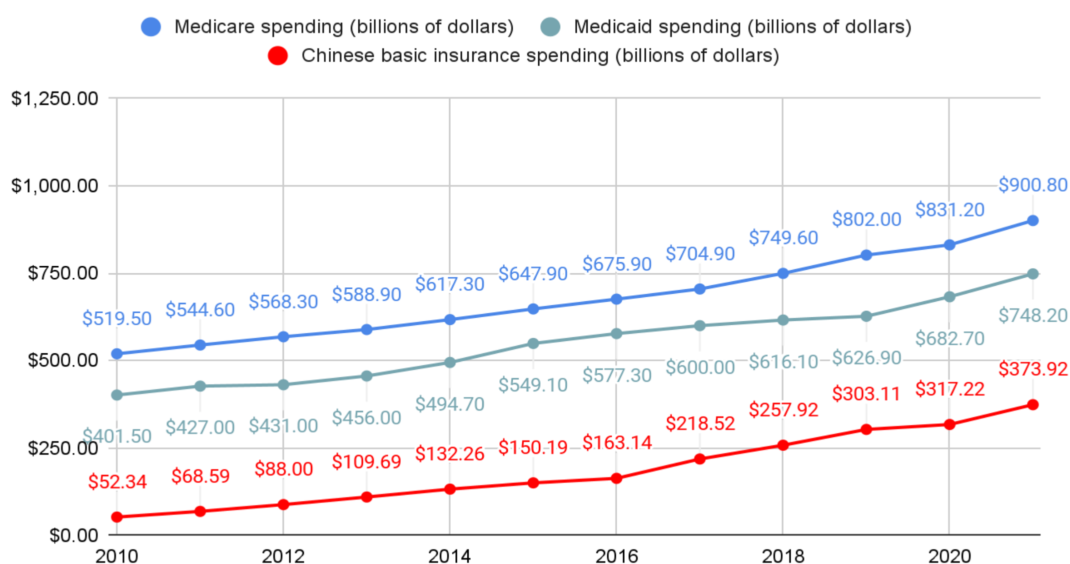

Figure 4. Insurance Spending [3-6]

As shown in Figure 4, the data on insurance spending across Medicare, Medicaid, and China's basic insurance systems, provides a valuable lens to understand not just healthcare expenditure but also socio-economic priorities. The trends observed over the years 2010 to 2021 offer some compelling insights. The most immediate observation is the steady increase in spending for all three systems. Medicare, for instance, increased from $519.5 billion in 2010 to $900.8 billion in 2021. Medicaid saw a rise from $401.5 billion to $748.2 billion over the same period. However, the most striking change has been in China's basic insurance, which increased from $52.34 billion to $373.92 billion in just 11 years. This suggests that while the U.S. systems are growing, China is pouring significant resources into its healthcare system at a much faster rate.

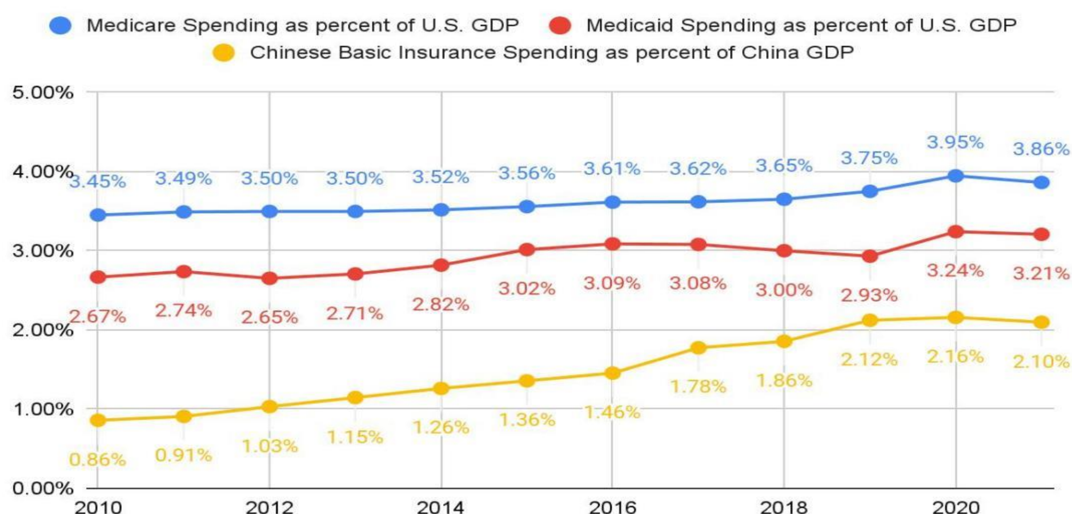

Figure 5. Insurance Spending as a Percent of GDP [3-6]

In Figure 5, U.S. systems appear to be costlier, but this may be misleading. It's crucial to consider that Medicare and Medicaid are largely targeted systems catering to seniors, people with disabilities, and low-income families. China's basic insurance system aims to be more universal, covering a larger, albeit less affluent, population base. Thus, the spending differences might be reflective of the different types of healthcare models in practice. The steady growth in Medicare and Medicaid may demand policy reforms, as these numbers are likely unsustainable in the long run. China's rapid investment in healthcare could signify its ambitions to improve its domestic quality of life or could be aimed at closing the healthcare gap between it and Western nations. In conclusion, while the U.S. and China have been increasing their healthcare spending steadily, the rates and directions are vastly different, suggesting differing economic, demographic, and even political landscapes [9]. The data serves as a reminder that while healthcare is universally important, how nations choose to prioritize and fund it can vary significantly.

5. Conclusion

The data on healthcare expenditures for Medicare, Medicaid, and China's basic insurance system illuminates significant divergences between the U.S. and China, both in terms of total spending, and spending as a percentage of GDP. Importantly, these disparities extend to the structural and demographic characteristics of each country, which in turn influence the effectiveness and reach of their respective healthcare systems. The U.S. healthcare system is characterized by higher per capita spending and a more substantial percentage of GDP devoted to healthcare. Despite the sizable investments, the system primarily focuses on seniors and low-income populations through Medicare and Medicaid, rather than offering a universal coverage model. On the other hand, China’s healthcare spending is growing at a significantly faster rate, with its basic insurance aiming for more universal coverage, albeit at a much lower per capita investment. It is crucial to consider the demographic and occupational makeup of China when evaluating the rapid increase in healthcare spending. China’s large agricultural population underlines the importance of universal healthcare coverage in a country where a substantial part of the populace may not have easy access to advanced medical facilities. Unlike urban areas, which have better healthcare services and higher incomes, rural regions may lag in both facilities and the ability to pay for services. In such a context, China's efforts to increase basic insurance spending could be interpreted as an attempt to bridge the healthcare gap between its urban and rural communities [10].

The U.S. and China represent two contrasting paradigms of healthcare investment. The U.S. operates on a more selective yet expensive model, while China is working towards universal coverage, facilitated by rapid financial growth in healthcare. Each approach has its merits and drawbacks,

shaped in part by each country's unique socio-economic realities. As China's agricultural community continues to be a significant part of its demographic, its investments in universal healthcare signify not just economic growth but social progress. Meanwhile, the U.S., despite its higher spending, may need to reevaluate the efficiency and reach of its existing healthcare models.

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