The Changing Trend of Primary Medical Care in China From The Perspective of Urban and Rural Areas

Zixuan Luo*

School of Economics, Sichuan University, Chengdu

*Corresponding author: lzx@alu.scu.edu.cn

Abstract. As one of the most populous countries in the world, China has consistently grappled with the challenge of uneven distribution and inequitable provision of medical resources between urban and rural areas. Urban regions boast a greater number of medical facilities and healthcare professionals compared to their rural counterparts, exacerbating the issue of insufficient medical resources and inadequate services in rural areas. This disparity not only impacts the health status of rural residents but also perpetuates social inequality between urban and rural communities. With China's ongoing process of urbanization, these disparities in healthcare have become increasingly pronounced. The objective of this study is to examine the evolving trends in China's primary healthcare system from an urban-rural perspective, aiming to gain a better understanding of how medical resources are distributed, access to healthcare services is facilitated, and disparities in medical consumption persist between urban and rural areas. The findings from this study yield several crucial recommendations: Firstly, it is imperative to prioritize enhancing the establishment of primary healthcare facilities in rural areas by significantly increasing both the quantity and quality standards for medical institutions while improving bed availability to meet the pressing needs for adequate healthcare among rural residents. Secondly, measures should be implemented to bridge the gap in distribution between health workers serving urban versus rural populations by incentivizing more professionals to engage in medical work within undeserved regions to ensure timely access for all individuals residing outside major cities. Additionally, both government entities and society at large should encourage increased investment by rural residents into their expenditure on healthcare while simultaneously improving overall levels of medical security coverage as a means of alleviating financial distress. Finally, it is imperative to adapt and optimize the rural industrial structure following the specific circumstances of different regions, thereby enhancing the income of rural residents and augmenting their capacity to allocate resources towards medical and healthcare expenditures.

Keywords: Primary care system; Urban and rural perspective; Allocation of medical resources; Access to medical services.

1. Introduction

1.1. Background

The research on the changing trends in China's grassroots healthcare from an urban-rural perspective is of paramount significance. Over the past few decades, China has achieved remarkable economic growth. However, this development has not been evenly distributed, with a stark urban-rural healthcare divide emerging as a prominent concern.

China's grassroots healthcare system plays a pivotal role in providing essential medical services to its vast population. Unfortunately, it has faced substantial challenges, including resource imbalances, shortages of rural healthcare professionals, and uneven service quality. These challenges have exacerbated disparities in healthcare access and quality between the city and the countryside, ultimately impacting the well-being of millions.

Understanding the evolving dynamics of China's grassroots healthcare system is crucial for policymakers, healthcare practitioners, and researchers. It offers insights into how to bridge the urban-rural healthcare gap, enhance healthcare accessibility in rural regions, and ensure equitable healthcare services for all citizens. By examining the impact of government policies and technological advancements, this research can contribute valuable recommendations to address these pressing issues and promote more balanced urban-rural development.

In summary, the study of China's grassroots healthcare changes from an urban-rural perspective holds significant importance in advancing healthcare equity, promoting social well-being, and fostering balanced socioeconomic development in the world's most populous nation.

1.2. Related research

Hsiao's article "Rural Health Care in China: Policy and Practice" in Health Affairs explores the intricacies of rural healthcare policies and practices in China. The study provides valuable insights into the challenges faced by rural communities in accessing quality healthcare. It underscores the importance of policy reforms to bridge the urban-rural healthcare gap, emphasizing the need for sustainable healthcare systems [1]. Hu explores the effects of health insurance on healthcare utilization among China's elderly population. Hu's research indicates that health insurance significantly increases healthcare access for older individuals. This study contributes valuable insights into healthcare policies for the elderly in China, highlighting the importance of insurance coverage in improving their medical services utilization [2]. Liu investigates disparities in health-related quality of life between rural and urban populations in Northern China. Liu's research findings indicate that rural residents generally exhibit a comparatively poorer related health quality of life in comparison to their urban counterparts. This work underscores the need for targeted healthcare interventions and policies to bridge this gap, particularly in Northern China's rural areas [3].

Lin's research explores the impact of health insurance on healthcare utilization in rural China. The study suggests that health insurance plays a significant role in increasing healthcare access and usage among rural populations. Lin's findings emphasize the importance of extending and enhancing health insurance coverage to further improve healthcare utilization and quality in rural areas of China [4]. Xi provides critical insights into the complexities of healthcare reform in rural areas. The research identifies key challenges and proposes effective strategies to address them. Xi emphasizes the need for tailored policies, increased funding, and healthcare infrastructure development to bridge the urban-rural healthcare gap. This study serves as a valuable resource for policymakers and stakeholders working towards rural healthcare improvements in China [5]. Bai explores the healthcare-seeking patterns in a rural Chinese village. The research identifies factors influencing healthcare choices and highlights the importance of accessibility and affordability. Bai's findings underscore the need for improved healthcare infrastructure and services in rural areas. This research is instrumental for policymakers striving to enhance healthcare access and utilization among rural populations in China [6].

Zhu provides a comprehensive overview of the historical and contemporary landscape of rural healthcare in China. The study examines the evolution of healthcare policies and delivery systems in rural areas. It emphasizes the challenges posed by disparities in healthcare access and offers insights into policy recommendations. Zhu's research serves as a valuable resource for understanding the complexities of rural healthcare in China, aiding future policy development and healthcare improvement initiatives [7]. Zhang casts light on the vital contributions of community health workers (CHWs) to rural healthcare delivery. The study underscores the significance of CHWs in bridging the healthcare gap, offering essential services, and promoting health awareness among rural populations. Zhang's findings emphasize the need for continued support and integration of CHWs into rural healthcare systems to enhance access and quality of care in these underserved areas, making this research instrumental for healthcare policy and practice [8].

Wang offers valuable insights into the effects of the New Cooperative Medical Scheme (NCMS) on rural healthcare accessibility. The study highlights both the positive outcomes, such as increased financial protection, and the challenges, including disparities in benefit distribution. Wang's work underscores the significance of ongoing policy refinements to maximize the NCMS's effectiveness in improving healthcare access for rural populations, making this research critical for policymakers and healthcare stakeholders [9]. Wang delves into the urban-rural disparities in healthcare access. The research meticulously analyzes factors contributing to these gaps, emphasizing the role of socioeconomic conditions. Wang's work underscores the need for targeted policy interventions aimed

at reducing these disparities, ensuring equitable healthcare access for both urban and rural residents. Policymakers and researchers alike find this study instrumental in addressing China's healthcare inequalities [10].

1.3. Objective

This paper will study the changing trend of primary medical care in China from the perspective of urban and rural areas. The first part will introduce the relevant background of the article and the relevant research on the changing trend of primary medical care in China at home and abroad. The second part will make a detailed analysis of the development status and problems of primary medical care based on the figure. The third part will put forward policy suggestions and solutions to the above problems.

2. Development Status and Problems of Primary Medical Care

2.1. The Number and Growth Rate of Medical Institutions

From Fig. 1, we can see that the primary medical and health institutions in China are generally on the rise, but the growth rate is relatively slow. The decrease in the number of institutions was mainly due to the decrease in the number of village clinics. With the acceleration of urbanization construction, the rural population is decreasing year by year, and the number of village clinics is decreasing accordingly. The number of rural institutions is much higher than that of urban institutions, mainly because the rural population is large and scattered, the number of village clinics is dominant, and more medical institutions are needed to achieve coverage.

From Fig. 2, the growth of urban and rural primary medical institutions is divided: the number of rural primary medical institutions continues to decrease, while urban primary medical institutions continue to increase. Urbanization has accelerated the transfer of rural populations to cities, and the demand for urban medical care has been expanding, driving the growth of the number of urban grassroots medical institutions.

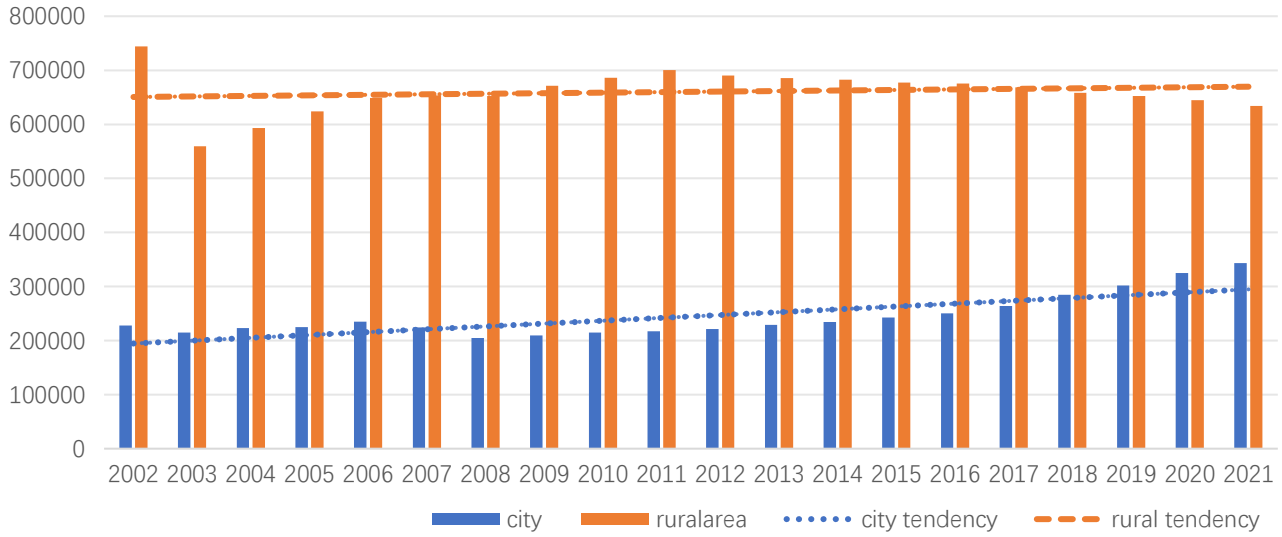


Fig. 1 Chinese Urban and Rural Primary Healthcare Institutions

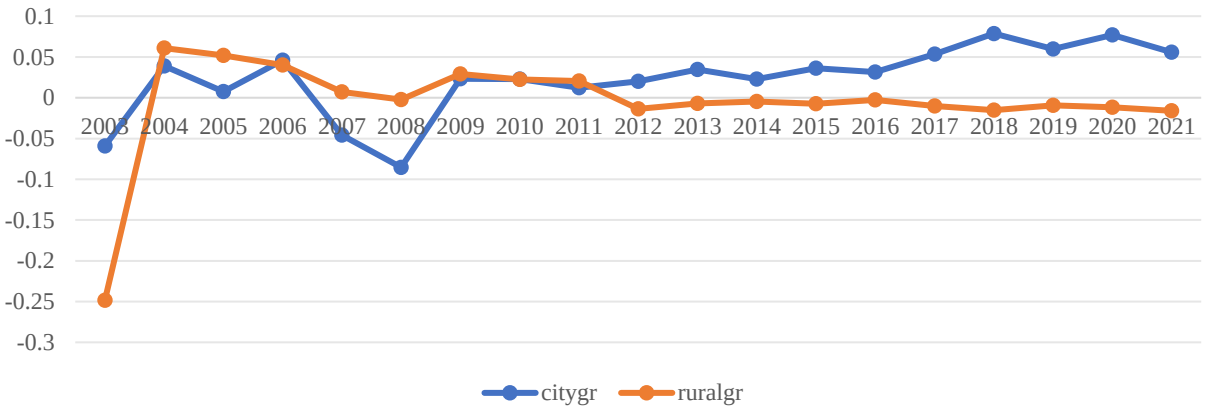


Fig. 2 Changes in the Number of Primary Healthcare Facilities in Urban and Rural China

2.2. Bed Equipment

Over the years, there has been a noticeable improvement in the density of healthcare beds provided by primary healthcare institutions. This positive trend reflects a concerted effort to address the healthcare needs of the population, particularly in urban regions. With more beds available per thousand people, there is an enhanced capacity to accommodate patients requiring hospitalization. This improvement is indicative of the commitment to bolstering the healthcare infrastructure in urban areas.

However, Challenges Persist in Rural Bed Supply. In stark contrast, rural areas continue to face challenges in terms of bed supply density. Here, the number of beds in primary healthcare institutions per thousand people remains significantly below that of urban areas, amounting to less than half the density. This disparity is closely intertwined with the slower pace of development in rural healthcare infrastructure. Several factors contribute to this imbalance, including limited resources, difficulties in attracting healthcare professionals to rural areas, and historical disparities in healthcare investments.

The disparity in bed supply density between town and country areas highlights the persistent rural-urban healthcare divide in China. While urban regions enjoy better access to healthcare resources, rural populations face obstacles in obtaining essential medical services. This rural-urban gap not only affects healthcare quality but also underscores the broader socioeconomic imbalances in the country. Addressing this issue is crucial for achieving equitable healthcare access and improving overall health outcomes across China, as shown in Fig.3 and Fig.4.

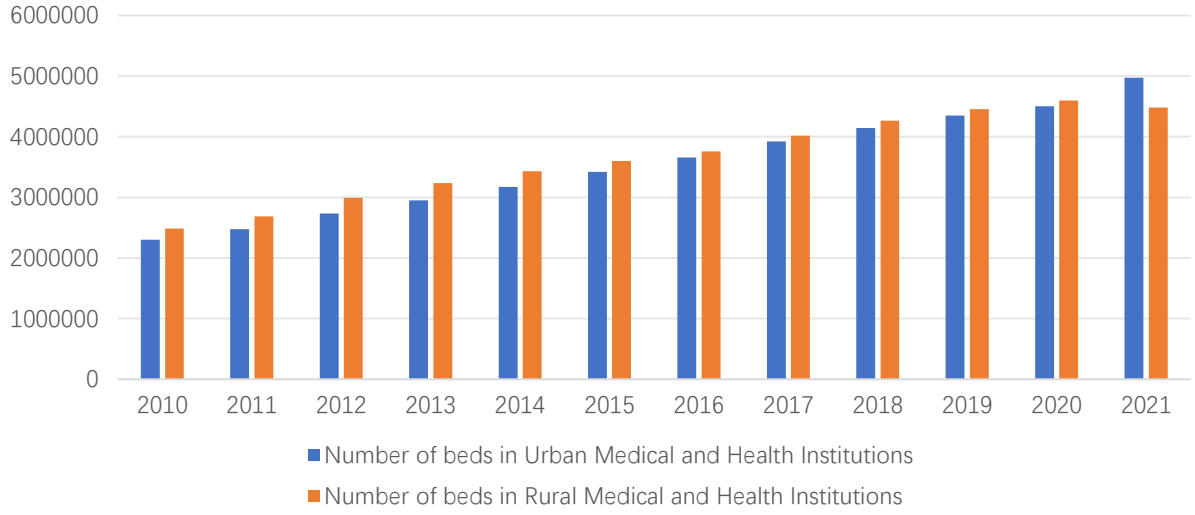


Fig. 3 Number of beds in medical and health institutions

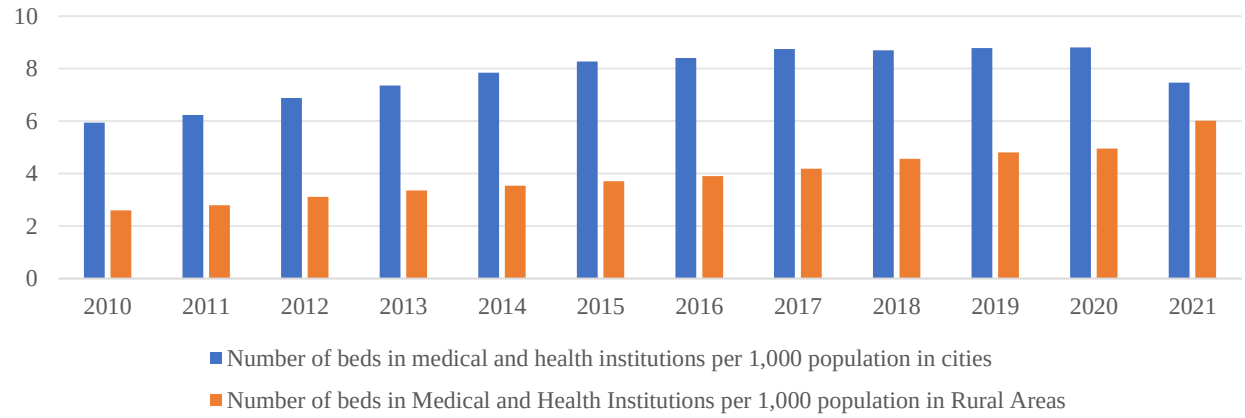


Fig. 4 Number of beds in medical and health institutions per 1,000 population

2.3. Number of health personnel

From Fig. 5 it can see that China's healthcare landscape is marked by stark disparities in the development of its healthcare workforce, with urban and rural areas experiencing vastly different trajectories. Urban centers are witnessing a steady but relatively slow growth in their healthcare workforce, resulting in a relatively modest overall count. In contrast, rural areas exhibit a significantly larger healthcare workforce, albeit with a notably sluggish pace of expansion.

The primary catalyst behind this divergence lies in the allure of urban locales for healthcare professionals. Urban healthcare institutions offer superior working conditions, access to cutting-edge medical technologies, and an overall higher quality of life compared to their rural counterparts. Consequently, healthcare talents often gravitate toward urban environments, where they can access abundant resources for professional advancement.

Conversely, rural regions confront a myriad of challenges that impede the recruitment and retention of healthcare professionals. These hurdles encompass limited access to advanced medical equipment, a dearth of specialized training opportunities, and comparatively lower living standards. Consequently, healthcare workers in rural areas often encounter professional limitations and may be more inclined to seek career prospects in urban settings, as shown in Fig.6.

The disparities in healthcare workforce development between city and country areas underscore the broader urban-rural divide within China's healthcare sector. While urban centers benefit from a relatively high concentration of skilled healthcare personnel, rural regions grapple with shortages and face difficulties in retaining professionals. This chasm in healthcare workforce capacity has far-reaching implications for healthcare service quality and accessibility, potentially leaving rural populations underserved and facing challenges in accessing essential medical care.

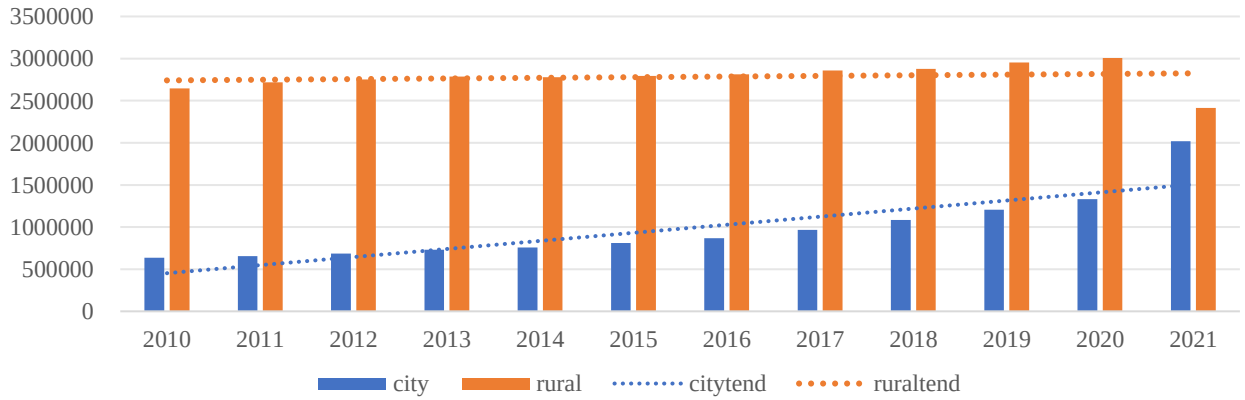


Fig. 5 Statistics on the number of personnel in primary medical and health institutions in China (2010-2021)

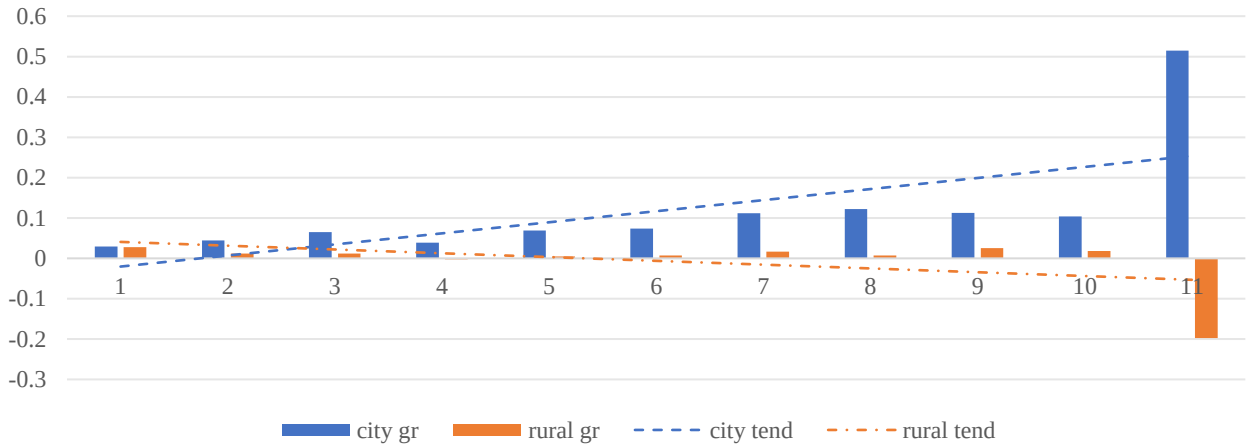


Fig. 6 Statistics on the tendency of the number of personnel in primary medical and health institutions in China (2010-2021)

2.4. Performance of services

Over the years, there has been a consistent upward trajectory in healthcare expenditure among residents, with both urban and rural populations bearing the impact. From Fig.7, this trend is reflected in the increasing per capita costs associated with hospitalization and outpatient services, indicating that individuals are allocating a growing portion of their resources to medical expenses.

Among healthcare expenses, the costs related to hospitalization emerge as the primary revenue generator for grassroots healthcare facilities. Per capita hospitalization expenses in communities and townships significantly outpace outpatient costs, serving as a vital income source for these healthcare providers.

A glaring disparity in healthcare expenditure between urban and rural areas becomes evident when examining the data. Per capita, hospitalization and outpatient expenses in urban settings are approximately double those observed in rural townships. Several factors contribute to this gap. Firstly, urban residents typically enjoy higher incomes, equipping them with greater financial capacity to cover medical costs. Secondly, urban populations tend to exhibit more progressive healthcare spending patterns, willingly allocating more resources to their health and well-being.

The substantial disparities in healthcare spending between urban and rural contexts have multifaceted implications. They not only underscore the enduring urban-rural divide but also bear consequences for healthcare accessibility and quality. Rural residents grappling with relatively lower incomes may face challenges in affording essential medical services, potentially compromising their health outcomes. Addressing these discrepancies is integral to promoting equitable healthcare access and ensuring that all citizens can avail themselves of necessary medical care.

The total amount increases and the growth rate decreases. The income of health centers is large: in terms of the income of various primary medical institutions each year, the income of health centers accounts for more than 50%. This is mainly because the medical equipment and service capacity of the health center are better than other primary medical institutions, and the number of diagnosis and treatment services is higher. The weak income-generating capacity of village clinics primarily stems from the rural population's migration to urban areas and the overall limited medical service capabilities of these clinics, resulting in sluggish revenue growth, as shown in Fig.7, Fig.8, and Fig.9.

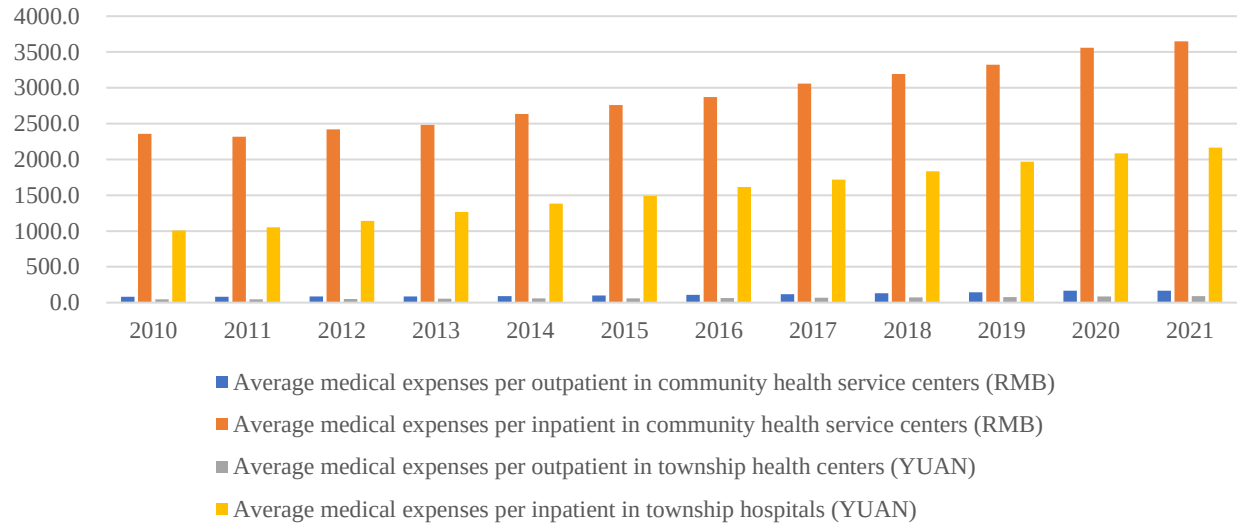


Fig. 7 Average medical expenses per inpatient in township hospitals (YUAN)

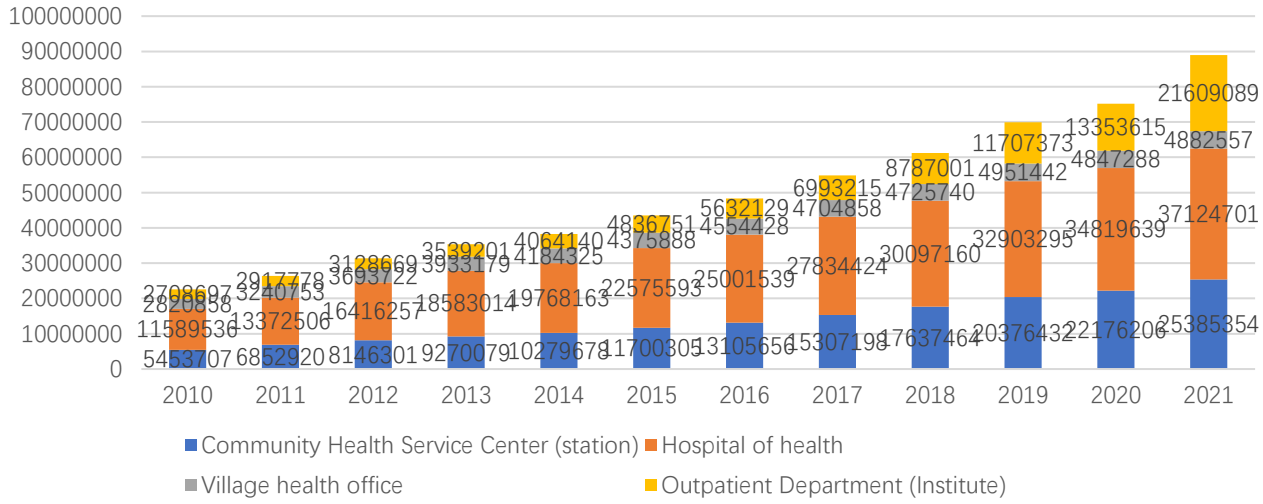


Fig 8 Revenue of primary medical Institutions in China (2010-2021)

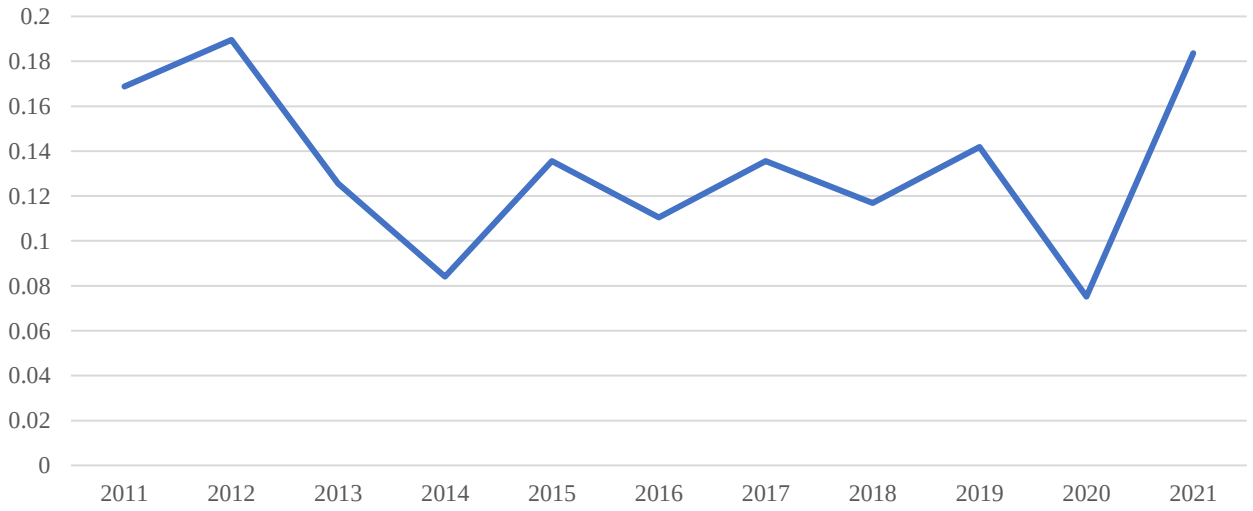


Fig. 9 Growth rate

2.5. Grassroots consumption

The proportion of healthcare expenditure in urban and rural areas has been steadily increasing yearly. Notably, rural residents tend to allocate a higher percentage of their income to healthcare expenses compared to their urban counterparts.

The differential composition of healthcare financing systems between urban and rural regions is a significant factor contributing to these consumption disparities. Urban areas often benefit from more comprehensive and robust healthcare insurance systems, which can alleviate the financial burden on residents. Conversely, rural areas may need more developed healthcare financing mechanisms, leading to a higher out-of-pocket expenditure for medical services.

Another contributing factor to the differing consumption patterns is the variance in nutritional and health conditions between urban and rural populations. Urban residents typically have better access to diverse and nutritious food options, resulting in improved overall health. In contrast, rural residents may face dietary limitations and encounter challenges related to malnutrition and food security. As a result, they may require more extensive healthcare services and allocate a greater share of their income to medical expenses, as shown in Fig. 10.

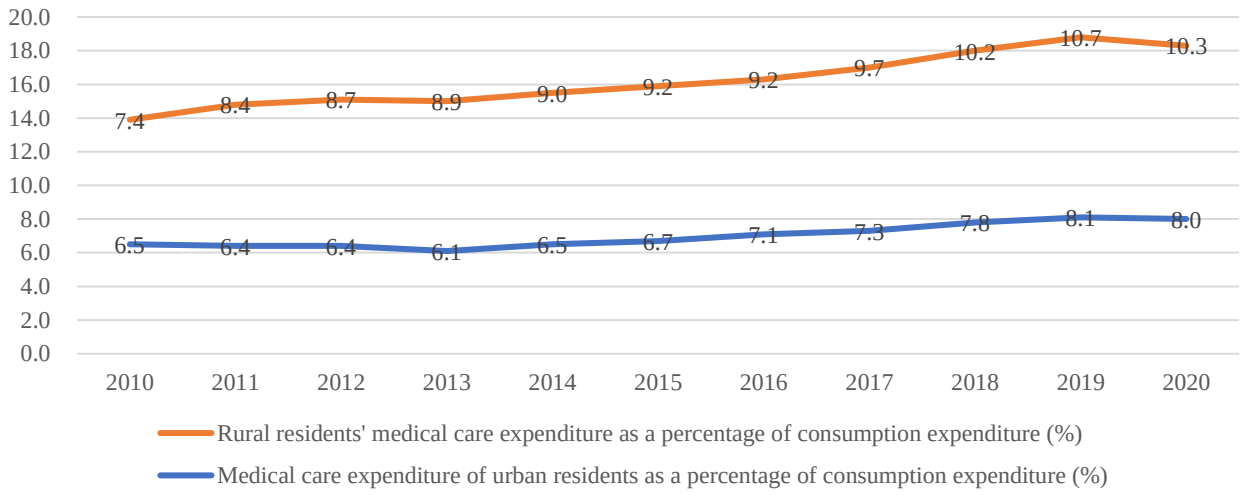


Fig. 10 Statistics of healthcare expenditure of urban and rural residents in China (2010-2020)

3. Suggestions and implications

3.1. Improving the distribution of primary medical facilities in urban and rural areas

Achieving a balance in the growth of primary healthcare institutions between rural and urban areas requires a comprehensive approach. Policymakers should focus on strategies that bolster rural healthcare infrastructure to better serve the remaining rural population. Improving rural infrastructure is vital for better healthcare resource distribution. Investments in transportation, communication networks, and basic amenities like clean water and sanitation can facilitate the flow of medical resources, personnel, and patients in and out of rural areas. We should vigorously develop rural industries with dynamic comparative advantages, increase farmers' income, and upgrade infrastructure in rural areas, including transportation and communication, to better distribute and provide medical resources. This requires combining local factor endowments, vigorously developing labor-intensive industries, characteristic agriculture, and rural service industries, improving the added value and profit margin of products, and building them into competitive advantage industries. Local governments should optimize the production layout of rural industries based on local conditions, improve their capacity to attract nearby employment for rural labor and enhance the potential for income growth in rural to increase investment in medical security. Simultaneously, they should ensure that urban areas have the necessary healthcare facilities to accommodate the influx of rural residents.

3.2. Narrowing the gaps in primary medical resources

To bridge the gap in bed supply density, it is imperative to accelerate the development of rural healthcare infrastructure. This encompasses augmenting investments in rural healthcare facilities, recruiting and retaining healthcare professionals in rural areas, and implementing policies aimed at mitigating the disparities between urban and rural healthcare systems. Promote the construction of urban and rural medical communities, improve the imbalance in the structure of medical service provision on the whole, and improve the equal development of medical services by implementing further social policies, such as making full use of China's comparative advantages in the Internet industry, promoting digital technologies such as telemedicine and artificial intelligence, and promoting the extension of "Internet + urban digital medical resources" to rural coverage. Establish an information-sharing mechanism for urban and rural medical resources to make the distribution of medical resources more transparent and reasonable to narrow the gap in urban and rural health infrastructure. Additionally, promoting community-based healthcare initiatives in rural regions can enhance access to healthcare services and help alleviate the shortage of beds.

3.3. Closing the gap in healthcare workforce development

Effectively narrowing the gap in healthcare workforce development necessitates a comprehensive and strategic approach. This may encompass targeted investments in rural healthcare infrastructure, the introduction of incentives to encourage healthcare professionals to practice in rural areas, and the implementation of policies designed to ensure equitable access to educational and professional development opportunities. Urban areas tend to attract more medical talent due to better career opportunities and living conditions. In contrast, rural areas face challenges in recruiting and retaining healthcare workers. To address this, policies such as offering financial incentives, housing, and career development opportunities for medical professionals working in rural regions have been implemented. Furthermore, fostering community-based healthcare initiatives in rural regions can play a pivotal role in enhancing the overall healthcare landscape and alleviating workforce shortages.

3.4. Narrowing the gap between urban and rural primary care consumption

Effectively navigating the disparities in healthcare expenditure requires a multifaceted approach. Developing industries with dynamic comparative advantages in rural areas is crucial. These industries should create employment opportunities and increase the income of rural residents. Labor-intensive industries, such as agribusiness and rural services, can harness the local labor force effectively. Policymakers must explore strategies that bolster rural residents' financial capacity to cover medical expenses, such as introducing targeted subsidies or insurance programs. Additionally, fostering healthcare awareness and promoting preventive measures can help mitigate health issues that necessitate costly treatments. Moreover, investments in rural healthcare infrastructure can contribute to reducing the urban-rural healthcare expenditure gap.

3.5. Unifying the medical insurance system for urban and rural residents

Achieving a balance in healthcare expenditure between urban and rural areas requires a multifaceted approach. Increase investment in rural medical facilities and personnel, and improve the quality of medical services at the grassroots level to promote the life and health of all people and more equal social rights. Expanding health insurance coverage, particularly in rural areas, has been a key strategy. China's New Rural Cooperative Medical Scheme (NRCMS) aims to provide financial protection and improve access to healthcare for rural residents. By reducing the financial burden of healthcare costs, it encourages rural residents to seek medical care when needed. Tailored Healthcare Solutions: Recognizing the unique healthcare needs of rural populations, healthcare delivery models have been tailored to rural contexts. These include village-based healthcare workers and township health centers. Integrating traditional Chinese medicine (TCM) into rural healthcare services is another approach to meeting the healthcare preferences of rural communities. Policymakers should focus on enhancing rural healthcare financing systems, ensuring that rural residents have access to

affordable and high-quality medical services. Additionally, efforts to improve rural nutrition and health conditions should be prioritized to reduce the need for extensive healthcare services.

4. Conclusion

This paper examines the evolving trends in China's primary healthcare and identifies several issues, including imbalanced growth of urban and rural medical institutions, significant disparities in primary care consumption between urban and rural areas, inadequate resources and talent reserves for rural primary care, and limited income-generating capacity. To address these challenges, this study proposes enhancing the distribution of primary healthcare facilities across both urban and rural regions; reducing gaps in access to medical resources; improving workforce development for healthcare professionals; narrowing discrepancies in primary care consumption between urban and rural populations; unifying the medical insurance system for all residents.

References

[1] Hsiao, W. C. (2013). Rural Health Care in China: Policy and Practice. Health Affairs, 32(2), 366-374.

[2] Hu, Y. (2019). The Impacts of Health Insurance on Health Care Utilization Among the Older People in China. International Journal of Environmental Research and Public Health, 16(6), 1017.

[3] Liu, S. (2018). Rural-Urban Differences in Health-Related Quality of Life in Northern China. International Journal of Environmental Research and Public Health, 15(10), 2272.

[4] Lin, W. (2017). Healthcare Utilization in Rural China: Does Health Insurance Make a Difference? International Journal of Environmental Research and Public Health, 14(5), 473.

[5] Xi, B. (2020). Challenges and Strategies of Health Care Reform in Rural China. Frontiers in Public Health, 8, 233.

[6] Bai, X. (2016). Healthcare Seeking Behavior Among Rural Population: A Case Study in a Northern Chinese Village. BMC Health Services Research, 16(1), 593.

[7] Zhu, W. (2015). Rural Health Care in China: Past and Present. BMC Public Health, 15, 107.

[8] Zhang, J. (2019). The Role of Community Health Workers in Rural China. International Journal of Environmental Research and Public Health, 16(7), 1232.

[9] Wang, Y. (2014). Exploring the Impact of China's New Cooperative Medical Scheme on Rural Healthcare Access. Applied Health Economics and Health Policy, 12(5), 485-503.

[10] Wang, X. (2016). Equity in Health Care Access: Assessing the Urban-Rural Gap in China. Health Policy and Planning, 31(10), 1310-1320.