

# A Study on the Current Status of Urban-Rural Health Disparities and the Impact of Food Policies

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## ABSTRACT

My country exhibits significant health disparities between urban and rural residents, a phenomenon closely related to unbalanced regional economic development, uneven resource allocation, and public policy orientation. Currently, urban residents generally outperform rural residents in terms of life expectancy and chronic disease management, but rural areas face significant challenges in infectious disease prevention and control, maternal and child health care, and access to basic medical services. As a key factor influencing residents' nutritional intake and health outcomes, the design and implementation of food policies profoundly shape urban and rural health patterns. Research has found that the urban-biased food distribution system, subsidy policies, and uneven market regulation exacerbate nutritional imbalances and food safety risks among rural residents. Furthermore, rural nutrition intervention programs have limited coverage and inadequate precision, making it difficult to effectively address health inequalities caused by income constraints and market failures. This article proposes the development of a coordinated urban-rural food policy system: optimizing agricultural product price support and subsidy structures, shifting towards a nutrition-oriented approach; strengthening rural food market regulation and infrastructure development; and integrating community resources to develop nutrition education and affordable healthy food supply programs. Through policy coordination, the nutritional health of rural residents can be significantly improved, the urban-rural health gap can be narrowed, and the Healthy China strategy can be implemented.

## KEYWORDS

Urban-Rural Health Disparities; Food Policy; Nutritional Equity; Health Inequality; Policy Intervention

## 1. INTRODUCTION

Health is a core goal of human development and an important measure of social equity. However, amid my country's rapid urbanization, a significant gap in health levels persists between urban and rural residents. Multiple authoritative reports show that urban residents significantly outperform rural residents in core health indicators such as life expectancy, maternal mortality, and infant mortality. This disparity is not only reflected in objective indicators of physical health but also has profound implications for the mental health, social inclusion, and equitable future development opportunities of urban and rural residents.

Exploring the root causes of the urban-rural health gap involves a complex interaction of multiple factors, including income, education, access to medical resources, sanitation, and daily behaviors. Nutrition is the foundation of health, but the disparity between urban and rural areas is stark. Food policy, a key tool for ensuring national nutrition, encompasses production, distribution, subsidies, regulation, and nutritional intervention. The rationality of these policy designs and their effective

implementation directly shape the quality of residents' daily diets, ultimately profoundly impacting their overall health.

Currently, food policy implementation differs between urban and rural areas. Thanks to well-developed market systems and strong regulatory capacity, urban residents enjoy relatively diverse and safer food choices. In contrast, rural areas, constrained by income levels, market development, and inadequate public service coverage, face a combination of inadequate intake of high-quality protein and micronutrients and excessive consumption of foods high in salt and oil, leading to more pronounced food safety risks. While existing rural nutrition improvement programs, such as the Student Nutrition Meal Program, have achieved some success, there is still room for improvement in terms of coverage, sustainability, and precision.

Therefore, systematically analyzing how food policies influence the formation and evolution of urban-rural health disparities, identifying policy bottlenecks, and exploring optimization paths are of great theoretical and practical significance for promoting health equity and achieving universal health coverage. This study aims to delve into this topic and provide a scientific basis for relevant policymaking.

## **2. CURRENT STATUS AND CORE CHALLENGES OF URBAN-RURAL HEALTH DISPARITIES**

Currently, urban-rural health disparities in my country exhibit multidimensional and structural characteristics. In terms of core health indicators, average life expectancy in urban areas continues to exceed that in rural areas. While the gap is narrowing, it still persists. More significant disparities are reflected in the spectrum of diseases and access to medical services: the incidence and burden of infectious, endemic, and parasitic diseases are relatively higher in rural areas. While sensitive indicators such as maternal mortality and under-five mortality rates have declined significantly, rural figures remain significantly higher than urban figures, reflecting the urban-rural disparity in maternal and child health care services. Meanwhile, chronic non-communicable diseases such as hypertension, diabetes, and stroke are prevalent in both urban and rural areas, but awareness, treatment, and control rates among rural residents are generally lower than those in urban areas, indicating significant shortcomings in health management capabilities.

Access to medical services is a key constraint. Rural areas lack high-quality medical resources and the service capacity of primary medical institutions is relatively weak, resulting in a long medical travel distance and heavy financial burden for residents. The phenomenon of "delaying treatment for minor illnesses and bearing the burden for major ones" persists. Regarding the public health service system, rural areas still lag behind urban areas in the coverage and quality of disease prevention and control, health education, and environmental sanitation infrastructure, hindering the effectiveness of primary disease prevention [1].

Farmers are short of money and cannot afford expensive meat, eggs and milk. They are also afraid of spending money to cover their illnesses. They have a weak cultural foundation and cannot understand health promotion, so it is difficult to develop good habits and they do not know how to use the clinics near their homes. What is even more worrying is that the young people have gone out to work, and it is even more difficult for the elderly and children left in the village to see a doctor. These difficulties are like a rope twisted together, widening the urban-rural health gap. We must make great efforts to find a solution from the root, both to provide a safety net and to provide support.

### **3. CHARACTERISTICS OF URBAN FOOD POLICIES AND THEIR POTENTIAL HEALTH IMPACTS**

The primary task of urban food policy is to ensure sufficient quantity, stable prices, and food safety. Its operation relies heavily on a dense network of wholesale markets, supermarkets, and retailers, profoundly influencing citizens' dietary choices and health. The government prioritizes ensuring the smooth operation of this system, including by stabilizing the supply of the "vegetable basket," improving cold chain logistics efficiency, and combating price manipulation. These measures ensure that citizens have convenient access to a wide variety of food. Second, food safety supervision is relatively strengthened. Leveraging relatively comprehensive laws and regulations, testing technology, and regulatory teams, cities are investing more in food production and processing, market access, sampling frequency, and information traceability, aiming to reduce the risk of foodborne illness and boost consumer confidence. Third, diversified nutritional intervention measures are being explored. Some cities are beginning to experiment with promoting nutrition labeling, healthy canteens, and salt and oil reduction initiatives in schools, communities, and workplaces, encouraging residents to develop healthier eating habits.

However, existing urban food policies also have limitations and may introduce new health risks. The primary issue is overreliance on the market, which has led to an influx of high-energy-dense, highly processed foods. Driven by efficiency and profit, supermarket shelves and dining venues are often filled with convenience foods, sugary drinks, and high-fat and high-salt snacks. The abundance of cheap, appealing, and heavily advertised unhealthy foods is shifting consumer preferences toward foods high in oil, salt, and sugar, significantly increasing rates of overweight, obesity, and chronic diseases such as diabetes. Secondly, despite relatively strict food safety regulations, policies are insufficient in proactively fostering a healthy eating environment. Current regulations primarily focus on preventing food safety incidents, while practical exploration of economic and regulatory tools such as tax adjustments, subsidies for healthy foods, or restrictions on sales in specific locations to guide residents in making healthier choices remains lagging and insufficient [2]. Furthermore, health inequalities within cities are prominent. Low-income communities and areas with large concentrations of migrant workers often lack easy access to or affordability for fresh, healthy food. At the same time, they are surrounded by a plethora of cheap, unhealthy food options, further exacerbating the risks of nutrition-related chronic diseases faced by vulnerable groups. Therefore, urban food policies urgently need to more actively incorporate health promotion while ensuring food supply.

### **4. RURAL FOOD POLICY ENVIRONMENT AND NUTRITIONAL HEALTH DILEMMA**

Compared with cities, uneven resource distribution and infrastructure shortcomings make the rural food policy environment more complex. Problems such as difficulty in obtaining high-quality protein and high risk of counterfeit and inferior food directly hinder the improvement of residents' nutritional and health levels. The core challenges primarily manifest in immature markets and weak infrastructure. The rural food distribution system is multi-layered, long, and inefficient. Cold chain logistics coverage is particularly inadequate in remote areas, leading to significant losses during transportation and storage of perishable, high-nutrition foods such as fresh fruits and vegetables, meat, eggs, and milk, as well as high costs and retail prices. This makes it difficult for rural residents, especially low-income families, to obtain stable and sufficient access to diverse, high-quality food. Secondly, weak market supervision is a major hidden danger. Grassroots regulatory agencies are understaffed, have limited technical resources, and operate in a limited scope, making it difficult to effectively oversee the production of smallholder farmers, small-scale processing workshops, and small retail outlets. The risk of excessive pesticide and veterinary drug residues, misuse of food

additives, and counterfeit and substandard food entering the rural market is significantly higher than in urban areas, posing a direct threat to food safety [3]. Third, income constraints are significant. Rural residents have lower per capita disposable income than urban residents, resulting in a higher proportion of their spending on food and a lower level of flexibility. Under budgetary constraints, to meet energy needs, people often prioritize inexpensive staple foods and high-fat, high-salt processed foods, sacrificing the quality of micronutrient intake like protein, vitamins, and minerals, leading to the hidden hunger problem of "sufficient energy but malnutrition."

Existing nutrition intervention policies targeting rural areas, such as the "Rural Compulsory Education Student Nutrition Improvement Program," have played an important role in improving the nutritional status of specific populations, but overall coverage and support remain insufficient. Universal nutrition intervention programs targeting a wider population, particularly nutritionally vulnerable groups like pregnant women, nursing mothers, and the elderly, are scarce and face sustainability challenges. While agricultural subsidy policies ensure staple food security and basic income for farmers, their original design focused primarily on output and producer income, with insufficient attention paid to the nutritional orientation of agricultural production. These factors have failed to effectively guide agricultural production structures toward a more diverse diet for residents. These combined factors have left rural residents facing the dual burden of both malnutrition and overnutrition, heightened food safety risks, and a significant driver of widening urban-rural health disparities.

## **5. ANALYSIS OF THE MECHANISMS OF FOOD POLICY'S IMPACT ON URBAN-RURAL HEALTH DISPARITIES**

Food policies primarily widen the urban-rural health gap by influencing food prices and purchasing power. While urban areas enjoy ample food supplies and relatively low prices, rural areas face difficulties accessing high-quality food and face high costs. Current agricultural subsidy and food distribution policies may objectively maintain low prices for staple foods, but they have failed to fully promote the production and consumption of nutrient-dense agricultural products such as fruits and vegetables and high-quality protein. While sophisticated logistics and markets in cities lower the cost of fresh produce distribution, rural areas face complex, inefficient distribution links, and inadequate cold chains, driving up prices for similar foods. This price disadvantage, compounded by the urban-rural income gap, makes it even more difficult for rural residents to afford diverse, high-quality, healthy food, forcing them to rely on cheap but nutritionally limited staples and processed foods.

Access to healthy food also differs significantly. Urban residents typically have convenient access to a wide selection of options in densely populated supermarkets and markets. In contrast, rural areas, especially remote villages, have fewer commercial outlets, and purchasing fresh fruits and vegetables, meat, eggs, and dairy products often involves long journeys and limited choices. Logistics shortcomings further restrict the variety and quality of fresh produce available, limiting healthy dietary choices [4].

Food safety regulatory capacity is also uneven. Cities have relatively well-developed regulatory systems and greater resources, enabling more effective monitoring of the supply chain. In contrast, grassroots oversight in rural areas is generally weak, leading to higher food safety risks. In contrast, regulatory resources in rural areas are often weaker, making it easier for counterfeit and substandard food, as well as excessive pesticide and veterinary drug residues, to enter the market, posing a direct health threat, particularly to children and the elderly. This unequal distribution of safety risks is an invisible driver of health disparities. Finally, there are significant differences in the coverage and precision of nutrition intervention programs. Cities are exploring and investing more in nutrition education, community health promotion programs, and healthy eating practices in specific settings. However, systematic, universal nutrition improvement programs targeting the vast majority of rural residents, particularly vulnerable groups, remain scarce, and existing programs face challenges in

sustainability, acceptance, and coverage. Uneven policy investment further exacerbates the urban-rural gap in health knowledge and behavioral support.

## **6. OPTIMIZING FOOD POLICIES TO PROMOTE URBAN-RURAL HEALTH EQUITY**

To effectively narrow urban-rural health disparities, it is urgent to establish a food policy system oriented towards nutrition and health, integrating urban and rural areas. The core approaches are as follows:

### **6.1. Promoting a Nutrition-Oriented Shift in Agricultural Support Policies**

Reform and improve the existing agricultural subsidy and price support system. While ensuring food security, gradually adjust the subsidy structure and increase support for the production of nutrient-intensive agricultural products such as soybeans, grains, fruits and vegetables, dairy products, and poultry. Explore the establishment of direct nutrition-oriented subsidies or insurance mechanisms for producers to encourage the optimization of planting and breeding structures. Develop agricultural product primary processing and cold chain logistics infrastructure, focusing on major and advantageous production areas, to reduce post-harvest losses of nutritious foods, increase commercialization and market competitiveness, and increase the supply of high-quality food from the source.

### **6.2. Strengthening Rural Food Market Supervision and Infrastructure Development**

Significantly increase human, financial, and material resources for grassroots food safety supervision in rural areas, enhance testing capabilities, and expand the coverage and frequency of random inspections. Leverage information technology to compensate for insufficient regulatory resources. Severely crack down on the production and sale of counterfeit, substandard, and substandard foods in rural markets. At the same time, we will strengthen the development of rural food distribution networks and support the expansion of chain supermarkets and standardized farmers' markets into towns and villages. We will encourage the development of diverse forms of agricultural product production and marketing integration, reduce intermediaries, lower distribution costs, and increase the availability and affordability of fresh and healthy food in rural markets.

### **6.3. Innovative Implementation of Targeted Nutrition Intervention Programs**

Building on the foundation of existing programs, we will design and promote universal nutrition supplementation and dietary guidance programs targeting key rural populations. We will explore the "Nutrition Package Plus" model, integrating health education with behavioral counseling. We will fully utilize grassroots platforms such as village clinics and women's centers to conduct regular, accessible nutrition education and skills training. We will pilot the inclusion of basic nutrition services in family doctor contracts. We will explore economic incentives such as conditional cash transfers (CCTs) to directly enhance the ability of low-income families to purchase healthy food.

### **6.4. Build a Policy Support Environment for Urban-Rural Collaboration**

Clearly incorporate nutrition and health goals into the strategic planning and assessment systems for rural revitalization and Healthy China, among other initiatives. We will strengthen policy coordination and information sharing among departments such as agriculture and rural affairs, health, market supervision, education, and social security to break down fragmented management. Establish a food and nutrition health monitoring and assessment system between urban and rural areas to dynamically track changes in disparities and provide data support for policy adjustments. Encourage

social forces and businesses to participate in rural nutrition improvement, forming a government-led, multi-faceted governance framework [5]. The ultimate goal is to create a supportive environment where both urban and rural residents have equitable access to safe, sufficient, and nutritious food and are empowered to adopt healthy dietary behaviors.

## 7. CONCLUSION

The urban-rural health gap profoundly reflects the imbalance and inadequacy in my country's social development. Urban-rural health disparities highlight the imbalances in my country's development. These disparities have multiple causes, with food policy being a significant influencing factor. Analysis indicates that the segmented operation of urban and rural food systems has shaped distinct nutritional environments: while urban residents face health risks associated with overly processed foods, they still enjoy advantages in food variety, safety, and accessibility. Rural residents, on the other hand, generally face difficulties accessing high-quality food, limited affordability, greater food safety risks, and inadequate systematic nutritional support, leading to a combination of nutritional deficiencies and chronic disease risks. This health inequality, driven by differences in the food policy environment, is a key driver of the persistent urban-rural health gap. Therefore, adjusting food policies and focusing on improving the food access environment and nutritional support systems for rural residents are key steps in narrowing the urban-rural health gap.

Food policies primarily influence urban-rural health disparities through core mechanisms such as price signals and affordability, market accessibility and the physical environment, the effectiveness of food safety regulation, and the coverage and precision of nutritional interventions. Existing policies have achieved significant results in ensuring basic supplies, but they are significantly inadequate in promoting nutritional equity and guiding healthy dietary patterns. In particular, targeted support and investment in rural areas urgently need to be strengthened.

Thus, to narrow the urban-rural health gap, nutrition and health goals must be deeply integrated into the core of food policies. Specific optimization paths include: promoting the shift of agricultural support policies toward the production of nutrient-intensive agricultural products, increasing high-quality supply from the source; vigorously strengthening rural food market supervision and distribution infrastructure to effectively improve the accessibility and affordability of healthy foods; innovatively designing and precisely implementing nutritional intervention programs targeting key rural populations to enhance health literacy and support behavioral change; and ultimately, fostering a cross-sectoral, coordinated, and integrated policy support environment, along with a dynamic monitoring and evaluation system. Only through these systematic and targeted reforms can food policies effectively transform into powerful tools for promoting health equity for all and lay a solid nutritional foundation for building a Healthy China.

## REFERENCES

- [1] Fan Yanhong, Qin Ming, Xu Xu, et al. Principal component analysis of differences in urban and rural residents' attention to food nutrition labels [J]. *China Food and Nutrition*, 2015, 21(08): 50-54.
- [2] Yan Yuanyuan, Li Qiang, Yu Lerong. Perspectives on the causes of health differences between urban and rural populations and policy recommendations [J]. *Rural Economy*, 2006, (08): 108-110.
- [3] Zhang Ruiqi, Qing Yanhua, Zou Guanyang, et al. Study on the quality of life and influencing factors of the elderly in urban and rural areas in China [J]. *China Rural Health Administration*, 2023, 43(11): 770-777. DOI: 10.19955/j.cnki.1005-5916.2023.11.002.
- [4] Zhang Gang, Li Yinghua, Li Li, et al. Study on the health literacy level and influencing factors of urban and rural residents in my country in 2021 [J]. *Chinese Journal of Health Education*, 2024, 40(05):387-391+400. DOI:10.16168/j.cnki.issn.1002-9982.2024.05.001.

- [5] Yu Yuehui, Qin Jingxia, Mao Yaxuan, et al. Changes in physical health of children and adolescents and urban-rural differences: influencing factors and policy implications [J]. Chinese Journal of Health Policy Research, 2025, 18(04):36-44.