

# Regional Health Policy Evolution Trends and Effectiveness Assessment - A Case Study of the Grassroots Health Policies by the Health Commission of Fujian Province

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## ABSTRACT

This study conducted a content analysis on policy texts, using the grassroots health policies of the Fujian Provincial Health Commission as data support. It sorted out the evolution trend of regional health policies, evaluated the implementation effects of the policies, and concluded that the policy measures have promoted the development of grassroots health services in Fujian Province. The level of informatization and technological capabilities of grassroots health institutions have been improved to a certain extent, and some progress has been made in addressing the widely concerned issue of health insurance. Therefore, it is essential to strengthen the resource integration of grassroots medical institutions and build county-level medical community.

**Keywords:** *Policy effect evaluation, Health policy, Evolution trend.*

## 1. INTRODUCTION

"Strengthening the grassroots" is one of the goals of the Healthy China strategy, and grassroots governance is the most crucial layer in building a socialist modernized and strong country in China. Primary healthcare infrastructure is an essential component of grassroots governance, and it is also an indispensable part of China's healthcare system. Public health policies are beneficial to the nation and the people. In the process of dealing with the COVID-19 pandemic since 2020, there is a need to further enhance grassroots health governance. The performance evaluation of policy implementation is crucial for ensuring the effective implementation of policies and facilitating timely policy optimization. Only by identifying and addressing issues in policy implementation can we explore and discover the optimal path for policy execution[1][2]. Since 2011, the Health Department of Fujian Province has implemented a series of policies to promote the development of primary healthcare and has achieved certain results. However, there are also certain issues that need to be addressed. The highlighted issues are reflected in these aspects: a single governance mechanism, imbalanced project

implementation, lack of initiative among grassroots public, lack of fairness and comprehensive qualities among grassroots management personnel and so on. The main factor affecting the level of basic rural health services is the lack of diverse governance mechanisms.

Currently, it is widely believed in the academic community that primary healthcare is constrained by various factors, with different government organizations and the political and economic development of the grassroots area being the main influencing factors[3]. In addition, the willingness and condition of grassroots healthcare workers, the completeness of policy content, and the channels of promotion have also drawn extensive attention from the general public and researchers[4][5]. The Health Commission is the governing body responsible for healthcare at the government level. It serves as the implementing authority for healthcare policies and plays a dominant role in ensuring that the policy direction is correct. Moreover, the various policies implemented by the Health Commission have a significant impact on the development of primary healthcare. However, these policies have received relatively little

attention, and there is a lack of research on primary healthcare based on policy text analysis.

Based on this, the policy text is analyzed using content analysis method in the paper. Specifically, the paper conducts a review of the literature, organizes the evolution of healthcare policies in Fujian Province, analyzes their policy effectiveness, systematically evaluates the policy, evaluates the performance of primary healthcare service policies in Fujian Province, and proposes policy optimization paths and related recommendations.

## 2. RESEARCH METHODS

The content analysis method is a semi-quantitative research method that combines qualitative analysis with quantitative analysis. With the content analysis method, it is possible to effectively convert originally non-quantitative textual content into quantitative, codable, and measurable information. Additionally, it allows for the extraction of corresponding feature data and systematic exploration of policy content, thereby revealing inherent patterns and potential relationships among policy elements. Currently, in the field of policy research, the method of content analysis has been widely applied in various areas of policy text research. Content analysis is also used in

the field of health policy research, primarily in the areas of public health policy and healthcare system reform. However, there is still room for further application of content analysis in the study of grassroots health policies.

## 3. DATA SOURCE

The primary sources of research data for this study are the Fujian Statistical Yearbook and the Health and Health Comprehensive section of the official website of the Fujian Provincial Health Commission. The data was collected using web scraping techniques and includes information such as the release time, generation time, policy index number, policy document number, policy title, and year of policy publication. The year of policy publication is determined by the release time of the policy. After collecting the data, manually clean the collected data to remove irrelevant texts that are clearly not related to policies. This helps to improve the validity of the data samples. Read the titles and corresponding text content of each policy, summarize and encode the main theme of the content, and deduce the main characteristics of the policy text, and conduct corresponding statistical analysis. The example below illustrates the final data collection situation ("Table 1"):

Table 1. Policy text data collection form (partial text)

Index number	Main content	Year	Title	Document number	Generation date	Publication date
FJ00123-0808-2021-00221	Medical institution construction	2021	Notification from the Fujian Provincial Health Commission on the publication of the list of community hospital construction in 2021	Fujian Provincial Health Grassroots Documents (2021) 859	2021/12/6	2021/12/8
FJ00123-0808-2021-00204	Personnel team construction	2021	Notification on the Issuance of the 2021-2023 Rural Doctor Training and Capacity Enhancement Plan by the Fujian Provincial Health Commission	Fujian Provincial Health Grassroots Documents (2021) 659	2021/9/17	2021/9/20
FJ00123-0808-2021-00161	Medical institution construction	2021	Notice from the Fujian Provincial Health Commission on accelerating the construction of community hospitals in the province	Fujian Provincial Health Grassroots Documents(2021) 469	2021/7/9	2021/7/12
FJ00123-0808-2020-00126	Medical institution construction	2020	Notice from the Fujian Provincial Health Commission on Comprehensively Promoting the Construction of Community Hospitals	Fujian Provincial Health Grassroots Documents(2020) 74	2020/8/28	2020/8/31
FJ00123-0808-2019-00127	Institutional integration	2019	Fujian Provincial Health Commission's Notice on Selection of Pilot Counties for Comprehensive Medical and Health Community	Fujian Provincial Health Grassroots Documents(2019) 403	2019/6/20	2019/6/24

## 4. DATA ANALYSIS

### 4.1 Content Analysis of Policy Text

The specific process involves using the excel software and applying the COUNTIFS function to conduct a quantitative analysis of the main content of grassroots health-related policies from 2011 to 2021 in a time series. This will create a table ("Table 2") that displays the quantitative statistics of the main content of grassroots health policies. Additionally, based on the total count, a pie chart ("Figure 1") will be created to illustrate the overall proportion of the main content in the policy texts.

According to "Table 2" and "Figure 1", there are significant differences in the annual trends of various policies. It is evident that there is a noticeable decrease in policies related to medical insurance, and no relevant policies have been issued since 2017. This may be closely related to the implementation of mandatory medical insurance measures in 2017. Looking at the ten-year process of grassroots health policy construction from 2011 to 2021, it is evident that the construction of personnel teams has consistently received attention

from the Fujian Health Commission. This may be due to the serious loss of personnel at the grassroots level, which has had a significant negative impact on the development of grassroots health services. Therefore, long-term policy support from the government is needed to improve this issue.

In addition, there has been a gradual increase in health policies since 2017, with a focus on information construction and institutional integration. Although the number of these policies is relatively small compared to other types of policies, there is a clear upward trend in their quantity. This indicates that information technology is increasingly influencing government healthcare systems, and the development of information-based healthcare services is becoming one of the main directions of government-led healthcare system construction.

However, in terms of overall quantity, health insurance issues, policy indicators, personnel team construction, and medical institution construction account for a large proportion in the overall policy release. It is evident that these four aspects are the main focus and development direction of the Fujian Health Commission over the past decade.

Table 2. Statistical table of the main contents of grassroots health policies

Main content	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Sum	Total percentage
Health insurance issues	8	4	9	4	3	3	1	0	0	0	0	32	24.24%
Policy indicators	6	6	6	3	3	3	4	0	2	2	2	37	28.03%
Publicity	1	0	0	0	0	0	1	1	0	0	0	3	2.27%
Personnel team construction	1	3	5	3	1	1	7	2	1	0	1	25	18.94%
Medical institution construction	2	4	5	1	0	0	0	0	0	1	2	15	11.36%
Medical equipment investment	1	0	0	2	0	0	0	0	0	0	1	4	3.03%
Institutional reform	1	0	0	1	0	0	2	0	0	0	0	4	3.03%
Single diseases management	0	0	1	2	1	0	1	1	0	0	0	6	4.55%
Institutional integration	0	0	0	1	0	0	0	0	1	0	1	3	2.27%
Information construction	0	1	0	0	0	0	2	0	0	0	0	3	2.27%

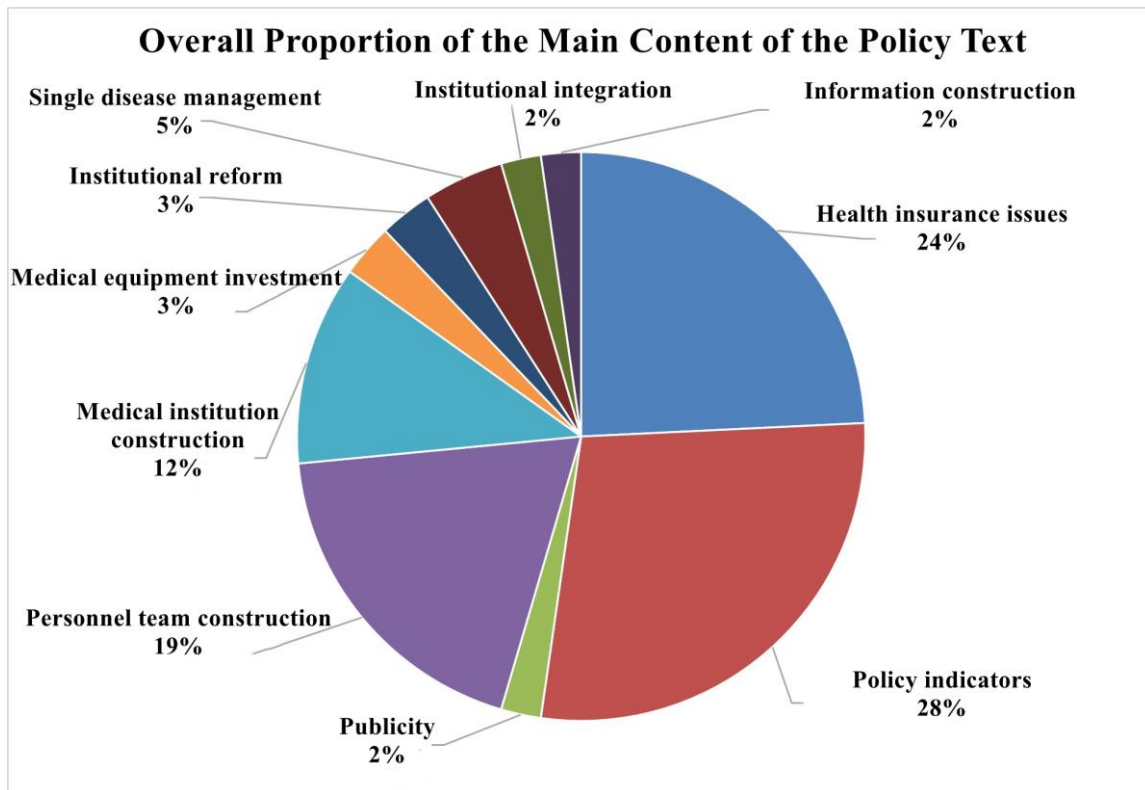


Figure 1 Overall proportion of the main content of the policy text.

#### 4.2 Analysis of Grassroots Health Data in Fujian Province

This study collected data on the rural village-level health organizations in Fujian Province for the years 2000, 2005, 2010, 2015, and 2020. The data is sourced from the 2021 Fujian Statistical Yearbook. A time series graph depicting the

situation of rural village-level health organizations in Fujian Province (“Figure 2”) was created based on this data. This study presents a time series analysis of the number of primary healthcare personnel in Fujian Province from 2011 to 2019. The findings are visually depicted in “Figure 3”, illustrating the changes in the number of primary healthcare personnel in Fujian Province over time.

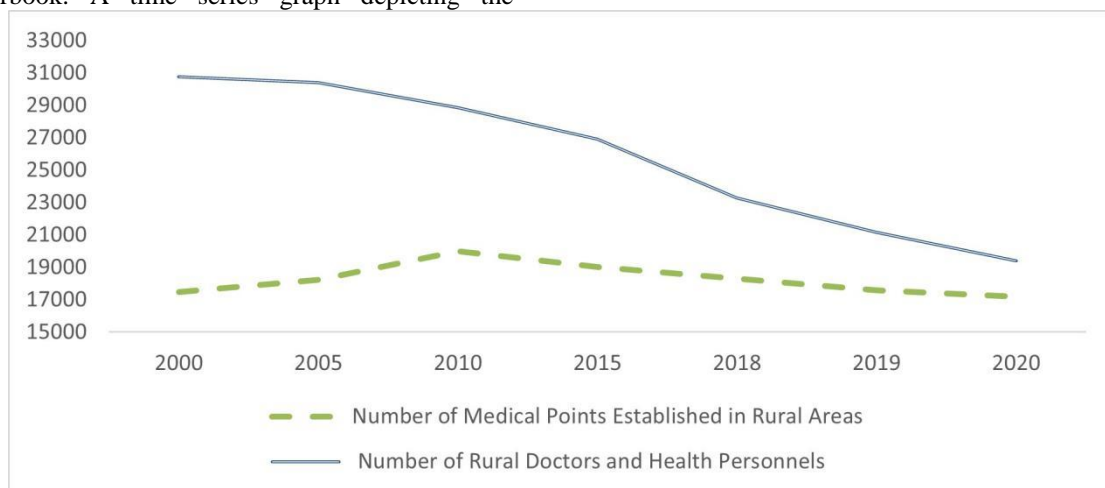


Figure 2 Rural village-level health organizations in Fujian Province.

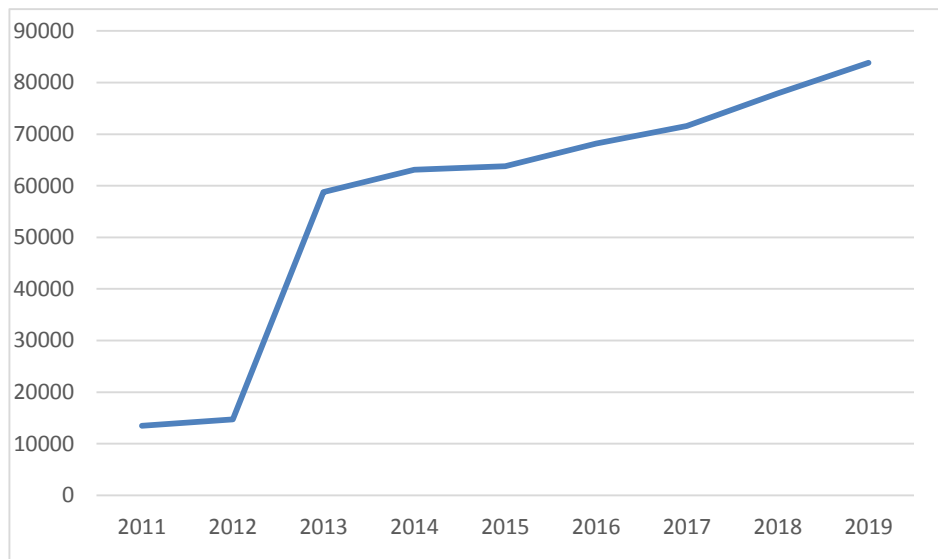


Figure 3 Changes in the number of primary health personnel in Fujian Province (2011-2019).

Based on the observations from “Figure 2” and “Figure 3”, it can be seen that at a holistic level, the number of grassroots healthcare personnel in Fujian province has been continuously increasing under the support of policies. The number of grassroots organizations has also maintained a similar trend of change. This indicates that the grassroots healthcare policy of the Fujian Provincial Health Commission has achieved certain effectiveness. In recent years, the integration of institutions, such as the establishment of county and township medical communities, has become a policy focus. However, in rural areas, the number of staff members in each rural primary healthcare institution has been decreasing in recent years, indicating a decline in village-level healthcare organizations and related professionals.

The number of rural health workers continues to decline, while the number of rural health organizations also started to decline in 2010 after a brief increase. This decline may be due to the poor remuneration in rural areas as well as the ongoing process of urbanization, which has resulted in rural health centers being converted into urban medical facilities.

## 5. CONCLUSION

### 5.1 Research conclusion

Based on the analysis above, it can be seen that the Fujian Provincial Health Commission has promoted the development of primary healthcare in

Fujian Province since 2011 through various policy measures such as health insurance, personnel team construction, policy indicators, publicity, medical institution construction, medical equipment investment, institutional reform, single diseases management, integration of primary healthcare institutions, and information construction. The informatization and technological capabilities of primary healthcare institutions have been improved to a certain extent, and some of the previously widely concerned issues related to health insurance have been partially resolved. Based on the data, it is evident that there is a downward trend in village-level organizations and professionals. In recent years, the integration of institutions, such as the establishment of county and township medical communities, has become a focal point of policy. Overall, this policy demonstrates good feasibility, stability, scientificity, foresight, and rationality. However, there is still a serious issue of rural primary healthcare personnel attrition, which poses a dilemma in the face of a relatively high number of rural primary healthcare institutions.

### 5.2 Policy recommendations

Establishing a sound primary healthcare system is a crucial part of achieving the rural revitalization strategy in our country. It serves as a guarantee for improving the living standards of residents in towns and rural areas, as well as an important foundation for advancing the construction of a new rural area in our country. Although the government has recently paid great attention to the "agriculture,

rural areas, and farmers" issues and made significant progress in rural economy and primary healthcare, the rural economy is still underdeveloped, and there are still many problems in the primary healthcare system. The important factors leading to poverty among the rural population are impoverishment due to illness and falling back into poverty due to illness. Therefore, based on the above research, the following three recommendations are proposed.

Firstly, it is important to enhance the integration of resources at the primary healthcare institutions and establish a county-level medical community. Building upon this, we can promote the integration of resources between primary public health institutions, hospitals, and medical healthcare organizations, creating a working mechanism that is characterized by clear division of labor, complementary functions, seamless information exchange, and shared resources. This will facilitate efficient coordination and seamless connection of public health services and medical services.

Secondly, the continuous loss of rural primary health personnel indicates that the policy-oriented role of the healthcare system alone is limited. It requires collaboration from multiple departments and organizations to optimize the working environment and related benefits of primary health personnel at the grassroots level in order to alleviate the serious loss of rural primary health personnel[6].

Thirdly, it is essential to enhance the optimization of primary healthcare policies and improve the structural development of relevant healthcare organizations at the grassroots level. The construction of primary healthcare services is a long-term endeavor that requires the cooperation of all parties involved to ensure that rural residents have access to reliable medical care as soon as possible.

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