

Research Status and Prospects of Cross-Regional Medical Treatment in China Based on Bibliometric Analysis: Postprint

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Abstract

Background: In the context of fragmented medical insurance and normalized population mobility, how to provide more convenient and efficient medical settlement services for patients seeking cross-regional medical treatment has increasingly become a hot issue of common concern to both practitioners and researchers.

Objective: To analyze the research status quo, hotspots, and evolution trends of cross-regional medical treatment issues in China, and to provide reference for related research.

Methods: Relevant literature on China's cross-regional medical treatment issues was retrieved from the CNKI database from inception to June 10, 2023. CiteSpace software was employed to quantitatively analyze literature data in this field, and visual analysis of knowledge mapping was conducted on characteristics including publication time, authors, institutions, and keywords.

Results: A total of 590 valid articles were retrieved. Publications in China's cross-regional medical treatment field broke through single digits in 2009 (16 articles), thereafter showing a wave-like fluctuation trend in annual publication volume. There were 57 core authors (with \$ \$3 publications), with a combined output of 238 articles (40.39%); the author collaboration network density was 0.051. Research institutions were mainly universities, research institutes, medical institutions, and local medical insurance management departments. The institution with the highest publication count was the Institute of Medical Information, Chinese Academy of Medical Sciences (22 articles), followed by the International School of Pharmaceutical Business, China Pharmaceutical University (9 articles), North China University of Science and Technology (8 articles), Huashan Hospital Affiliated to Fudan University (6 articles), and

Jiangxi University of Chinese Medicine (6 articles). The institutional collaboration network density was only 0.0016. Keyword frequency analysis: the keyword network mapping contained 424 nodes and 1,188 connections, with a network density of 0.0132. “Cross-regional medical treatment,” “medical insurance,” “inter-provincial medical treatment,” and “non-local settlement” occupied central positions in the keyword co-occurrence network. Keyword clustering timeline mapping analysis: in addition to “cross-regional medical treatment,” nine major cluster themes were formed, including “medical insurance,” “direct settlement,” “management,” “New Rural Cooperative Medical Scheme,” “inter-provincial medical treatment,” “satisfaction,” “Yangtze River Delta,” and “tiered diagnosis and treatment.”

Conclusion: The quality and depth of research in China’s cross-regional medical treatment field are continuously improving, yet deficiencies remain in research methods, content, and collaboration networks. It is necessary to focus on difficult and emerging issues in cross-regional medical treatment, innovate research methods, and continuously strengthen cross-institutional exchange and cooperation among researchers.

Full Text

Research Status and Prospect of Cross-regional Medical Treatment in China Based on Bibliometric Analysis

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Abstract

Background: In the context of fragmented medical insurance systems and normalized population mobility, how to provide more convenient and efficient medical settlement services for patients seeking cross-regional medical treatment has become a hot issue of common concern in both practice and theory.

Objective: To analyze the current status, hotspots, and evolutionary trends of research on cross-regional medical treatment in China, thereby providing reference for future research in this field.

Methods: The CNKI database was searched for literature on cross-regional medical treatment in China from inception to June 10, 2023. CiteSpace software was used to conduct quantitative analysis of the literature data and visualize knowledge graphs examining publication timelines, authors, institutions, and keywords.

Results: A total of 590 valid articles were retrieved. Annual publications in this

field first exceeded single digits in 2009 (16 articles), thereafter showing a wave-like fluctuation pattern. There were 57 core authors (with \$3 publications) who contributed 238 articles (40.39% of the total). The author collaboration network density was 0.051. Research institutions were primarily universities, research institutes, medical institutions, and local medical insurance management departments. The Institute of Medical Information Sciences of the Chinese Academy of Medical Sciences ranked first with 22 publications, followed by the School of International Pharmaceutical Business at China Pharmaceutical University (9 articles), North China University of Science and Technology (8 articles), Huashan Hospital affiliated with Fudan University (6 articles), and Jiangxi University of Chinese Medicine (6 articles). The institutional collaboration network density was only 0.0016. Keyword analysis revealed 424 nodes and 1,188 connections with a network density of 0.0132. “Cross-regional medical treatment,” “medical insurance,” “cross-provincial medical treatment,” and “different settlement” occupied central positions in the keyword co-occurrence network. Timeline analysis identified nine major clustering themes: “medical insurance,” “direct settlement,” “management,” “New Rural Cooperative Medical Scheme,” “cross-provincial medical treatment,” “satisfaction,” “Yangtze River Delta,” and “hierarchical diagnosis and treatment.”

Conclusion: The quality and depth of research in China’s cross-regional medical treatment field are continuously improving. However, deficiencies remain in research methodology, content, and collaborative networks. Future research should focus on challenging issues in cross-regional medical treatment, innovate research methods, and strengthen cross-institutional communication and cooperation among scholars.

Keywords: Office visits; Cross-regional medical treatment; Insurance, long-term care; CiteSpace; Bibliometric analysis; Research hotspot; Emerging trends

1 Data Sources and Methods

1.1 Data Sources

The CNKI database served as the data source. Using the advanced search function, we limited document type to “academic journals” and employed the following search terms: title = “cross-regional medical treatment” OR “cross-regional medical insurance” OR “cross-regional settlement” OR “cross-provincial medical treatment” OR “direct settlement” OR “immediate reimbursement” OR “immediate settlement” OR “networked settlement” OR “cross-regional patients” (Figure 1). The matching mode was set to “precise,” with the time range from database inception to June 10, 2023. To exclude irrelevant literature, non-research documents such as newspaper articles, publications without authors, and those clearly unrelated to the theme were manually removed.

1.2 Methods

CiteSpace software was used to quantitatively analyze literature data in the cross-regional medical treatment field, conducting visualized knowledge graph analysis of publication timelines, authors, institutions, and keywords.

2 Results

2.1 Annual Publication Volume Analysis

A total of 1,049 articles were initially retrieved, and after manual exclusion of irrelevant literature, 590 valid articles were included. The literature screening flow chart is shown in [Figure 1: see original paper]. The annual distribution characteristics of publication volume and proportion in China's cross-regional medical treatment research field are presented in [Figure 2: see original paper]. Early research failed to attract sufficient academic attention, with the field first breaking into double digits in 2009 (16 articles). Since then, annual publications have shown a wave-like fluctuation trend. Starting in 2016, annual publication volume began to increase substantially, reaching a historical peak in 2018 (98 articles). Although research intensity has since declined somewhat, it remains at a relatively high level, indicating the maturation of related research and continuously improving quality and depth (2023 data only includes literature up to June 10, and therefore does not represent the complete annual total).

2.2 Author and Institution Collaboration Networks

2.2.1 Core Authors and Collaboration Networks Drawing on the statistical experience of scholars such as Li Ze [?], both first authors and non-first authors were treated equally when identifying core authors in the cross-regional medical treatment field. According to Price's Law, when the number of publications by core authors reaches approximately 50% of all papers, a core author group can be considered to have formed in that field. The calculation formula is: $MP = 0.749 \times NP_{max}$ (where NP_{max} represents the number of papers published by the most prolific author; MP is the minimum number of publications for core author candidates) [?]. Based on this calculation, authors with three or more publications could be considered core authors in China's cross-regional medical treatment research field. The current 57 core authors have contributed a total of 238 publications, accounting for approximately 40.39% of the 590-article sample—approaching the standard for a core author group according to Price's Law. The author collaboration network mapping is shown in [Figure 3: see original paper]. The most prolific authors include Liu Yang (12 articles), Guo Minjiang (11 articles), Li Yazhi (7 articles), Xu Wei (7 articles), Zhang Xiao (7 articles), Xie Liqin (6 articles), Chen Shu (6 articles), Cheng Peiran (6 articles), and Guo Lin (6 articles), while other authors have fewer than 6 publications. Liu Yang, Xu Wei, Zheng Xianping, Chen Shu, Lü Dawei,

Xu Changyuan, Xia Wei, Wu Qunhong, and others have multiple connections with fellow authors, forming small-scale collaboration networks. However, overall these networks remain fragmented, with a network density value of 0.051, indicating that communication among author groups still needs strengthening. Additionally, due to software limitations, it is not possible to accurately identify first authors and corresponding authors, so the above statistical results may have some degree of bias—highly productive authors may not have published all their relevant research as corresponding or first authors.

2.2.2 Institutional Collaboration Networks The institutional co-occurrence knowledge mapping for cross-regional medical treatment research institutions is shown in [Figure 4: see original paper]. Research institutions are primarily universities, research institutes, medical institutions, and local medical insurance management departments. The Institute of Medical Information Sciences of the Chinese Academy of Medical Sciences ranks first with 22 publications, followed by the School of International Pharmaceutical Business at China Pharmaceutical University (9 articles), North China University of Science and Technology (8 articles), Huashan Hospital affiliated with Fudan University (6 articles), and Jiangxi University of Chinese Medicine (6 articles). Regarding inter-institutional collaboration, [Figure 4: see original paper] shows 352 nodes but only 99 connections, with a network density of merely 0.0016, revealing relatively weak connections and insufficient academic cooperation among research institutions in the cross-regional medical treatment field, with dispersed research perspectives and no tightly integrated large-scale collaboration circles having formed. Furthermore, analysis of existing cross-institutional collaborations shows that most cooperative research is limited to certain geographical boundaries, with relatively little cross-regional cooperation. Approximately 40.35% of core authors come from the top five research institutions by publication volume, indicating that current author and institutional collaboration networks in the cross-regional medical treatment field require further optimization.

2.3 Keyword Analysis

2.3.1 Keyword Frequency Analysis The keyword network for China's cross-regional medical treatment research is shown in [Figure 5: see original paper]. The keyword network mapping contains 424 nodes and 1,188 connections, with a network density of 0.0132. “Cross-regional medical treatment,” “medical insurance,” “cross-provincial medical treatment,” and “different settlement” occupy central positions in the keyword co-occurrence network with high frequency, confirming that these core keywords align with the research content, while other keywords extend accordingly from this center. “Direct settlement,” “immediate reimbursement,” “one-card system,” “medical insurance networking,” and “information construction” represent important measures for realizing medical insurance reimbursement for cross-regional patients. “Floating population,” “designated medical institutions,” “stakeholders,” “mobile labor

force,” and “medical insurance policy” constitute the main research subjects in the cross-regional medical treatment field. “Management,” “medical insurance management,” “problems,” “countermeasures,” and “status analysis” address issues and optimization paths in implementing cross-regional medical settlement policies. “Satisfaction,” “influencing factors,” and “hierarchical diagnosis and treatment” focus on evaluating policy implementation effects. Notably, “Yangtze River Delta” and “Beijing-Tianjin-Hebei” appear frequently, further demonstrating the current regional imbalance in China’s cross-regional medical treatment research, with concentrations in these areas.

2.3.2 Keyword Clustering Timeline Analysis Building on keyword frequency analysis, the Timeline View function was used to generate the keyword clustering timeline mapping shown in [Figure 6: see original paper], with Q -value = 0.4785 and S -value = 0.8213. Beyond “cross-regional medical treatment,” nine major clustering themes emerged: “medical insurance,” “direct settlement,” “management,” “New Rural Cooperative Medical Scheme,” “cross-provincial medical treatment,” “satisfaction,” “Yangtze River Delta,” and “hierarchical diagnosis and treatment.” Prior to 2009, research in China’s cross-regional medical treatment field remained in its infancy with limited academic response, focusing mainly on “medical insurance,” “management,” and “satisfaction.” The “management” research cluster emerged earliest and remained a hot topic from 2006 to 2020, connecting with keywords such as “problems,” “difficulties and countermeasures,” “medical insurance system,” “practice,” “treatment location,” “dilemmas,” and “record-filing.” As the medical expense compensation insurance for patients, “medical insurance” is an unavoidable topic in cross-regional medical settlement services, with related research beginning in 2008 and becoming increasingly refined in recent years to focus more on policy performance issues such as “policy evaluation” and “convenience for the people.”

In 2009, two new keyword clustering themes emerged: “satisfaction” and “New Rural Cooperative Medical Scheme.” “Designated medical institutions,” “influencing factors,” and “insurance fraud” were early research foci within the “satisfaction” cluster. With the nationwide completion of networked cross-provincial inpatient expense direct settlement in September 2017, scholars began focusing on satisfaction issues related to implementation, such as “structural variation analysis,” “propensity scoring,” “cross-regional networking efficiency,” and “medical insurance fund payment ratios.” Research related to the “New Rural Cooperative Medical Scheme” was concentrated mainly between 2009 and 2018, generating keywords including “model exploration,” “networked reimbursement,” “insured patients,” “information management system,” “provincial settlement center,” and “low-income families.” Unlike other clusters that continued evolving after 2019, the “New Rural Cooperative Medical Scheme” cluster shows a research gap after 2018, with no new findings discovered since.

The “direct settlement” cluster emerged in 2009 but remained limited until research interest increased in 2014. The cluster’s latest research hotspots include

“national platform,” “hospital management,” “policy value,” and “optimization pathways.” “Cross-provincial medical treatment” gained research momentum after the 2016 national “13th Five-Year Plan” explicitly called for accelerating cross-provincial medical expense direct settlement, with “information construction,” “record-filing cancellation,” “medical behavior,” and “medical resource imbalance” as its latest hotspots. “Yangtze River Delta” research first emerged in 2010 but only began to flourish after 2016, focusing on “regional coordination,” “outpatient services across regions,” “record-filing system,” and “policy implementation.” “Hierarchical diagnosis and treatment” gained prominence after 2018, with “policy friction,” “medical technology,” and “medical resource allocation” as key research topics.

3 Discussion

3.1 Policy Changes as the Primary Driver of Cross-regional Medical Treatment Research

Academic attention to cross-regional medical treatment issues has evolved from peripheral to central, influenced by national policies and theoretical demands from grassroots practice. Based on publication volume, the research can be divided into three stages: slow growth (2006–2015), rapid rise (2016–2018), and consolidation and development (2019–2022).

3.1.1 Slow Growth Period (2006–2015) During this period, China’s cross-regional medical treatment literature experienced two fluctuating increases, peaking in 2010 and 2014 respectively, with the second increase being more substantial than the first. Before 2009, China was still establishing and improving its basic medical insurance system, with national priorities focused on expanding coverage and improving benefit levels, while paying less attention to cross-regional medical treatment issues affecting relatively small populations. Consequently, academic attention to cross-regional medical treatment problems remained low. However, by 2009, with the basic medical insurance system becoming increasingly sound, cross-regional medical treatment difficulties affecting minority groups gradually became apparent. Related content was first included in policy documents issued by the Central Committee of the Communist Party of China and the State Council, sparking academic interest and driving the field to its first “small peak” (24 articles) in 2010. Subsequently, from 2010 to 2013, various provinces further promoted municipal-level coordination through unified collection and expenditure or adjustment funds, basically resolving the problem of intra-city cross-regional medical expense reimbursement. In 2014, to achieve real-time settlement of intra-provincial cross-regional medical expenses, the Ministry of Human Resources and Social Security and two other departments issued the “Guiding Opinions on Further Improving the Settlement of Basic Medical Insurance Cross-regional Medical Expenses” [?]. Under national policy guidance, the field welcomed another peak

in 2014 (43 articles). Although this stage spanned approximately 50.00% of the total time period, publications accounted for only 33.39% of all literature.

3.1.2 Rapid Rise Period (2016–2018) During this period, frequent introduction of cross-regional medical treatment policies led to rapid growth in research that resonated with national policy trends. In 2015, with the basic completion of intra-provincial settlement work, the reform focus gradually shifted toward cross-provincial medical treatment. In early 2016, the national “13th Five-Year Plan” explicitly called for accelerating the nationwide networking of basic medical insurance and direct settlement of cross-regional medical expenses [?]. Subsequently, policy documents on cross-regional medical treatment increased rapidly. In December 2016, the “Notice on Doing a Good Job in Direct Settlement of Basic Medical Insurance Cross-provincial Inpatient Medical Expenses” was issued, and the national cross-regional medical settlement system entered trial operation [?]. By September 2017, all coordinated regions nationwide had successfully connected to the national cross-regional medical settlement system, achieving networked operation [?]. In 2018, the establishment of the National Healthcare Security Administration further advanced the rapid development of China’s cross-regional medical settlement work [?]. Marked by the 2016 national “13th Five-Year Plan,” research in this field entered an “accelerator” phase, increasing to 61 articles in 2017 and surging to 98 articles in 2018—the peak annual publication volume. Although this stage spanned only 16.67% of the total time duration, publications accounted for 32.71% of all literature.

3.1.3 Consolidation and Development Period (2019–present) During this period, as China’s cross-regional medical settlement policies continued to enrich and improve, related research also matured. Although publication volume has declined compared with the peak period, it remains relatively high, with increasing proportion of core journal articles and continuously improving research quality and depth. In 2018, the Yangtze River Delta region launched pilot work for direct settlement of outpatient expenses across provinces, marking a new development stage for China’s cross-regional medical direct settlement [?]. Subsequently, the five southwestern provinces and the Beijing-Tianjin-Hebei region also launched similar pilots. In 2020, based on 12 pilot provinces, the National Healthcare Security Administration gradually expanded the scope of pilot regions, designated medical institutions, and outpatient settlement coverage [?]. In 2021, in addition to accelerating direct settlement of ordinary outpatient medical expenses across provinces, the state also began piloting direct settlement for outpatient chronic disease and special disease treatment expenses [?]. In 2022, with the release of the “Notice on Further Improving Direct Settlement of Basic Medical Insurance Cross-provincial Medical Expenses” [?], China’s cross-provincial medical settlement work entered a new chapter of standardization and unification. Publications during this stage account for 33.90% of all literature, spanning only 22.78% of the total time duration. It is expected that “cross-

regional medical treatment” will remain an important topic with relatively high research intensity for a considerable period.

3.2 Fragmented Collaboration Networks and Uneven Regional Distribution of Research Strength

Current research on cross-regional medical treatment shows uneven regional distribution among authors and institutions, concentrated mainly in the Yangtze River Delta and Beijing-Tianjin-Hebei regions. As China’s three major urban agglomerations, these regions have close economic exchanges and frequent inter-provincial population mobility, generating stronger demand for cross-regional medical treatment compared with other regions. Consequently, they have been at the forefront of implementing cross-provincial direct settlement services, with local scholars starting research earlier and producing more literature. However, relying solely on pilot region experiences without conducting in-depth research based on local actual conditions may lead to limited understanding and problem-solving approaches. Therefore, research in other regions should be encouraged to provide feasible suggestions and solutions for gradual nationwide promotion. Moreover, existing author collaboration networks are mostly composed of scholars from the same institution, with limited cross-institutional cooperation. Approximately 40.35% of core authors come from the top five research institutions by publication volume. This indicates that current author and institutional collaboration networks in the cross-regional medical treatment field require further optimization, with insufficient academic cooperation, particularly lacking collaboration across large geographical spans. This can lead to fragmented, contradictory, or homogeneous research findings, which is not conducive to providing effective knowledge supply and practical support for advancing China’s cross-regional medical settlement work.

3.3 Timeline of Research Hotspot Themes

Based on the above analysis and subsequent manual reading of literature, research in the cross-regional medical treatment field can be divided into three stages.

3.3.1 Conceptualization and Basic Theory Stage (pre-2016) During this stage, research hotspots focused on problems and countermeasures in implementing cross-regional medical settlement. Cross-regional medical treatment generally refers to medical behavior occurring outside a patient’s insured coordination area, with four categories of patients: relocated retirees, workers stationed elsewhere, referral patients, and other types. Zheng Xianping argued that differences in medical technology are the primary driver of cross-regional medical treatment issues, while the low coordination level of medical insurance funds is the root cause [?]. He Yunzhen proposed that direct settlement policies have positive effects on medical insurance sustainability, health service utilization, and accessibility [?]. However, policy and level differences across

regions often lead to reimbursement difficulties and high out-of-pocket costs for cross-regional patients [?]. Due to information sharing deficiencies between departments, violations such as fraudulent insurance claims occur, necessitating establishment of unified management standards, exploration of building cross-regional medical expense settlement platforms, removal of information sharing barriers, and strengthening of central-level coordination and supervision [?]. Necessary verification of the rationality of cross-regional medical treatment demand and supervision of designated medical institution behavior are required to achieve unified management systems, networked medical insurance information, and interconnected medical settlement [?].

3.3.2 Practical Exploration and Comparative Analysis Stage (2016–2018) During this stage, scholars summarized intra-provincial direct settlement practices, compared domestic and international experiences, and explored feasible paths for cross-provincial direct settlement. Chen Ting conducted comparative analysis of cross-regional medical treatment policies from 21 provincial-level administrative regions and proposed policy optimization recommendations [?]. Fang Pengqian analyzed existing policy orientations from a national policy design perspective and examined implementation difficulties from institutional, systemic, and technical levels [?]. Wang Shuyi further 梳理 ed existing policy achievements and shortcomings, drawing on EU management experience to propose corresponding countermeasures [?]. He Yunzhen compared EU and Chinese cross-regional medical treatment policies regarding target populations, authorization, service institutions and types, and medical insurance reimbursement, proposing recommendations for improving China’s cross-provincial medical management [?]. Zhen Cheng innovatively introduced process reengineering theory to analyze limitations in original processes and reengineer the direct settlement process for cross-provincial patients [?].

3.3.3 Policy Implementation Effects and Performance Evaluation Stage (2019–present) As direct settlement policies entered comprehensive promotion, scholars began focusing on implementation effects, concentrating on three aspects: policy implementation deviation, impact on patient medical behavior and medical expenses, and performance evaluation of implementation effects. First, cross-regional medical settlement policy implementation involves multiple stakeholder interests, and interest fragmentation among actors can cause implementation deviations. The policy exhibits obvious characteristics of multi-actor interactive game-playing, with each actor both dependent on and competing with others while pursuing self-interest maximization [?]. Therefore, constructing regional interest coordination and guarantee mechanisms is crucial, with regulatory effectiveness and rational designated hospital layout being key factors in balancing such conflicts [?]. Additionally, intelligent information system construction, specialized medical insurance governance, and diversified collaborative management approaches are necessary paths to improve settlement policy implementation efficiency [?]. Second, research on

policy impacts on medical behavior and expenses: Hu Yunhe noted that the number of cross-regional patients using card-based settlement continues to grow, with strong regional characteristics in patient distribution [?]. Zhang Jun conducted retrospective analysis of cross-regional medical insurance patients in a Tianjin tertiary hospital, examining age, insurance location, hospitalization frequency, and departments [?]. Chen Zhishui found that direct settlement does not significantly stimulate cross-coordination area medical treatment for cancer patients, but patients tend to flow to provinces with broader benefit catalogs [?]. Cui Jia pointed out an inverse relationship between cross-regional and local medical treatment, resulting in small changes in total visits and expenses, but average expenses for cross-provincial patients are significantly higher than for local patients [?]. Zhang Xiaoxiang noted that regional differentiation and medical technology disparities drive cross-regional medical behavior, with medical expenses proportional to patient age and length of stay; disease type and medical choice also significantly impact inpatient expenses [?]. Finally, research on policy implementation effect evaluation: Xu Changyuan used descriptive statistics and regression analysis based on a questionnaire survey of designated medical institutions in Guangdong to explore inpatient satisfaction and understand policy implementation effects [?]. Wu Fengqin conducted performance evaluation of cross-provincial medical settlement work based on comparative analysis of data before and after national cross-provincial settlement platform networking, using a regional cancer hospital as an example [?]. Liu Xinyu constructed a performance management evaluation system for cross-regional medical treatment at Hospital F based on the Balanced Scorecard model [?].

4 Future Research Directions

4.1 Methodology: Emphasizing Combination of Qualitative and Quantitative Research

A considerable number of studies in the cross-regional medical treatment field remain at the level of basic theory, attributes, and relationships using qualitative analysis. Although some scholars have provided theoretical responses from policy and grassroots practice perspectives, most rely on case analysis. Overall, empirical and quantitative research remains insufficient. As China's cross-regional medical settlement policy practice continues to deepen, research on policy implementation effects and influencing factors may become future priorities. Greater emphasis should be placed on diversified methodological choices, scientifically applying quantitative analysis tools to effectively measure actor intentions, behavioral characteristics, and institutional performance in cross-regional medical settlement policies, providing more empirical data support for continuous policy improvement and optimization, and enhancing the scientific rationality of policy formulation.

4.2 Content: Solving Cross-regional Medical Treatment Problems at the Institutional Level Remains a Future Challenge

Breaking the logical chain of “fragmented medical insurance system—fragmented medical insurance management—low coordination level” is key to solving cross-regional medical settlement difficulties. However, given existing conditions, achieving nationwide coordination of basic medical insurance in the short term is difficult. How to improve inter-provincial communication and coordination mechanisms and achieve regional cross-regional medical expense direct settlement is a current research priority. Simultaneously, research should focus on optimizing allocation of medical and health resources between urban and rural areas and across regions, promoting regional coordination of medical resources to prepare for integrated national medical services. Particularly, how to strengthen coordination between cross-regional medical treatment and hierarchical diagnosis and treatment, and how to enhance regulatory capacity and service capability building, are key content areas requiring long-term attention. Although some scholars have addressed performance evaluation of settlement policy implementation effects, research remains limited and mostly case-based, with questionable generalizability. Scientific evaluation of policy effects can effectively provide direction for institutional optimization, making this issue worthy of further in-depth study.

4.3 Collaboration Networks: Strengthening Cross-institutional Exchange and Cooperation

Current research collaboration networks in China’s cross-regional medical treatment field are relatively fragmented, with uneven regional distribution concentrated in the Yangtze River Delta and Beijing-Tianjin-Hebei regions. The limited data available from these areas cannot support comprehensive, systematic analysis of the cross-regional medical settlement system. Moreover, since cross-regional medical settlement policies are implemented gradually through pilot programs, regional pilot research can provide experience for other areas but lacks universal applicability, requiring attention to and respect for widespread regional differences. Therefore, regional barriers should be broken down to strengthen cross-regional and cross-disciplinary scholar cooperation, complementing each other’s strengths to continuously improve research quality and explore mechanisms for establishing long-term, sustainable academic cooperation and exchange to produce timely academic achievements.

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