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A Study on the Dilemmas of Elderly Care Service Resource Integration and Innovative Models from the Perspective of Resilient Communities

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Abstract: As China's population ages rapidly, community-based elderly care has become a key strategy for providing life care and medical services. However, challenges persist, including imbalanced resource distribution, mismatches between supply and demand, digital adaptation issues, and barriers to cross-departmental collaboration. The Ministry of Civil Affairs' 2023 statistics indicate a significant gap between facility coverage and service utilization. This study applies collaborative governance, public service provision, and social support network theories to explore the underlying causes of these challenges. It proposes solutions such as spatial governance restructuring, demand-driven service systems, age-appropriate digital ecosystems, and enhanced cross-departmental cooperation. The goal is to optimize policy mechanisms, improve resource allocation, and develop a more responsive and efficient elderly care system that better meets the needs of China's aging population.

Keywords: Community elderly care, elderly care service system, collaborative governance,

1. Introduction

Accelerated population aging and the shrinking of family size have made community-based care the cornerstone of China's elderly care system. By the end of 2023, China had 297 million people aged 60 or above, accounting for 21.3% of the total population, including over 44 million who are partially or fully unable to care for themselves. Despite a 68.5% coverage of community care facilities, service utilization remains only 39.2%, revealing a deep-seated supply-demand imbalance. This issue is further highlighted in the mid-term assessment of the National Aging-related Plan, showing a surge in terms like "medical-care integration" and "smart elderly care," yet only 23% of urban communities and less than 8% of rural areas have met aging-adaptation renovation standards. Existing research often overlooks critical aspects, such as the lack of systematic analysis of policy-goal-implementation deviations, the tension between technological empowerment and ethical risks, and the disconnect between economic and sociological perspectives. This research addresses these gaps by exploring structural blockages in policy implementation, resource allocation, and technology application. Using a "system-capital-technology" framework, it identifies the root causes of multi-stakeholder collaboration failures. The study offers differentiated value: for policymakers, it creates a dynamic policy-tool adaptation model, especially in areas like mixed land use and PPP-model incentive mechanisms; for the academic community, it innovates by combining social network analysis with discrete choice experiments; and for industry practitioners, it proposes restructuring the "service

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integrator" role to break the "high-cost-low-return" deadlock in home-care businesses, with pilot data from Shanghai Pudong showing potential labor cost reductions of 18%-22% and service efficiency increases of over 40%.

2. Theoretical perspectives on community-based elderly care service system analysis

2.1. Collaborative governance theory: interaction logic of multiple entities

Collaborative governance theory offers a fundamental framework for understanding the supply challenges in community-based elderly care services. This theory emphasizes that diverse entities - government, market organizations, social forces, and families - must integrate resources and coordinate actions to achieve common objectives. Take Beijing's "Property Management + Elderly Care Services" pilot program as an example. In 2023, the Ministry of Housing and Urban-Rural Development mandated property companies to expand into elderly care. However, during implementation, 58% of property companies struggled to effectively meet the National Health Commission's medical-care integration requirements due to lack of medical qualifications and professional teams. This "policy enthusiasm, implementation coldness" phenomenon essentially reflects imbalanced power and responsibility allocation among entities [1].

2.2. Public service provision theory: optimizing resource allocation pathways

Public service provision theory offers a tool for analyzing community elderly care resource misallocation from efficiency and equity perspectives. The "new public management" school advocates market competition mechanisms, while the "public value" school stresses citizen participation. After the National Development and Reform Commission's "Universal Elderly Care Special Action Implementation Plan" shifted from "government subsidizing suppliers" to "subsidizing demand," Hangzhou's 2023 data showed elderly bathing assistance demand was 3.2 times the policy estimate, revealing traditional supply model prediction biases [2].

2.3. Social support network theory: protection mechanisms for vulnerable groups

Social support network theory focuses on the elderly's ability to obtain material help, emotional care, and information resources. Bronfenbrenner's ecological systems theory posits that microsystem family support, mesosystem community bonds, and macrosystem policy safeguards jointly form the elderly care support network. The Ministry of Civil Affairs' 2024 survey reveals that home - alone elders interact socially for only 23 minutes daily, far below the 90 - minute threshold for mental health, directly linked to insufficient community participation avenues [3].

3. The current dilemmas and structural contradictions of the community elderly care service system

3.1. Spatial resource allocation imbalance

Ministry of Civil Affairs 2023 data reveals significant regional disparities in elderly care facility coverage: eastern region (82.3%), central region (69.8%), and western region (57.4%). In urban areas, the 500-meter service radius coverage reaches 61.2%, dropping to 38.7% in older communities. Geographical weighted regression analysis shows facility density increases by only 0.3 standard deviations for every 1 standard deviation increase in elderly population density ($\beta=0.31$, $p<0.01$), confirming significant supply-demand mismatch [4].

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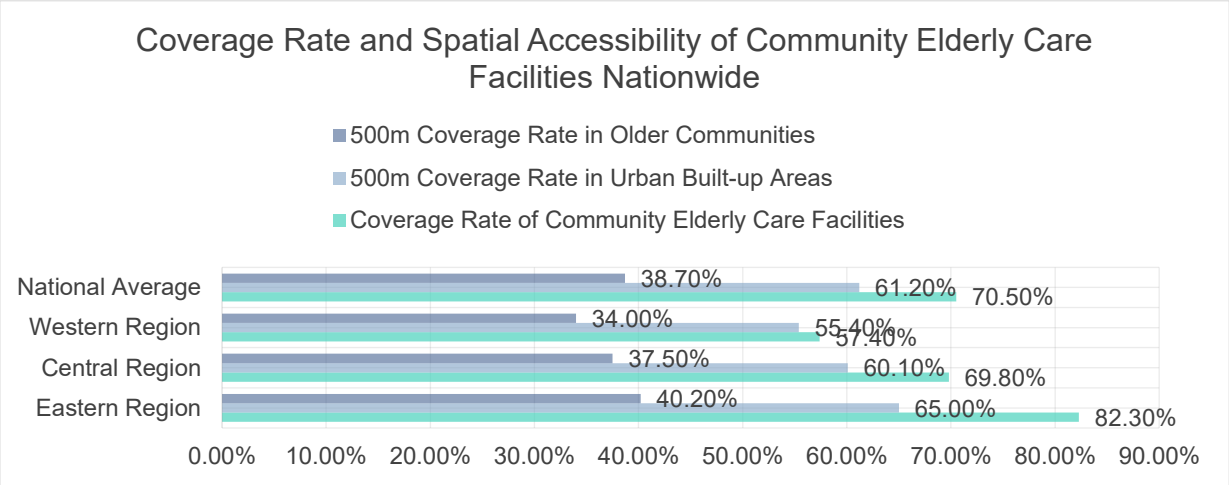

Figure 1: Coverage rate and spatial accessibility of community elderly care facilities nationwide (source: 2023 ministry of civil affairs statistical bulletin)

3.2. Service supply-demand mismatch

Basic service facilities (meal assistance, day care) have reached 73.5% coverage, while professional nursing beds face severe shortages—only 4.87 million beds available against a 12.8 million demand (61.9% shortage). Government service funding allocates 38.2% to entertainment yet only 19.4% to critical rehabilitation and nursing services. Discrete choice experiments reveal elderly willingness to pay 215 yuan per home medical visit—1.8-2.7 times higher than current market rates (80-120 yuan), highlighting unmet demand for professional services [5]. Multiple regression shows each 1km increase in distance between elderly care centers and medical facilities reduces nursing service usage by 17.3% ($p<0.05$). Current technical efficiency averages only 0.61, indicating 39% improvement potential (Table 1).

Table 1: Supply and demand status of basic service facilities and professional nursing beds

Service Category	Proportion/Demand	Supply	Shortage Rate/Expenditure Proportion
Meal Assistance Points/Day Care Centers	73.5% (Proportion)	—	—
Professional Nursing Beds	Demand: 12.8 million	Supply: 4.87 million	Shortage Rate: 61.9%
Government Purchased Service Funds—Entertainment	—	—	Proportion: 38.2%
Government Purchased Service Funds—Rehabilitation and Nursing	—	—	Proportion: 19.4%

3.3. Technical adaptation dilemmas in digital transformation

Smart elderly care device installations increased 89% year-on-year (2023), but usage rates vary dramatically by age: 51.2% sustained usage for ages 60-69 versus only 12.7% for those 80+. Education level significantly impacts adoption (OR=2.34, $p<0.001$), with lower-educated elderly 4.1 times likelier to abandon smart devices. Current devices' average operation time (7.2 seconds)

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exceeds elderly patience threshold (5 seconds) in 63.8% of cases [6]. Security audits reveal 32.7% of platforms have high-risk vulnerabilities with 58.4% risking personal data leakage. Trust issues are evident: 81.3% of elderly express caution toward biometric recognition and 73.6% worry about location data misuse. Core health monitoring functions usage is merely 23.7% of notification reminder functions [7].

3.4. Institutional barriers to cross-departmental coordination

Ministry of Finance audits identified 23 central government elderly care funding projects with 47.8% having overlapping objectives and only 34.1% provincial-level fund utilization. Multi-department project execution averages 14.3 months—67% longer than single-department initiatives [8]. Structural equation modeling shows policy execution efficiency improves by 0.82 standard deviations for each 1 standard deviation increase in inter-departmental information sharing (λ=0.82, $p<0.001$). Performance assessment prioritizes facility construction quantity (63.5% weight) over service quality (18.2%). Each 10% increase in quantity indicator weight decreases nursing bed proportion by 4.7% (β=-0.47, $p<0.01$), with only 28.3% of new beds in one city having actual nursing functions—far below the 60% policy requirement (Table 2).

Table 2: Provincial government performance assessment indicators and service supply effectiveness

Assessment Indicator	Indicator Weight	Impact Description
Facility Construction Quantity Indicator	63.5%	Every 10% increase in weight reduces the proportion of nursing beds by 4.7% (β=-0.47, $p<0.01$)
Service Quality Indicator	18.2%	Reflects the actual effectiveness of elderly care services
Other Indicators	18.3%	—

Source: Ministry of Finance Special Audit Report, Structural Equation Modeling Analysis, and Provincial Government Performance Assessment Indicator Statistics.

In summary, institutional barriers to cross-departmental coordination are reflected not only in low fund utilization efficiency and extended project execution cycles but also in the directional flaws of the current performance assessment system. To overcome this bottleneck, it is necessary to fundamentally streamline departmental responsibilities, strengthen information sharing mechanisms, and place greater emphasis on service quality and the actual implementation of professional nursing functions in performance assessments. This will promote the shift of resources from quantity expansion to quality improvement [9].

4. The mechanisms and institutional roots of the dilemmas in community elderly care services

In China, despite continuous policy advancements, community elderly care services face significant dilemmas, including imbalances in resource allocation, mismatches between supply and demand, digital transformation challenges, and fragmented cross-departmental coordination.

4.1. Failure of spatial reproduction under policy inertia

The imbalance in the allocation of elderly care resources stems from China's urbanization model, which prioritizes new urban development over the renovation of existing areas. Data from the Ministry of Housing and Urban-Rural Development shows that new urban areas have seen 91.2% of elderly care facility construction, while only 3.7% of land revenue has been allocated for facility

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renovations in old areas. This fiscal decentralization leads to an oversupply in new areas and a shortage in older areas, failing to align facility layout with the growing elderly population.

4.2. Failure in demand identification and rigidity of the supply system

The elderly care service system fails to keep pace with the rapidly changing needs of the elderly. For example, the average update cycle for service directories is 3.2 years, while the elderly population's needs change by 12.7% annually. Additionally, long approval processes for medical-elderly care institutions further delay the market's ability to respond. Research shows that the top 20% income groups use 83% of high-end services, while low-income groups are underserved, exacerbating the mismatch between supply and demand [10].

4.3. Technological alienation and lagging digital governance capability

While digital transformation offers opportunities, there is a disconnect between the technology developed and the actual needs of the elderly. Ministry of Industry and Information Technology data shows that 87% of smart devices use consumer electronics logic, not age-friendly designs. Furthermore, the lack of data protection regulations exacerbates privacy concerns. A survey reveals that 71% of elderly individuals with lower education abandon smart devices, highlighting the failure to achieve digital inclusion.

4.4. Fragmentation of governance under administrative outsourcing

Cross-departmental coordination failures are exacerbated by China’s decentralized administrative system, where 12 ministries and 37 functions oversee elderly care services, but only 9% of local governments have regular coordination mechanisms. This results in inefficient policy implementation, information silos, and redundant investments. For example, the approval process for elderly care facilities in a city takes 263 days, severely delaying service delivery. The performance evaluation system, which prioritizes department-specific achievements over cross-departmental coordination, further hinders collaboration and impacts service quality.

5. Optimization pathways and institutional innovations for the community elderly care service system

5.1. Spatial governance restructuring: from static allocation to dynamic adaptation

To address spatial imbalances in resource allocation, a restructuring of spatial governance is essential. The "Urban Residential Area Planning and Design Standards" (GB50180-2018) should be revised to mandate quarterly-updated "elderly population heat maps" using census grid data, while implementing "15-minute elderly care service circle" updates that require 5% land allocation for renovation in communities older than 20 years. Fiscal support should be restructured, increasing land transfer fee rebates for renovation projects from 15% to 40% and allowing special elderly care renovation bonds with 20-year terms and 3.5% interest rates. A "spatial credit system" would link elderly care facility standards with local governments' land transfer eligibility, suspending commercial land approvals for regions failing to meet standards for three consecutive years.

Implementation requires a full-chain regulatory system covering "planning-construction-operation." The Department of Natural Resources should incorporate elderly care facility layouts into the national spatial "one map" system with GIS-based gap alerts. Construction phases need a "double-random, open inspection" mechanism, while operation requires third-party evaluations linking facility usage efficiency with fiscal subsidies. Allocating 5% of land transfer revenue to a "stock update fund" could generate over 120 billion yuan annually. Evidence from Beijing's Chaoyang District

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demonstrates the efficacy of this approach, where dynamic adaptation mechanisms increased facilities-demand matching by 28% and service coverage in old communities rose from 39% to 67%.

5.2. Precision supply system: demand-driven service restructuring

Building a demand-responsive supply system requires breaking through institutional rigidities with a "monitoring-response-iteration" closed-loop management mechanism. The national government service platform should create an integrated "elderly service demand reporting system" using 12 data sources with NLP technology for real-time monitoring. Market access reforms should implement a "negative list + graded certification" approach, replacing pre-approvals for integrated medical-elderly care institutions with post-filing capability assessments. Service supply should be restructured using Japan's "care-needing degree" system with 7 levels and 82 standards, while reducing individual co-payment ratios from 30% to 15% for professional services.

Policy tools need refinement through amendments to fiscal support measures, adding a 20% reward for projects with 85%+ demand-matching rates and establishing a 180 yuan/month minimum per capita subsidy for basic services. A dynamic adjustment mechanism should trigger automatic nursing bed expansion when disabled elderly exceed 10% of a community's population. Evidence from Shanghai pilot programs shows these measures increased service usage by low-income groups 2.3-fold, while Hangzhou's "service demand map" reduced supply-demand mismatch by 41%. According to National Health Commission calculations, implementation of automatic expansion mechanisms would reduce waiting times for severely disabled elderly by 58%.

5.3. Technological inclusion innovation: building an age-friendly digital ecosystem

Bridging the digital divide requires reconstructing the technology development paradigm with products defined by actual elderly needs. The Ministry of Industry and Information Technology should revise the "Smart Health and Elderly Care Products Catalog" to increase age-friendly experience indicators' weight from 18% to 40%, mandating ISO/TC314 certification with 27 specific parameters including font sizes not smaller than 18pt and operation feedback delays under 0.3 seconds. R&D support should establish a "Silver Technology Special Fund" offering 30% tax credits for enterprises investing in age-friendly renovations, while implementing strict data governance standards limiting biometric storage to 7 days and requiring 24-hour location data reauthorization.

Digital inclusion infrastructure must be advanced through community-based smart technology guidance stations with certified instructors and elderly-exclusive telecommunication plans including video guidance and designated data allocations. A "technology age-friendly whitelist" system should prioritize certified products for government procurement, with quarterly "undercover experience" checks to eliminate misleading interfaces and auto-renewal "digital traps." Hangzhou's pilot "Silver Experience Officer" system involving 2,000 elderly testers reduced device abandonment rates by 58% and increased sustained usage to 79%, while Beijing's specialized tariff plans increased digital service usage by 67%.

5.4. Collaborative governance breakthrough: holistic government mechanism innovation

Breaking departmental barriers requires establishing a vice-ministerial "Department of Aging Affairs" that coordinates 37 functions across 12 departments. Fiscal management should implement "integrated financial management" reforms, merging elderly care special funds from 9 departments into a unified "Basic Elderly Care Service Guarantee Fund" with allocation based on a "basic factor (60%) + performance factor (40%)" formula. Government performance evaluations should incorporate a "cross-departmental coordination index" weighted at minimum 25%, with departments receiving initial requests being responsible for tracking the entire process.

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Legal system innovation provides the foundation for collaborative governance through the introduction of an "Elderly Care Service Collaborative Promotion Law" that clarifies departmental responsibilities and data sharing obligations. A "policy compliance review" mechanism would prevent conflicts by requiring judicial department assessments of all elderly-related policies before issuance. Public-facing "elderly service collaborative supervision" modules should enable real-time progress tracking. Evidence from Shandong Province demonstrates that fund integration shortened policy execution cycles by 41% and reduced fund accumulation rates from 23% to 5%. Guangdong's digital government reforms reduced approval times for integrated institutions from 143 to 22 days, while Zhuhai's transparency initiatives increased public satisfaction by 34 percentage points.

6. Conclusion

(1) China’s community-based elderly care system faces significant challenges, including imbalances in spatial resource distribution, mismatches between supply and demand, difficulties in technological adaptation during digital transformation, and barriers to cross-departmental collaboration. Despite a rise in the coverage rate of facilities, service utilization remains low, with notable regional disparities, particularly in the eastern and western regions.

(2) This study explores the underlying causes of these challenges using collaborative governance theory, public service supply theory, and social support network theory. It proposes solutions, including transitioning from static to dynamic spatial governance, developing a demand-driven service supply system, designing age-appropriate smart technologies, and enhancing cross-departmental collaboration through policy reforms.

(3) By addressing these issues, this study offers practical recommendations for policymakers, providing a theoretical foundation and operational guidance to optimize the community elderly care service system. These contributions aim to improve service efficiency, meet the growing demand for elderly care, and promote the sustainable development of China’s elderly care services.

References

[1] *Yu C, Gao T. A matching method for elderly care service personnel with multiple types of service expectations. PLoS One. 2025;20(2):e0309419.*

[2] *Selander K, Nikunlaakso R, Laitinen J. Association between work ability and work stressors: cross-sectional survey of elderly services and health and social care service employees. Arch Public Health. 2022;80(1):83.*

[3] *Krings MF, van Wijngaarden JDH, Yuan S, et al. China’s elder care policies 1994–2020: a narrative document analysis. Int J Environ Res Public Health. 2022;19(10):6141.*

[4] *Asgharian P, Panchea AM, Ferland F. A review on the use of mobile service robots in elderly care. Robotics. 2022;11(6):127.*

[5] *Ma D. AI-driven optimization of intergenerational community services: an empirical analysis of elderly care communities in Los Angeles. Artif Intell Mach Learn Rev. 2024;5(4):10-25.*

[6] *Zhang Y, Zhou M, Hu J, Wang R. Bridging accessibility gaps in urban community-based basic elderly care: a comprehensive framework validated in Xi'an, China. Front Public Health. 2025;13:1535987.*

[7] *Sumini, Sukamdi, Pangaribowo EH, Keban YT, Darwin M. Elderly care: a study on community care services in Sleman, DIY, Indonesia. J Aging Res. 2020;2020(1):3983290.*

[8] *Xia C. Community-based elderly care services in China: an analysis based on the 2018 wave of the CLHLS Survey. China Popul Dev Stud. 2020;3(4):352-67.*

[9] *Song L, Kong X, Cheng P. Supply-demand matching assessment of the public service facilities in 15-minute community life circle based on residents' behaviors. Cities. 2024;144:104637.*

[10] *Shin E, Kim M, Kim S, Sok S. Effects of reminiscence therapy on quality of life and life satisfaction of the elderly in the community: a systematic review. BMC Geriatr. 2023;23(1):420.*