Original Paper

PEST-SWOT Analysis of Standardization for Community-Home Medical-Care Integration Services: Based on Regional Characteristics of Dongguan

Tao He[1], Lei He[1], Wendi Fang[2], Chaofeng Tang[1], Xin Zhao[1], & Yuan Xiao[1*]

[1] College of Humanities and Management, Guangdong Medical University, Dongguan, Guangdong, China

[2] The Second Clinical Medical College of Guangdong Medical University, Dongguan, Guangdong, China

[*] Yuan Xiao, Corresponding Author

Abstract

Facing the structural tension of hidden aging in youth-oriented cities, this study employs the PEST-SWOT model to systematically analyze the internal and external environment for standardizing community-home medical-care integration services in Dongguan. It identifies strengths, weaknesses, opportunities, and threats across political, economic, social, and technological dimensions, proposing four strategic typologies: growth, turnaround, diversification, and defense.

Keywords

community-home medical-care integration, service standardization, PEST-SWOT analysis, Dongguan

1. Introduction

Accelerating demographic transitions have exposed China's community-home medical-care integration services to the systemic challenge of "aging before preparedness." Dongguan—a manufacturing powerhouse ("World Factory") adjacent to Hong Kong and Shenzhen, and a typical young immigrant city—harbors mounting pressures from its rapidly growing elderly migrant population beneath its youthful facade. This constitutes a highly representative sample for studying the "aging before preparedness" paradox. Although central and local policy documents on medical-care integration have

established a framework, standardization efforts remain constrained by multidimensional dynamics such as industrial restructuring and cross-border collaboration. Grounded in Dongguan's regional characteristics, this study employs the integrated PEST-SWOT analytical framework to deconstruct the internal and external drivers of standardizing community-home medical-care integration services. It aims to provide theoretical insights for similar cities exploring context-adapted development pathways.

2. Materials and Methods

2.1 Data Sources

Data were collected through multiple channels: Systematic retrieval of academic literature (2015–2025) from Chinese and international databases (CNKI, Wanfang, NSSD, PubMed, ProQuest, Springer) on medical-care integration standardization; Review of policy documents and proposal responses issued by national, Guangdong provincial, and Dongguan municipal governments; Collection of demographic aging data and community health service operation statistics from Dongguan Bureau of Statistics and Civil Affairs; Supplementary materials from platforms including *Dongguan News*, QIANZHAN, and CIR Industry Research Institute.

2.2 Research Methodology

The integrated PEST-SWOT framework was applied. First, the PEST model dissected the macro-environment across four dimensions: Political (P): Policy support and regulatory systems; Economic (E): Fiscal investment and industrial foundations; Social (S): Demographic structures and cultural needs; Technological (T): Smart eldercare technology applications. Subsequently, the SWOT model systematically identified: Internal Strengths (S) and Weaknesses (W) of the service system; External Opportunities (O) and Threats (T).

A PEST-SWOT matrix cross-matched macro-environmental factors with regional development features, generating differentiated strategic combinations. This approach preserves the systematicity of SWOT analysis while refining external environmental dimensions through PEST, making it suitable for regional public service research under complex policy contexts.

3. Regional Characteristics of Dongguan

3.1 Hidden Aging Pressure Beneath a Youthful Facade

Dongguan is a young immigrant city with an average age of only 33.4 years. However, as early migrants gradually enter old age—coupled with industrial restructuring and talent attraction policies—the elderly migrant population continues to expand. It is projected to grow at an average annual rate of 8.5% from 2025 to 2035, creating a structural challenge of "aging before preparedness" (Dongguan Municipal Bureau of Civil Affairs, 2023). This demographic paradox positions Dongguan as an ideal case for studying proactive aging responses.

3.2 Manufacturing-Driven Economic Resilience

As the "World Factory," Dongguan's 2024 GDP reached 1.23 trillion yuan, with industrial value-added

accounting for 55% (Dongguan Municipal Bureau of Statistics, 2025). Its electronics industry cluster dominates nationally, with Huawei, OPPO, and vivo collectively holding nearly 50% of China's smartphone market share and driving emerging industries like AI and biopharmaceuticals. According to the *Several Measures to Accelerate the Empowerment of Artificial Intelligence for High-Quality Manufacturing Development*, Dongguan plans to invest more than 3 billion yuan over three years to advance AI-enabled manufacturing, laying an industrial foundation for "AI+eldercare" technologies.

3.3 Policy-Led Institutional Innovation

Since becoming one of China's first national pilot cities for medical-care integration in 2016, Dongguan has pioneered "grid-based medical-eldercare integration" community services. This initiative deploys family doctors across 48 grassroots grids, delivers over 100,000 instances of continuing care, and trials an "AI+eldercare" smart platform for 24/7 monitoring. As a nationally accredited model institution, Dongkeng Hospital Nursing Home has led the development of industry standards and trained over 3,000 nursing professionals, advancing service standardization (Zeng et al., 2022). Concurrently, Dongguan attracts Hong Kong and Macao seniors through "cross-border elderly care" programs. Projects like Donghua Sunshine City explore collaborative service models within the Greater Bay Area (GBA), fostering a diversified and standardized medical-eldercare ecosystem.

3.4 Flat Spatial Governance Structure

As one of China's only four municipalities directly administering towns (without county-level divisions), Dongguan implements a two-tier governance system (city-town). Its 32 towns/subdistricts report directly to the municipal government, granting them high autonomy—including 80% fiscal independence—to allocate land and planning resources, accelerating local policy implementation. However, severe land fragmentation constrains contiguous medical-eldercare facility development, with industrial plots scattered across over 20,000 parcels and development intensity nearing 50% (Dou et al., 2021).

4. PEST-SWOT Analysis of Standardization for Community-Home Medical-Care Integration Services in Dongguan

The PEST-SWOT framework demonstrates high applicability in analyzing the standardization of community-home medical-care integration services in Dongguan, given its regional characteristics. By deconstructing macro-environmental drivers through the PEST model and identifying interactions between internal/external conditions via the SWOT model, this approach addresses the structural contradiction of "youthful appearance versus hidden aging" in immigrant cities.

External Environment (PEST Dimensions): Political (P): Synergy between national pilot policies and local governance innovations; Economic (E): Technology spillover and fiscal support from manufacturing transformation; Social (S): Service demand heterogeneity driven by intergenerational migration; Technological (T): Potential of AI and IoT to restructure service processes.

Internal Conditions (SWOT Dimensions): Strengths (S): First-mover policy advantages of the

"grid-based medical-eldercare integration" model and industrial cluster capabilities; Weaknesses (W): Land fragmentation constraining contiguous facility deployment; Opportunities (O): Standard mutual recognition under Greater Bay Area (GBA) collaboration; Threats (T): Fiscal sustainability risks from low-end industrial relocation.

By constructing a PEST-SWOT matrix, this study dynamically aligns external environmental factors with regional endowments, revealing a standardization pathway driven by policy incentives, technological adaptation, and demand responsiveness. This provides a theoretical framework and practical paradigm for resolving the "aging before preparedness" dilemma in youth-dominant cities.

5. Political Factors

5.1 Strength Analysis

5.1.1 Pilot Policy Conversion Advantage

As one of China's first national pilot cities for medical-care integration, Dongguan has enacted a series of policies to construct and refine its integrated eldercare system. The *Implementation Opinions on Promoting the Integration of Medical and Elderly Care Services* clarifies the "medical-care integration" approach, while the *Revised Management Measures for Home-Based Elderly Care Services in Dongguan* details standards for utilizing community health institutions and eldercare facilities to provide comprehensive services—including daily care, medical support, and rehabilitation.

5.1.2 Multi-Department Coordination Mechanism

Dongguan established a joint conference system involving 22 departments (e.g., civil affairs and health authorities) to coordinate eldercare services. This mechanism enhances systemic precision in "policy formulation-resource allocation-service implementation," significantly improving service delivery efficiency.

5.1.3 Targeted Fiscal Subsidy System

Differentiated subsidies optimize fiscal resource allocation: Medical-care integration facilities: Receive construction subsidies of ¥18,000 per bed (vs. ¥12,000 for standard beds) and operational subsidies of ¥200/bed/month for accommodating disabled elders; Home-based care: Monthly subsidies of ¥360–720 based on disability level; Home care beds: One-time grants of ¥2,000–3,000 per bed. A dynamic adjustment mechanism and segregated fund accounting further improve fiscal efficacy.

5.2 Weakness Analysis

5.2.1 Fragmented Implementation of Grassroots Policies

Dongguan's *city-administering-town* flat governance model has led to significant disparities in the implementation of medical-care integration policies at the grassroots level. Due to variations in resource endowments and enforcement capacity across towns/subdistricts, a fragmented pattern characterized by discrepancies in service standards and regulatory enforcement has emerged. The absence of a rigid city-level coordination mechanism has resulted in inadequate execution of key indicators—such as family doctor contracting services and smart device deployment—in some

towns/subdistricts. This impedes the synergistic advancement of citywide standardization efforts(Jiao et al., 2021).

5.2.2 Insufficient Policy Coordination

Despite establishing a multi-department joint conference system, the lack of detailed implementation rules undermines the effectiveness of cross-departmental collaboration. For instance, the *Revised Management Measures for Home-Based Elderly Care Services in Dongguan* fails to clarify the specific responsibilities of civil affairs, health, and medical insurance departments in service quality oversight. Consequently, some towns/subdistricts face issues such as multi-channel approval processes and ambiguous accountability.

5.2.3 Inadequate Incentives for Social Capital

Current subsidy policies primarily target registered elderly residents, leaving non-Dongguan residents without equivalent coverage. Private institutions report protracted disbursement cycles for subsidies. Moreover, the absence of a long-term care insurance system further constrains market-driven operations and sustainable investment(Zhuang et al., 2025).

5.3 Opportunity Analysis

5.3.1 Deepened Policy Synergy in the Greater Bay Area

The *Outline of the Development Plan for the Guangdong-Hong Kong-Macao Greater Bay Area* supports cross-border elderly care collaboration. Dongguan has piloted the Guangdong Residential Care Service Scheme for Hong Kong and Macao seniors. Projects like Donghua Sunshine City attract Hong Kong elders, promoting mutual recognition of service standards and cross-border referrals within the Bay Area. This injects transnational resources into standardization development.

5.3.2 Policy Leverage Accelerates Local Implementation

China's National Health Commission and four other ministries jointly issued the *Guidelines on Promoting High-Quality Development of Medical-Care Integration Services*, explicitly increasing investment in community-based medical-eldercare services. This policy impetus enables Dongguan to expedite the establishment of a graded home care bed subsidy system, thereby advancing service standardization.

5.3.3 Quality Control Standards Drive Service Enhancement

Aligned with China's *Guidelines for the Construction and Management of Geriatric Medicine Departments*, Dongguan's Geriatric Medicine Quality Control Center is formulating local quality control standards. These cover comprehensive geriatric assessments and multimorbidity co-management protocols. Concurrently, efforts to strengthen medical-care integration include building medical-eldercare consortia and extending healthcare services to communities and households, ensuring essential medical and health services for the elderly.

5.4 Threat Analysis

5.4.1 Policy Iteration Transition Risks

China's medical-care integration policies are undergoing dynamic adjustments. Inadequate articulation

between new and existing policies may create implementation gaps at the local level. Despite high fiscal autonomy in Dongguan's towns/subdistricts, some grassroots departments exhibit insufficient adaptability to policy changes, resulting in risks of lagging standardization efforts.

5.4.2 Limitations in Medical Insurance Coverage

Medical insurance payments provide inadequate support for home-based medical-eldercare services, with low reimbursement rates for telemedicine and home nursing. Additionally, cross-regional medical settlement procedures remain suboptimal. Some non-Dongguan elderly residents report cumbersome registration processes that hinder efficient medical expense reimbursements, thereby constraining service accessibility and sustainability.

5.4.3 Incomplete Regulatory Accountability Mechanisms

Existing policies lack comprehensive regulatory details for medical-care integration service quality, while third-party evaluation systems are still under development. A 2024 inspection by Dongguan's Health Bureau revealed that some institutions had inadequate fire safety facilities and defective medical safety management systems. Such inconsistent service quality increases health risks for the elderly.

6. Economic Factors

6.1 Strength Analysis

6.1.1 Industrial Chain Empowerment for Cost Reduction and Efficiency

Dongguan's prominent electronics industry cluster enables leading enterprises to continuously deliver smart eldercare technologies. Locally developed intelligent monitoring devices are widely deployed in community-home settings, significantly reducing manual inspection costs. Through manufacturing technology transfer, these innovations achieve full-cycle cost optimization of monitoring equipment.

6.1.2 Targeted Subsidies Guide Resource Optimization

Dongguan has established a stratified subsidy system that offers higher construction subsidies for medical-care integration institutions than standard eldercare facilities. It implements graded home care bed subsidies for both registered and non-local elderly residents. This precision allocation model effectively channels resources toward critical areas such as disability care and smart facility retrofitting.

6.1.3 Incremental Cross-Border Elderly Care Market

Leveraging its strategic position in the Greater Bay Area, Dongguan attracts premium clients through the *Cross-border Elderly Care Scheme* for Hong Kong and Macao seniors (Li et al., 2024). Projects like Donghua Sunshine City gain competitiveness by offering service fees significantly lower than those in Hong Kong and Macao, simultaneously driving exports of locally produced smart eldercare devices and creating new revenue growth channels.

6.2 Weakness Analysis

6.2.1 Inefficient Fiscal Resource Allocation

The fragmented management system for community-based medical-eldercare services in Dongguan leads to dispersed funding distribution. Uncoordinated grassroots procurement results in duplicate investments and idle resources in certain areas, while universal access services suffer from chronic underfunding. This constrains the overall efficiency of fiscal resource utilization.

6.2.2 Inadequate Fiscal Subsidy Coverage

Current subsidy policies prioritize registered residents, leaving a substantial non-registered elderly population insufficiently covered. Key initiatives like home care bed subsidies apply significantly reduced standards to non-local seniors, creating a mismatch between fiscal input and actual service demand. This undermines the equity of essential public services.

6.2.3 Resource Displacement by High-End Projects

Preferential policies for premium initiatives (e.g., cross-border elderly care projects)－including land concessions and dedicated subsidies － divert fiscal resources otherwise available for community medical-eldercare services. Persistent shortages of smart monitoring devices and professional caregivers at the community level reflect contradictions between resource prioritization and universal needs (Gu, 2023).

6.3 Opportunity Analysis

6.3.1 Development of Inclusive Elderly Care Finance

Under the *Implementation Plan for Promoting High-Quality Development of the Silver Economy to Enhance Elderly Well-being in Guangdong Province*, Dongguan is advancing elderly care financial policies. By issuing inclusive elderly care re-lending facilities, it supports manufacturing of senior products and R&D of smart eldercare devices. This alleviates financing pressures for medical-care integration institutions and provides funding guarantees for service standardization upgrades.

6.3.2 Green Finance Optimizes Costs

Financial institutions in Dongguan support energy-saving renovations of community medical-eldercare facilities through green project loans. Innovatively applying instruments like pledging of green revenue rights and carbon emission rights, they effectively reduce energy consumption and equipment maintenance costs, thereby releasing more resources for standardization initiatives.

6.3.3 Home Service Engineering Enhances Talent Supply

Leveraging grassroots "Nanyue Home Services" stations, Dongguan has built an integrated "training-employment-service" platform. It offers free courses in elderly care nursing and rehabilitation skills, implementing targeted training programs for professionals. This addresses human resource shortages in community medical-eldercare services and provides manpower support for standardized implementation.

6.4 Threat Analysis

6.4.1 Industrial Relocation Undermines Elderly Care Investment

The ongoing shift of low-end manufacturing to Southeast Asia has strained local finances in traditional industrial towns like Chang'an and Humen (Fang Yang, 2023). With stagnant growth in eldercare

budgets, long-term investments in smart device upgrades and standardized training face reduction risks.

6.4.2 Payment System Deficits Intensify Burdens

The absence of a long-term care insurance system forces families to bear out-of-pocket expenses for disabled elders' medical care (Zhuang et al., 2025). Complex cross-regional insurance reimbursement procedures further restrict coverage for non-Dongguan residents, compelling some households to forgo standardized services due to financial stress. This suppresses effective demand realization.

6.4.3 Policy Disparities Trigger Resource Outflow

Shenzhen's Qianhai Cooperation Zone creates policy arbitrage opportunities through corporate tax reductions and subsidized land pricing. To lower operational costs, some Dongguan-based smart eldercare equipment manufacturers have relocated to Qianhai. This erodes local supply chain integrity and indirectly escalates implementation costs for community medical-care service standardization.

7. Social Factors

7.1 Strength Analysis

7.1.1 Youthful Population Supports Elderly Care Capacity

Data from China's *Seventh National Population Census* reveals that over 70% of Dongguan's population are migrants, creating a unique "young workforce supporting aging care" demographic dividend. Younger demographics exhibit high acceptance of smart eldercare technologies, accelerating the adoption of home health monitoring devices like the *Ping An Bell* system. This provides both a talent foundation and innovation momentum for standardized services.

7.1.2 Community Culture Enhances Service Adaptability

Lingnan cultural traditions of familial mutual aid and community cohesion drive the "neighborhood mutual assistance + professional support" service model. For instance, Zhongtang Town's pilot time banking initiative engages younger seniors in caring for older disabled elders. This not only reduces labor costs but also strengthens emotional connections, enhancing the adaptability of standardized services.

7.1.3 Multi-Stakeholder Collaborative Network

Under government leadership, social work organizations, volunteers, and enterprises form a coordinated network. The Dongguan Medical-Elderly Health Association integrates resources from 85 institutions, establishing a technology-sharing platform connecting "medical institutions-eldercare facilities-equipment suppliers." This promotes cross-institutional standardization of home hospital beds and telemedicine, addressing service fragmentation (Dongguan Municipal Bureau of Civil Affairs, 2023).

7.2 Weakness Analysis

7.2.1 Cultural Integration Barriers for Non-Local Elderly

Non-registered seniors account for over 30% of Dongguan's elderly population. Dialect differences and lifestyle disparities hinder service acceptance. Some elders refuse to sign family doctor contracts due to

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language barriers, impeding unified implementation of health management standards. This exposes deficiencies in localized service adaptation (Wang et al., 2024).

7.2.2 Shortage of Family Caregiving Time

Manufacturing workers in Dongguan typically follow three-shift work schedules, making daytime care provision difficult for dual-income families. Delayed emergency response for disabled elders living alone contradicts the "15-minute response" standardization requirement, undermining effective service delivery.

7.2.3 Traditional Values Diminish Demand

Most elders reject home-based care services due to the "*raising children for old-age support*" mentality, viewing external care as undermining family dignity. Consequently, social capital investment shrinks due to insufficient market demand, obstructing large-scale adoption of standardized services (Fang et al., 2019).

7.3 Opportunity Analysis

7.3.1 Standardization Upgrade for Mutual Aid Elderly Care

China's National 14th Five-Year Plan for the Development of Aging Causes and Elderly Care Service Systems explicitly supports mutual-aid eldercare. Dongguan's *time banking* pilot has been promoted by the Ministry of Civil Affairs. The government plans to establish a citywide unified volunteer service credit exchange standard to institutionalize mutual aid services, providing innovative solutions to workforce shortages.

7.3.2 Youth-Driven Service Innovation

With over 170,000 university students and 12% annual growth in social work organizations, Dongguan leverages the Communist Youth League's *Youth-Elderly Companionship* project. This initiative pairs young volunteers with isolated seniors, simultaneously alleviating care burdens and standardizing smart device operation training to cultivate an emerging service workforce (Ying et al., 2024).

7.3.3 Bay Area Integration Accelerates Standard Mutual Recognition

Deepening lifestyle integration through *cross-border elderly care* in the Greater Bay Area compels Dongguan to enhance assessment and nursing protocols. Hong Kong seniors' demand for professional services drives standardization, while projects like Donghua Sunshine City explore a Bay Area-wide service certification system, injecting external impetus into standardization efforts.

7.4 Threat Analysis

7.4.1 Regional Resource Imbalance

High-end medical-eldercare resources concentrate in Dongguan's urban core, while industrial towns and peripheral areas suffer from inadequate service provision. This spatial disparity causes divergent policy implementation outcomes across regions, potentially triggering public skepticism about standardization equity.

7.4.2 Filial Piety Ethical Conflicts

Elders often perceive children's use of smart services as substituting for companionship—an evasion of

filial duties. This reflects a clash between materialized filial piety and modern service concepts (Wu, 2024). Such ethical conflicts undermine emotional acceptance of standardized services, exacerbating supply-demand tensions.

7.4.3 Career Challenges in Elderly Care Nursing

Low wages and social status drive severe talent attrition among caregivers (Vyda, 2023). Frequent staff turnover hinders standardized execution of specialized techniques like decubitus ulcer prevention. Chronic issues—including delayed position rotation and missing skin assessment records—cause inconsistent service quality, threatening sustainable standardization.

8. Technological Factors

8.1 Strength Analysis

8.1.1 Enhanced Efficiency via AI Elderly Care Platform

Dongguan's city-level *AI + Eldercare Platform* integrates vital signs monitoring, service dispatch, and health databases in demonstration projects. It achieves cross-institutional data linkage in pilot zones. Dongkeng Hospital utilizes this platform for 24/7 monitoring and real-time home services for town-wide home-based elderly residents, significantly improving chronic disease management efficiency. This provides granular support for standardized processes.

8.1.2 Smart Technologies Lower Service Barriers

Dongguan's 5G-based *Traditional Chinese Medicine (TCM) Telemedicine Platform* connects home hospital beds with tertiary hospital resources. Equipped with intelligent devices for tongue diagnosis and pulse analysis, it enables *cloud ward rounds* and *tele-consultations*. The TCM health management rate for seniors aged 65+ rose from 59.49% to 74.73% post-implementation, effectively reducing access barriers to TCM services (Traditional Chinese Medicine Service Network Construction, 2025).

8.1.3 Non-Intrusive Monitoring Strengthens Protection

Non-intrusive health monitoring technologies have become critical for community-home medical-eldercare safety. Dongguan's *Ping An Bell System* integrates fall detection, one-touch emergency calls, and LBS positioning through multi-form terminals. This enables real-time risk awareness and closed-loop emergency management, providing technical safeguards for standardized response protocols.

8.2 Weakness Analysis

8.2.1 High Learning Costs for Technological Adoption

Insufficient age-friendly design in smart devices creates widespread operational barriers for the elderly. Communities must continuously invest human resources in targeted training programs, substantially increasing the costs of service standardization.

8.2.2 Data Silos Hinder Regional Coordination

Although the city-level "AI+eldercare" Platform achieves data linkage in pilot institutions, unified data standards are lacking across health, civil affairs, and medical insurance systems. Non-pilot areas still

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face information barriers－including duplicate health data entry and response delays－resulting in significant regional disparities in standardized service delivery.

8.2.3 Physical Environment Constraints on Device Efficacy

Weak signal coverage in Dongguan's aging residential areas and industrial zones impedes the responsive performance of smart devices. Resolving physical constraints to ensure timely emergency responses remains an urgent challenge.

8.3 Opportunity Analysis

8.3.1 Cross-Border Technology Enhances Adaptability

The Global Cross-Border Technology Trade Center in Dongguan's Binhai Bay New Area focuses on "*technological innovation + advanced manufacturing*." Its healthcare technology transfer sector is poised to accelerate age-friendly iterations of smart hardware—upgrading devices like millimeter-wave radars toward lightweight and low-power designs－creating new pathways to reduce elderly users' technological barriers.

8.3.2 Data Middle-Platform Integration Opportunity

As a national pilot for China's Basic Elderly Service Platform, Dongguan can leverage policy advantages to establish a multi-source data sharing mechanism. This facilitates the construction of an integrated regional data middle-platform, enabling standardized mapping of medical-health and eldercare service fields to provide technical infrastructure for service standardization.

8.3.3 Emergency Potential of Low-Altitude Technologies

With the advancement of *low-altitude economy* strategies, drone technology offers new solutions for community medical-eldercare services. Dongguan's *100-Scenario Plan*" proposes exploring emergency medicine delivery via drones. "Establishing community-level takeoff/landing networks could overcome traffic constraints in aging urban areas, achieving a "30-minute emergency response zone" － a breakthrough opportunity for standardization.

8.4 Threat Analysis

8.4.1 Cost Pressure from Rapid Technological Iteration

The accelerated update cycles of smart eldercare devices impose sustained hardware upgrade costs. However, manufacturing relocation hinders industrial towns' capacity to bear these expenses, potentially impeding the long-term development of technical standardization systems.

8.4.2 Technological Overreliance and Humanistic Deficits

While smart devices enhance service efficiency, excessive dependence erodes humanistic care. Some non-local elders develop resistance to smart terminals due to language barriers and human-computer interaction barriers, resulting in incomplete health data collection that compromises standardized service implementation. Furthermore, technologies misaligned with elderly operational habits may degrade service quality.

8.4.3 Data Security and Privacy Risks

As the municipal platform integrates multi-source health data, cybersecurity protections remain

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inadequate at town/subdistrict levels. Disparate resources create uneven data security infrastructure, risking sensitive information leaks－particularly in cross-border scenarios where Hong Kong/Macao seniors' data transfers must comply with dual privacy standards under Greater Bay Area regulations. Current governance mechanisms exhibit persistent compliance gaps.

9. Strategic Development for Standardizing Community-Home Medical-Care Integration Services in Dongguan

Based on the deconstruction of Dongguan's regional characteristics through the PEST-SWOT model, this study cross-matches internal and external conditions to formulate a SWOT strategic matrix. Four standardization strategies are proposed: Growth (SO), Turnaround (WO), Diversification (ST), and Defensive (WT).

9.1 SO Strategy: Growth-Oriented Strategy

Leveraging synergies between internal strengths and external opportunities, Dongguan must capitalize on its first-mover policy advantages and industrial foundations: (1) Utilize national medical-care integration pilot policies and the Donghua Sunshine City cross-border project to establish a Greater Bay Area mutual recognition mechanism for medical-eldercare standards. Promote the export of the "*grid-based medical-eldercare integration*" model to enhance regional leadership in standardization. (2) Exploit the electronics industry cluster to collaborate with manufacturers in establishing age-friendly device R&D centers. Through the municipal "AI + Eldercare" Platform, achieve cost efficiency in monitoring technologies and accelerate technology transfer to medical-eldercare services. (3) Integrate policy, technological, and cross-border resources to apply for a national pilot for community medical-care integration standardization, forging the "*Dongguan Standard*" service brand.

9.2 WO Strategy: Turnaround-Oriented Strategy

To transform internal weaknesses through external opportunities, Dongguan must urgently address land fragmentation and non-registered elderly coverage gaps: (1) Establish a graded security system for non-registered seniors, issuing home-based care subsidy vouchers based on disability levels. This breaks through the household registration restrictions to cover over 30% of non-local elderly, remedying service equity deficits. (2) Leverage towns/subdistricts' land autonomy to retrofit idle factories into mobile smart nursing stations, covering 10 highly fragmented industrial towns including Hongmei, resolving contiguous facility deployment challenges. (3) Respond to China's mutual-aid eldercare policy by formulating a municipal volunteer service point redemption mechanism. Enable cross-town/subdistrict exchange of *time banking* credits for community-home medical-eldercare services, alleviating workforce shortages. (4) Pilot instant medical insurance settlements for Hong Kong/Macao seniors through the Donghua Sunshine City project, streamlining cross-border service processes.

9.3 ST Strategy: Diversification-Oriented Strategy

To counterbalance internal strengths against external threats, Dongguan must leverage its

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manufacturing and technological foundations to mitigate industrial relocation and payment risks: (1) Establish a Manufacturing Return Guidance Fund to attract relocated enterprises' investment in smart eldercare R&D, offsetting fiscal risks from industrial relocation in towns like Chang'an. (2) Create a Low-Altitude Emergency Network deploying drone delivery nodes in aging communities, overcoming traffic constraints to achieve the "30-Minute Emergency Response" target. (3) Implement an inclusive long-term care insurance system using an *individual-enterprise-government cost-sharing model* to cover all permanent elderly residents, securing payment safety. (4) Adopt a dynamic adjustment mechanism for community-home care subsidies, indexed to both CPI and regional economic indicators, enabling precise and sustainable support (Qian, 2022).

9.4 WT Strategy: Defense-Oriented Strategy

Confronting dual pressures from internal weaknesses and external threats, Dongguan must fortify service equity and safety foundations: (1) Implement a town/subdistrict service compliance accountability system, incorporating indicators like family doctor signing rates and smart device coverage into mayoral evaluations to reduce inter-town disparities and alleviate regional resource imbalances. (2) Strengthen a tiered data security protection framework to prevent health data leakage risks. (3) Enhance technical inclusivity through age-friendly interactions (e.g., voice commands, physical buttons), while intensifying social workers' in-home emotional support to mitigate *human-machine alienation* (Al Rakib et al., 2021). (4) Establish a municipal standardization supervision unit conducting quarterly field inspections to bridge gaps between city-level protocols and grassroots implementation.

10. Conclusion

The standardization of community-home medical-care integration services is shaped by macro-environmental factors, necessitating dynamic adaptation of strategic pathways aligned with regional characteristics. This PEST-SWOT analysis demonstrates that Dongguan ── confronting the tension of "hidden aging within youth-oriented cities"──should leverage its manufacturing foundations and cross-border collaboration advantages to continuously refine policy coordination, resource allocation, and technology application. Future efforts must closely track the interplay between demographic shifts and industrial upgrading, advancing standardization from "*localized exploration*" toward a "*quality-efficiency paradigm*". This provides a reference for resolving the "aging before preparedness" dilemma in comparable cities.

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