

Research on the Construction of Smart Senior Living Communities: A Case Study of Taikang Senior Living

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ABSTRACT

With the deepening global aging population, smart senior living communities have become a focal point in addressing elderly care challenges. Taikang Senior Living explores smart elderly care through the integration of "medical care, technological empowerment, and active aging."Its practices offer valuable experience for the industry, helping to alleviate pressure on elderly care and promote the development of the senior care sector. However, the study finds that Taikang Senior Living communities face issues such as a narrow customer base, an incomplete profit model, and high investment and operational risks. These problems stem from traditional views on aging, high upfront investment, lack of operational experience, and a shortage of professional talent. To optimize Taikang's operational model, this paper proposes the following recommendations: combining online and offline promotion to enhance brand awareness; optimizing the profit model and strengthening risk control and financing; highlighting unique features, improving service quality, innovating operational models, and implementing differentiated pricing. These suggestions provide reference for insurance companies operating senior living communities and promote the standardized development of China's senior living industry.

KEYWORDS

Smart senior living community; Taikang senior living; Integration of medical care and elderly care; Technological applications

1 Introduction

Since the 21st century, the rapid acceleration of population aging has led to a continuous increase in the elderly population. China is undergoing an unprecedented demographic shift. The 7th National Population Census reveals the severity of aging in China, with the proportion of elderly people steadily rising. According to authoritative forecasts, China will reach a peak aging period by the mid-21st century. This trend will have profound impacts on the social and economic structure, as well as pose major challenges to the social security system, healthcare resources, and labor markets. How to properly address elderly care issues has become an urgent task related to national development and social stability. Exploring elderly care models suited to China’s national conditions is not only a necessary response to the aging challenge but also a key to achieving social harmony and sustainable development. Against this backdrop, the construction of smart senior living communities has become an important pathway to solving elderly care problems.

As an emerging elderly care model, smart senior living communities leverage modern information technology to provide more convenient, efficient, and personalized services for the elderly. By integrating various resources and utilizing smart devices and digital platforms, these communities can significantly improve the capacity and efficiency of elderly care services, offering more stable and sustainable support. Technologies such as IoT, big data, and AI enable real-time health monitoring and precise management, allowing early detection and intervention of health issues, thereby reducing disease risks. Meanwhile, intelligent facilities and services meet the elderly’s needs in daily care, emotional support, cultural activities, and entertainment, enhancing their quality of life and sense of happiness.

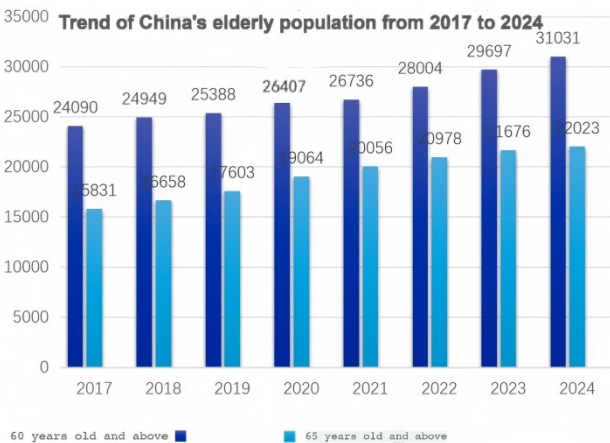


Figure 1

The construction of smart senior living communities also involves technological innovation and industrial development across multiple sectors including smart hardware manufacturing, software development, and elderly care service operations promoting coordinated development of related industries and creating more employment opportunities and economic growth. Moreover, the efficient operational model of smart senior living communities helps reduce social elderly care costs, improve resource utilization efficiency, and support sustainable economic development.

This paper adopts literature review and case study methods. Through reviewing relevant literature, it explores the concept, theoretical basis, and current development of smart senior living communities. Using Taikang Senior Living as a case study, it conducts an in-depth analysis of its operational model, technological applications, and service system, summarizes experiences and lessons, and proposes optimization strategies.

2 Literature review

Research on senior living communities started earlier abroad and is relatively mature. Xian C et al. (2022) emphasized that with the rapid growth of the global elderly population, creating an age-friendly community environment is urgent, meaning the fit between individuals and their environment will become more important, making aging less psychologically burdensome. Liu C and Xue Z (2023) proposed starting with smart architecture to build more elderly-friendly buildings and facilities on the basis of energy efficiency and environmental protection. Additionally, foreign studies place great emphasis on food safety in senior communities. Tao Chen-Wei et al. (2023) pointed out that as more elderly people move into senior living communities, dining services play a key role in their decision-making.

Jiang Yuwei (2019), based on a survey conducted by Union Life Insurance on the elderly care industry, suggested that in planning senior communities, elderly individuals should be regarded as “users”, and a user-centered approach should be adopted to effectively integrate their needs into all aspects. Wang Lianxin (2023) noted that although China’s community elderly care service institutions are developing rapidly, they are still constrained by many factors. These institutions should enhance integrated service capabilities, raise community awareness of elderly care, improve service offerings, focus on rehabilitation and nursing services, and emphasize feedback to promote high-quality development. Feng Jie and Cheng Mengfan (2023) emphasized the importance of building “integrated elderly care service complexes” to support senior living communities.

China’s social elderly care service system is a comprehensive system composed of service providers, service recipients, service content, service standards, operational mechanisms, and funding. According to the National Plan for the Construction of the Social Elderly Care Service System (2011–2015), China has established a system based on home-based care, supported by community care, and supplemented by institutional care, in line with the aging process and economic development level.

Currently, China has limited experience in operating senior living communities, and there is a severe shortage of qualified management talent, resulting in low operational efficiency. Attracting more residents and cultivating high-quality managers are urgent issues for insurance companies. Wang Siyuan et al. (2023) analyzed the joint development of pension business and commercial pension insurance, covering product development, service institution setup, and community construction. They emphasized the need to improve relevant laws and policies to promote the professionalization of commercial pension insurance and reform the operational and strategic models of insurance companies.

3 Taikang senior living’s operational model

3.1 “Insurance + senior living” model

Taikang has pioneered an innovative “insurance + senior care community” model, providing comprehensive retirement solutions for the elderly. The company offers a range of insurance products linked to its senior care communities, including annuity insurance and whole life insurance. Upon purchasing these products, clients gain eligibility to reside in Taikang’s senior care communities. Regarding residency fees, Taikang adopts a flexible “entry fee or monthly fee” model. Residents are required to pay a one-time entry fee upon moving in, with the amount determined by the selected room type and length of stay. This approach safeguards clients’ rights while ensuring the sustainable operation of the communities. Taikang’s unique “insurance-funded retirement” model seamlessly integrates insurance products with senior care services. When clients meet the policy conditions—such as retirement or reaching a specified age—they can receive monthly or annual insurance payouts, which can be directly used to cover community expenses, ensuring uninterrupted access to high-quality care services. To cater to diverse client needs, Taikang offers three flexible residency options: Long-term residency, Clients may choose to live permanently in the community, enjoying full-spectrum services including medical care, recreational activities, and dining services. Short-term trial stays, Clients can

experience the community's environment and service quality firsthand through a trial stay. Rotational retirement living, Clients can alternate stays across Taikang's nationwide network of communities, embracing a "migratory bird" retirement lifestyle that combines regional diversity with consistent service standards. This multi-tiered senior care system ensures every elderly individual can find their ideal retirement solution.

3.2 Profitability

As of the end of 2024, Taikang Senior Living achieved a comprehensive investment yield of 10.06%, a significant increase from 2.39% in 2023. The investment return rate also rose to 2.17% by the end of 2024.

3.3 Planning philosophy and site selection

Taikang's planning philosophy aligns with environmental protection, energy efficiency, and people-centered design, catering to the elderly's diverse needs. Site selection prioritizes livable environments, convenient transportation for visits, and proximity to medical facilities for emergency care.



Figure 2 Map of taikang insurance senior living community locations

3.4 Smart Construction

Smart Security: Fall detection radar, smart mattresses, emergency location cards, and a smart security platform enable real-time monitoring, emergency response, and safety patrols.

Smart Health: The Taikang Smart Elderly Care Cloud Platform integrates booking, digital contracts, 1+N care services, health management, and cultural activities. Remote medical services cover 7 communities and 2 tertiary hospitals, offering teleconsultation, imaging, ECG reading, and health lectures.

Smart Care: 24/7 radar, smart nursing beds, and platforms provide comprehensive care.

Smart Dining: Intelligent systems ensure dietary health.

Smart Living: TV platforms, smart terminals, mini-programs, and delivery robots enhance convenience and engagement.

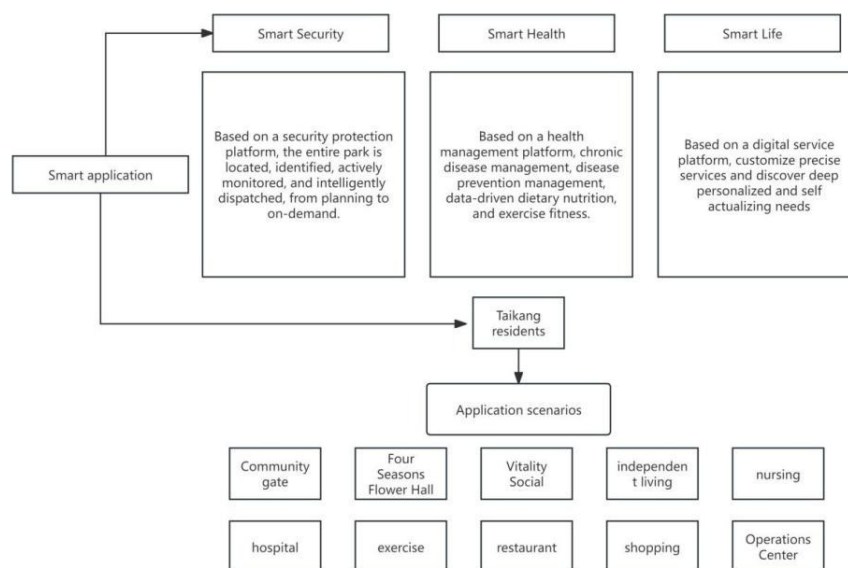


Figure 3

4 Pathways to taikang's smart elderly care model

4.1 Taikang smart cloud service platform

Taikang Group has established a comprehensive smart elderly care service system, leveraging the coordinated operation of multiple intelligent platforms to provide residents with holistic senior care solutions. The Taikang Resident Service System integrates daily life assistance, medical support, emotional care, community safety management, healthy dining, cultural activities, and rehabilitation services. These modules work in seamless collaboration to form a complete elderly care service loop.

On the sales front, Taikang has enabled seamless data sharing between its smart senior care communities and its life insurance client platform. Elderly residents and their families can use the system to book rooms online, sign digital contracts, request one-click assistance, and schedule visits. The system also intelligently determines payment methods and standards for residents, significantly improving move-in efficiency. Currently, 72% of contracts are signed digitally, demonstrating the convenience of its paperless services. For care services, Taikang's innovative "1+N" care model assigns a dedicated team to each resident, supported by personalized health records. This ensures end-to-end health management—from assessment and tiered care planning to execution and outcome evaluation. Additionally, the billing system, centered around the "Tai Le Xiao" one-stop service platform, not only manages the entire sales process—from lead tracking to contract settlement—but also automatically calculates promotional discounts, achieving over 80% coverage rate and substantially boosting operational efficiency. The deep integration of these systems enables Taikang to deliver efficient, precise, and human-centric smart elderly care services, setting a benchmark in the industry.

4.2 Offline staff configuration

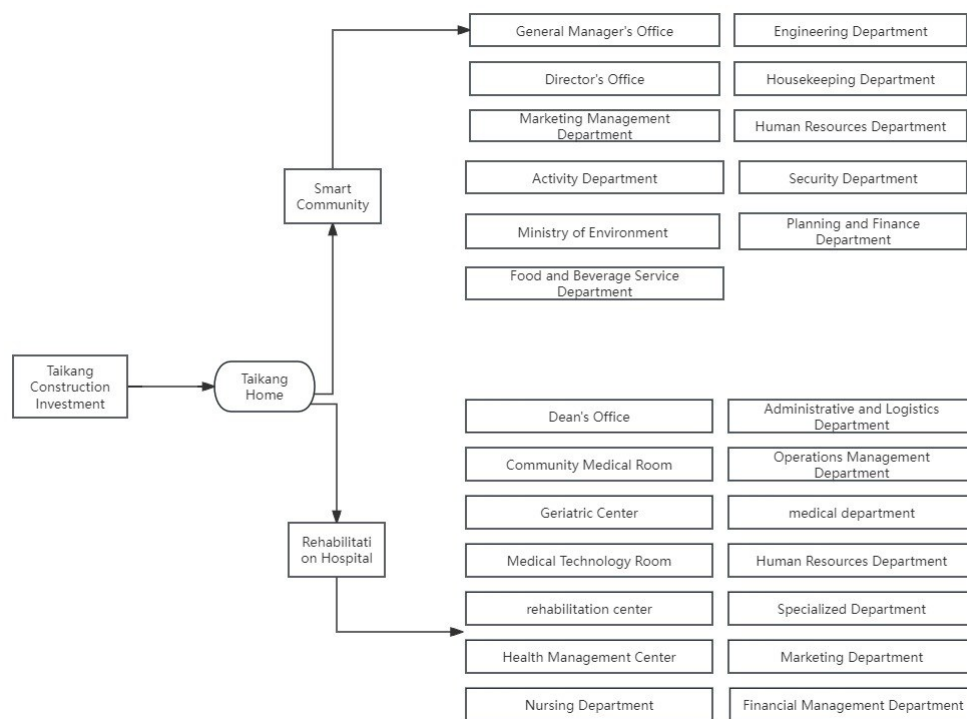


Figure 4

Under the coordination of Taikang Construction & Investment, the management framework of Taikang's Smart Senior Care Community is operated by Taikang Healthcare in a scientific and well-structured organizational system, providing solid support for intelligent elderly care services.

From an overall perspective, Taikang Healthcare consists of two core sectors—the Smart Community and the Rehabilitation Hospital—which work in synergy to establish a comprehensive elderly care service network. The Smart Community focuses on creating a comfortable, convenient, and safe living environment for seniors. It includes executive offices such as the General Manager's Office and the Director's Office to oversee the community's operational direction at a macro level. Additionally, it is equipped with a Marketing Management Department responsible for promotions and client expansion, an Activities Department organizing various cultural and recreational events to meet seniors' spiritual needs, as well as an Environmental Department, Catering Services Department, and Engineering Department to ensure daily operations and maintenance. The Butler Department, Human Resources Department, Security Department, and

Planning & Finance Department play key roles in customer service, personnel management, safety assurance, and financial management, respectively, ensuring the efficient functioning of the Smart Community in all aspects.

The Rehabilitation Hospital, as a critical provider of medical services, is managed by the Dean's Office, which oversees overall hospital operations. Facilities such as the Community Clinic, Geriatric Medical Center, Medical Technology Department, Rehabilitation Center, and Health Management Center offer professional medical diagnosis, rehabilitation therapy, and health management services for seniors. The Nursing Department, Administrative & Logistics Department, and Operations Management Department ensure nursing care, logistical support, and operational management, while the Finance Department, Human Resources Department, Specialty Departments, and Marketing Department each fulfill their roles in financial affairs, staffing, specialized medical services, and market expansion. Working in tandem with the Smart Community, the hospital provides one-stop services ranging from daily care to medical rehabilitation.

Through clear division of responsibilities and collaborative efforts among all departments, Taikang is able to deliver high-quality, all-around smart elderly care services, meeting seniors' diverse needs and enhancing the quality and happiness of their later years.

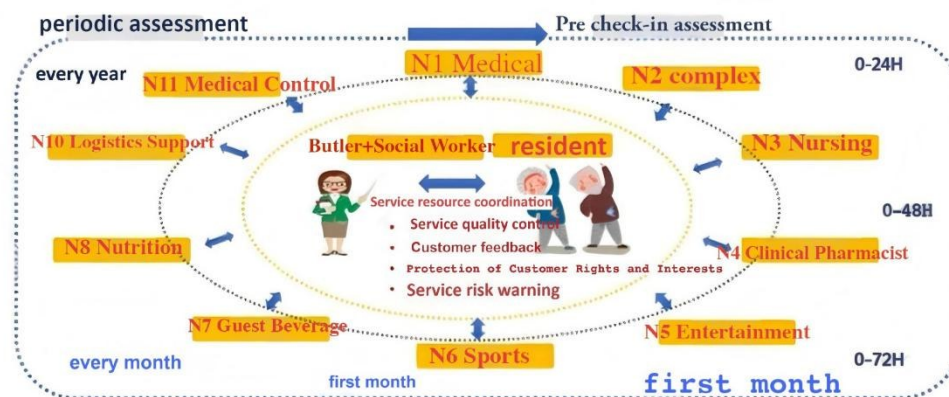


Figure 5

Taikang Smart Senior Care Community adopts a service personnel structure centered around butlers, supported by a "1+N" multidisciplinary professional team that works collaboratively to serve residents.

In the service process, the butlers and social workers closely engage with residents, undertaking key responsibilities such as coordinating service resources, ensuring service quality, collecting and relaying resident feedback, safeguarding resident rights, and providing early risk warnings. They serve as the vital link connecting specialized services with residents' needs.

The "1+N" multidisciplinary team covers a wide range of fields, including medical care, rehabilitation, nursing, clinical pharmacy, entertainment, fitness, dining, nutrition, logistics, and infection control. Medical professionals play a crucial role in key stages such as pre-admission health assessments, while rehabilitation specialists, nurses, and clinical pharmacists provide continuous health support. Entertainment and fitness teams enrich residents' cultural and recreational lives, whereas dining, nutrition, logistics, and infection control teams ensure quality of life and safety.

Through this well-structured staffing model, Taikang Smart Senior Care Community establishes a comprehensive, multi-tiered service system, delivering high-quality, efficient, and personalized elderly care to residents.

5 Optimization suggestions for taikang smart elderly care operation model based on SWOT analysis

5.1 Internal weaknesses

Taikang's smart senior care communities encounter several challenges in their growth trajectory:

Shortage of Multidisciplinary Professionals. The communities require talent with expertise spanning healthcare, nursing, and information technology. However, the current scarcity of such professionals significantly hinders further expansion.

Long Investment Cycles & Financial Pressure: Building senior care communities demands substantial capital investment, coupled with an extended payback period, posing challenges to cash flow management and sustainable operations.

High Entry Barriers Limit Target Market:

Taikang's relatively strict residency criteria exclude middle-to-low-income seniors, narrowing the potential client base.

Limited Operational Experience:

As an emerging model, Taikang is still refining its management framework for smart senior care communities, requiring continuous trial-and-error optimization.

5.2 External challenges

Currently, the smart elderly care community industry lacks unified standards and regulations. This absence of a standardized system means there are no clear benchmarks for service quality and operational models, which hinders the healthy and orderly development of the entire sector. As the smart elderly care market continues to grow, an increasing number of enterprises are recognizing its business potential and entering the field, leading to intensifying market competition. Taikang's smart elderly care communities must continuously enhance their core competitiveness to stay ahead in this competitive landscape. Additionally, some of Taikang's elderly care communities face challenges with low occupancy rates, primarily due to high admission standards and insufficient promotional efforts. Low occupancy not only weakens the operational vitality of the communities but also negatively impacts the company's profitability.

5.3 Internal strengths

Taikang Group has made substantial financial investments in the field of smart elderly care, providing a solid material foundation for the research, development, construction, and operation of smart elderly care projects. This ensures the introduction of advanced facilities and equipment, as well as the continuous optimization of service systems. With a vast and diverse customer base, Taikang has accumulated abundant client resources, which not only provide stable market support for its business operations but also enable precise identification of customer needs, thereby enhancing service relevance and satisfaction. By integrating high-quality medical resources—whether through its self-invested healthcare institutions or partnerships with top-tier external medical teams—Taikang offers robust healthcare support for smart elderly care, ensuring that seniors receive professional health management. Furthermore, Taikang's existing successful implementation experience in smart elderly care allows it to mitigate risks, streamline processes, and further improve the quality and efficiency of smart elderly care services in future projects.

5.4 Opportunities

On one hand, international best practices provide valuable references for Taikang. By adopting globally leading elderly care service concepts, technologies, and management models, Taikang can continuously enhance the quality and standards of its smart elderly care services. On the other hand, strong policy support from the Chinese government for the elderly care industry has created a favorable regulatory environment for Taikang's smart elderly care expansion, facilitating smoother project development and operations. With growing societal demand for more personalized and lifestyle-oriented elderly care services, Taikang can further refine its service offerings to meet the diverse needs of seniors. Additionally, increasing attention and investment from capital markets in the elderly care sector provide Taikang's smart elderly care business with greater financial support and partnership opportunities.

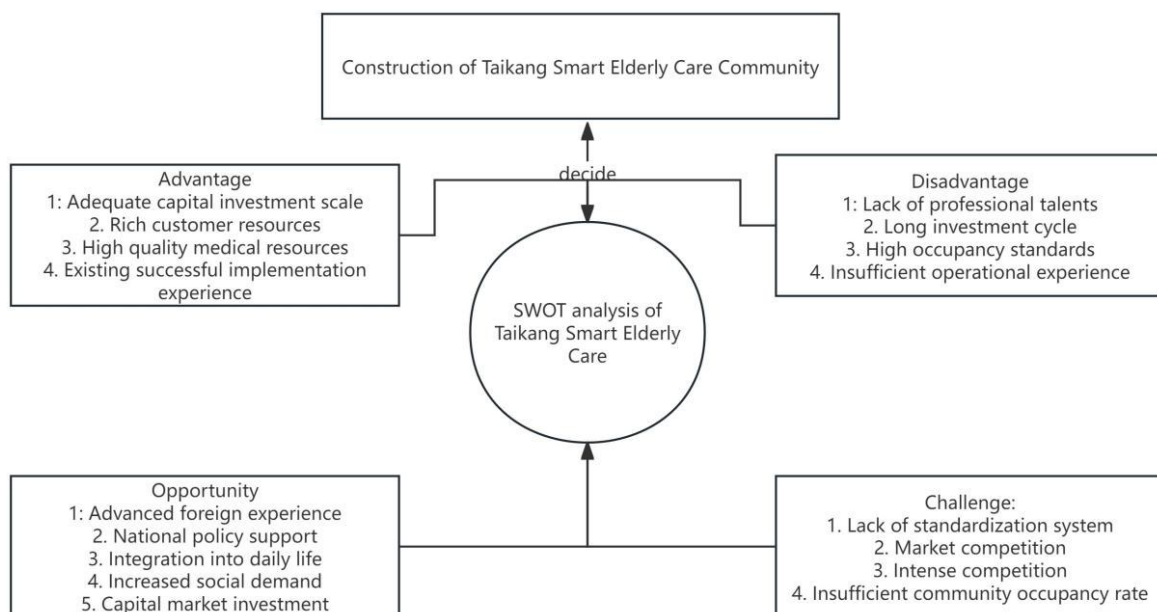


Figure 6

6 Conclusion and outlook

With the accelerating process of population aging, the demand among elderly people for high-quality elderly care services is growing increasingly. Currently, although the smart elderly care model in China is developing through exploration, there remains a certain gap compared to international advanced standards, making it difficult to fully meet the diversified needs of the elderly. Against this backdrop, the development of smart elderly care communities that integrate "insurance + elderly care" is particularly crucial. At present, the participation of Chinese insurance companies in the construction of smart elderly care communities is still in the developmental stage, with few mature models. Empirical research on Taikang's elderly care communities has found that its integrated model of "insurance + elderly care" and "payment + service + investment" demonstrates significant advantages in resource integration, meeting the needs of mid-to-high-end clients, and achieving long-term returns.

However, smart elderly care communities operated by domestic insurance companies still face numerous shortcomings, such as high admission standards, a narrow target client base, imperfect profit models, and a shortage of professional talent. At the same time, they are exposed to potential risks such as high land costs and intense market competition. Nevertheless, in this process, insurance companies can optimize services, standardize operations, and enhance their own capabilities through market competition.

This requires us to learn from international successful experiences, such as the American CCRC model and Japan's application of smart devices, while considering the characteristics of China's aging society, the actual needs of the elderly, and the development circumstances of enterprises. Efforts should be made in diversifying service models, differentiating admission standards, talent cultivation, and resource integration to build a more adaptive and competitive smart elderly care service system with Chinese characteristics.

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