

Urban China's Long-Term Care Landscape: A Narrative Review of Current Practices and Emerging Trends

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ABSTRACT

Background

As a consequence of the one-child policy (1979–2015), China is confronting a rapidly aging population ¹. This demographic transition imposes significant pressure on the existing long-term care (LTC) system, which remains inadequate in addressing the escalating demand. Consequently, there is an urgent imperative to develop a more efficient and sustainable LTC model. This literature review examines recent practices and innovative advancements within the LTC system in urban China.

Material and Methods

This narrative literature review employed an iterative search approach to identify relevant literature and key subtopics. A total of 257 articles met the basic eligibility criteria, all of which were reviewed. The findings were analyzed and compared across the selected studies.

Results

This review analyzed 81 studies, 50 in English and 31 in Chinese. The findings highlight several critical challenges facing China, including demographic aging, shrinking family sizes, a rising elderly dependency ratio, caregiver shortages, and concerns over financial sustainability. Published literature emphasizes key emerging trends, including the growth of home- and community-based care (HCBC), healthcare–LTC integration, and innovative models like smart LTC and time banks to alleviate workforce and resource pressures.

Conclusions

In response to profound demographic shifts, China's LTC landscape is undergoing a transformation from traditional family-based care to publicly supported long-term care services. This transition has spurred rapid development of HCBC, positioning it as a cornerstone for aging in place model. Moving forward, establishing an LTC model that is both efficient and sustainable will be essential to meeting the diverse and growing needs of China's aging population.

INTRODUCTION

As of May 2021, China's seventh National Population Census reported 264 million people aged 60 and above (18.7% of the total population), including 191 million aged 65 and above. Compared to 2010, the proportions of seniors increased by 5.44% and 4.63% respectively ². The National Health Commission projects continued growth in the aging population over the next two decades, the number projected to reach 400 million by 2035 ³. In 2022, the Chinese National Bureau of Statistics reported a population decline of approximately 850,000, the first since the 1960s ⁴, negative population growth is expected to exacerbate the traditional challenges experienced by aging societies.

China's urban areas are chosen as the focus of this study due to the country's ongoing and rapid urbanization. In 2000, only 36% of the population lived in cities, but by 2018, this figure had risen to nearly 60%, and it is projected to reach 80% by 2050^{5,6}. It signals a major shift in the geographical distribution of the aging population. With more elderly individuals migrating to or aging within cities, urban areas are becoming the epicenter of China's LTC needs⁷. Therefore, addressing LTC in urban China is not only timely but strategic

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as it allows policymakers to test scalable solutions in high-demand areas and build a foundation that may be adapted to suburban and rural contexts later. Thus, solving the problem of eldercare in cities holds the key to resolving China's broader LTC challenges in the future.

The Chinese government has made significant efforts to expand the supply of LTC, particularly in urban centers. However, rapid demographic changes and evolving socioeconomic pressures continue to pose challenges. These shifts demand further systemic transformation to ensure the LTC system can effectively address the complex and growing needs of the aging population⁸. In light of these challenges, the establishment of an efficient and sustainable LTC model has become an urgent priority. This review offers a comprehensive overview of current practices and innovative trends in urban China's LTC landscape, exploring both existing conditions and the future trajectory of care delivery.

MATERIAL AND METHODS

This study employed a narrative literature review methodology to synthesize recent developments and innovations in LTC in urban China. An iterative search strategy was utilized to identify relevant peer-reviewed articles, policy documents, and reports published in both English and Chinese. The review focused on literature from 2010 onward to reflect the substantial policy reforms and demographic shifts in China's LTC sector during the past decade⁹.

The databases searched included PubMed, EBSCO, and Google Scholar for English-language sources, as well as the China National Knowledge Infrastructure (CNKI) and the VIP Database for Chinese Technical Periodicals (VIP) for Chinese-language sources. Relevant government websites were also consulted. Search terms covered topics such as aging population, elderly care, LTC models, healthcare integration, and innovative approaches (e.g., smart LTC, time banks, and PACE). Boolean operators were used to refine searches. A complete list of keywords is available upon request.

Inclusion criteria were: full-text availability, published 2010-2025, focus on LTC in urban China, and discussion of macro-level policy, system-wide challenges, or model innovation. Studies focusing solely on clinical interventions or specific geriatric conditions were excluded. Opinions, letters, and other non-peer reviewed publications were excluded.

Thematic analysis was used to categorize findings and identify key themes of interest. Our data synthesis aims to inform LTC policy and planning in response to China's rapidly aging urban population.

RESULTS

From an initial pool of 674 sources, 257 articles met the basic eligibility criteria. Following full-text screening, a total of 81 articles (50 in English and 31 in Chinese) were selected for in-depth analysis and citation. Four subtopics were identified, and this review is organized thematically into four main subtopics (Figure 1, Study flow):

Demographic shifts and their impact on the LTC system, existing LTC models, emerging and innovative LTC models, and the development trends in LTC.

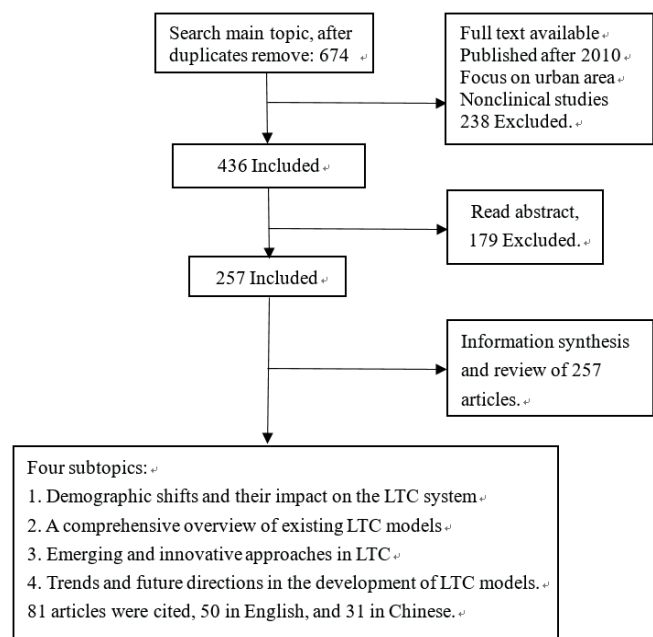


Figure 1. Study Flow

General findings

1. Demographic Change and Its Implications for LTC Systems

China is undergoing a rapid demographic transition characterized by population aging, a trend that commenced in the late 1970s and has since advanced at an average annual rate of 3.2%. In contrast to developed countries, which typically required more than 45 years to reach comparable levels of population aging,

China has experienced this transformation within less than three decades^{1,10}. In addition to the one-child policy, the Family Planning Program has significantly contributed to the acceleration of population aging by delaying childbearing and reducing fertility rates^{11,12}. These policies have contributed to the emergence of the so-called “4-2-1” family structure, with one child supporting two parents and four grandparents, the system thereby imposes substantial caregiving and financial pressures on the younger generation, particularly in urban settings^{12,13}. LTC in China encompasses a range of services designed for individuals aged 60 and above who experience limitations in independent living. These services include assistance with activities of daily living (ADLs), respite care, home healthcare, adult day care, and institutional care in nursing homes¹⁴.

According to China’s Seventh National Population Census, the average household size has decreased from 3.10 in 2010 to 2.62 persons per household². Projections indicate that by 2044, the elderly dependency ratio will reach 1:2.5, implying that there will be one older adult for every 2.5 working-age individuals. This demographic shift places pressure on both social and economic systems^{15,16}. Moreover, the legacy of the one-child policy presents additional challenges for LTC, particularly for single-child families and those who have experienced the loss of their only child, who often face significant difficulties in securing adequate support and care in old age⁸.

In China, filial piety (Xiao) represents a deeply rooted cultural norm that emphasizes the moral obligation of adult children to care for their aging parents and attend to their needs¹⁷. However, this traditional model of eldercare is increasingly under strain, particularly due to the emergence of the “4-2-1” family structure^{18,19}. The situation is further exacerbated by the growing prevalence of “empty nesters”, referring to elderly individuals who live separately from their children. This group accounted for 51.3% of the elderly population in 2015 and is projected to rise to 90% by 2030, significantly intensifying the demand for public long-term care services²⁰⁻²².

The loss of an only child has emerged as a significant social issue in China, imposing considerable psychological and emotional burdens on affected families. As of 2016, over 1.45 million families had experienced the loss of their only child, with the number increasing by approximately 76,000 annually. Projections indicate

that this figure may reach 11.84 million by 2050²³. This growing demographic group reflects a distinctive feature of China’s population structure, shaped by decades of strict birth control policies^{10,24}. Support services for this population remain insufficient, failing to adequately address key areas such as economic stability, mental health, eldercare, healthcare access, and social integration. Notably, over 63% of parents who lost their only child experience social isolation within the home, and approximately 80% are affected by mental health disorders or psychological trauma²⁵.

Population aging is influenced not only by the implementation of birth control policies but also by declining mortality rates and increasing life expectancy, which rose significantly from 60.9 years in 1990 to 76.3 years in 2016²⁶.

2. An Overview of Existing Long-Term Care Models

In general, LTC in China is structured around four primary models: the family-based model, the home-based model, the community-based model, and the residential care model²⁷.

Family-based model (family care)

Family-based care is deeply embedded in strong familial bonds. Traditionally, this LTC model has placed primary responsibility for elder care on family members, with sons historically regarded as the principal caregivers²⁸.

In accordance with the Law on the Protection of the Rights and Interests of the Elderly in China, families that provide LTC for older adults are eligible to receive government subsidies. However, these financial supports are often limited, averaging no more than USD 75 per month, with regional variation ranging from approximately USD 30 in Fujian Province to USD 75 in Shaanxi Province^{29,30}.

Home-based model (home care)

Home care facilitates “aging in place” by enabling older adults to remain within their familiar living environments as they age³¹. Home care represents a more structured and comprehensive model of service delivery. It encompasses a wide range of services, including assistance with ADL, basic healthcare, preventive interventions, and the application of advanced technologies. This model extends caregiving responsibilities beyond family networks to include trained professionals from the community or external LTC providers, thereby offering a more holistic,

consistent, and professionally managed support system for elderly individuals ¹.

Community-based model (Community care)

To effectively support the elderly, community care must integrate with home care based on the “aging in place” principle ³². It provides various daily assistance services in public space, including meal provision, social engagement, healthcare, rehabilitation, traditional Chinese medicine, personal assistance, companionship, and recreational activities, often offered free of charge or at subsidized rates ¹. Its emergence in the 1990s; however, its progress has been relatively slow, despite governmental initiatives aimed at integrating healthcare with LTC and promoting smart LTC innovations ³³. Key challenges include supply-demand imbalance, insufficient funding, workforce shortages, inadequate infrastructure, and suboptimal service quality ^{34,35}.

Residential care model

The residential care model refers to a LTC arrangement in which older adults reside in nursing homes, where they receive 24-hour supervision, medical care, assistance with activities of daily living, and social support services. This model is typically employed when individuals are no longer able to live independently or require continuous care due to physical or cognitive limitations ²⁸.

Residential care facilities can be categorized into three types based on ownership: government-built and operated, government-built but privately operated, and privately built and operated ³⁶. Social welfare homes in China are a type of LTC facility that provide free or low cost services to older adults who lack income, the ability to work, and legal guardians, commonly referred to as the “Three No” elderly population ^{37,38}. In 2014, China had 38 thousand social welfare institutions with 5.865 million beds^{39,40}. Traditional beliefs about raising children as caregivers limit acceptance of residential LTC as a source of care, with only 11.9% of older adults preferring LTC facilities ^{41,42}.

3. Emerging LTC Models

3.1 smart LTC model

The smart LTC model supports “aging in place” by using information and communication technology, internet, big data, and wearable devices to integrate LTC resources. It enables real-time monitoring of vital signs, overcoming time, space, and geographic limitations in LTC, enhancing safety, expanding services, and

improving care efficiency^{43,44}.

3.2 Integration of healthcare and LTC model

The integration of healthcare and LTC combines the services of LTC institutions and medical facilities to provide comprehensive care for the elderly, including daily care, healthcare, rehabilitation, checkups, and emotional support ^{1,45}. Similar to the USA’s PACE (Program of All-Inclusive Care for the Elderly) model, it allows older adults to live at home ⁴⁶.

This integration is achieved through three primary approaches: the formation of strategic alliances between LTC and medical facilities; the establishment of healthcare units within LTC institutions; and the transformation of hospitals into hybrid facilities that provide both medical and long-term care services ¹.

Migratory bird model

The “migratory bird” model refers to the seasonal relocation of older adults, typically during the winter or summer months, in pursuit of more favorable climatic conditions⁴⁷. These individuals may stay in secondary residences, LTC facilities, short-term rentals, or hotels. In China, this model’s viability is supported by the country’s extensive geography, significant climatic differences between northern and southern regions, and diverse tourism and leisure destinations ^{44,48}. Access to this model is limited by financial considerations, with not everyone able to afford moving seasonally.

House for pension model

The house-for-pension model, analogous to the reverse mortgage system in USA, enables elderly homeowners to leverage their residential property as collateral to finance LTC needs. This approach is particularly advantageous for urban elderly individuals without direct heirs ^{49,50}. Nevertheless, by 2018, the model had generated only \$46.5 million in asset-based income, falling significantly short of initial expectations ⁵¹.

CCRC-inspired Care Model

The emergence of models resembling Continuing Care Retirement Communities (CCRCs) in China dates back to the early 2000s ⁵². CCRCs are a growing sector offering integrated residential and care solutions for aging populations, primarily through market-driven mechanism. Notable examples include the Tai Kang Community, China Life CCRC in Wuhan, the Cherish-Year Community in Shanghai, and the Greenland Health & Elderly Care Community, among others.

The development of these models remains in an early stage, marked by growing commercialization influenced by both governmental support and increasing demand for LTC services^{53,54}. These communities generally provide high-quality LTC but are primarily accessible to affluent individuals due to high costs. Often driven by commercial real estate interest groups, such as insurance companies or property developers, LTC services are integrated to enhance project marketability^{44,55}.

4. The development trends of the LTC system in China

The development trends will present the following characteristics:

Reduce informal LTC and increase public LTC

While families are expected to remain the primary providers of LTC in the near future, their role is projected to gradually decline as public LTC provision expands. In response to this anticipated shift, the Chinese government has prioritized the development of public LTC services over the past two decades, setting key targets for expansion by 2025⁴⁰. The main objectives of this policy agenda are summarized in Table 1⁵⁶.

Table 1. Key Indicators of the Development of China's National LTC System up to 2025.

| "14th Plan" Main index of the development of the national aging cause and LTC service system | |
|---|--|
| Index | 2025 Target Value |
| 1. Total number of beds for elderly care services | 9 million |
| 2. Monthly visiting rate of the elderly with special difficulties | 100% |
| 3. The rate of supporting facilities for the elderly in new urban areas and newly built residential areas | 100% |
| 4. Proportion of Nursing Beds in Elderly Care Institutions | 55% |
| 5. Proportion of secondary and above general hospitals with departments of geriatrics | ≥60% |
| 6. Enrollment scale of majors related to LTC in undergraduate colleges and vocational colleges | Significant growth |
| 7. Number of social workers per 1,000 elderly people | keep more than 1 person |
| 8. Penetration Rate of the colleges for the Elderly | At least one in each county (city, district, banner) |
| 9. Frequency of "Respect for the Aged Month" activities | Each community conducts once a year |

Data retrieved from the 14th Five-Year Plan for the Development of National Aging Affairs and Elderly Care Service System. Chinese Government Network

Focus on the development of HCBC model

Home care and community care are interdependent components that together constitute a comprehensive HCBC model. This model offers holistic and sustainable support for older adults. In contrast to many Western countries, the high population density in China's urban areas presents favorable conditions for organizing and delivering LTC services at the community level⁵⁷.

Integration of healthcare and LTC model

Effective implementation of HCBC requires ensuring reliable access to essential healthcare services for the elderly, highlighting the importance of seamless integration between healthcare provision and LTC. The Chinese government continues to demonstrate a strong commitment to enhancing and expanding HCBC initiatives.

Person-centered

China can adopt a person-centered, precision care approach by tailoring LTC services to the specific needs of older adults, as exemplified by Japan. This strategy helps prevent over-care, enhances resource allocation, and improves the overall efficiency of the LTC system⁵⁸. By conserving public resources and enabling their reallocation toward essential LTC services, this model presents a feasible and potentially effective approach for implementation in China.

Smart LTC care is an important trend

The primary impediment to the widespread adoption of Smart LTC is the high cost of advanced technological equipment⁵⁹. As technological advancements progress, the prices of these devices are expected to decline, thereby accelerating the rate of Smart LTC implementation. Countries such as Japan and Germany have piloted the integration of robotic technologies and information and communication technologies (ICT) into their LTC systems, yielding promising outcomes in terms of care efficiency and user satisfaction^{1,60}.

Time Bank model

One of the most pressing challenges in LTC is the persistent shortage of caregivers. An innovative and potentially effective response to this issue is the implementation of the "Time Bank" model—a mutual assistance system wherein healthy, newly retired

individuals provide care services on a voluntary basis. In return, they accumulate service hours that can later be redeemed when they themselves require care. This model not only contributes to alleviating the strain on formal LTC resources but also promotes social cohesion, community engagement, and intergenerational solidarity^{61,62}.

Coexistence of multiple LTC models

HCBC and the integration of healthcare with LTC are expected to become mainstream, while innovative, specialized LTC models will continue to evolve. These options will allow elderly individuals and their families to choose the most suitable model based on factors like socioeconomic status, family structure, and personal preferences^{40,44}.

DISCUSSION

This review highlights four pivotal areas shaping the development of China's LTC system: demographic transitions, the structure and performance of existing LTC models, the emergence of innovative approaches, and evolving trends influencing future directions. These dimensions indicate that China's LTC system is in a critical phase of transformation, driven by the dual imperatives of responding to rapid population aging and reconfiguring care delivery to adapt to evolving societal and familial structures.

China's demographic-economic interplay, characterized as "growing old before getting rich"⁶³, prioritizes optimizing existing resources to enhance the availability and quality of elderly care services as a key priority in current LTC reform. Accordingly, the Chinese government has implemented strategic policies and development plans to expand service provision and elevate care quality. A central strategy in China's LTC reform is the promotion of aging in place, underpinned by the expansion of HCBC³¹. Guided by the 90-7-3 policy 90% of older adults receiving care at home, 7% in community settings, and 3% in residential facilities. HCBC has become the preferred model of care delivery⁶⁴, it is a widely adopted practice globally, with demonstrated effectiveness across various international contexts. Drawing on these successful models, the Chinese government has implemented a series of tailored measures to promote and advance the development of HCBC, such as the development of community canteens and the promotion of smart LTC systems⁶⁵.

Smart LTC is a popular topic in China today. The central government and certain local governments with more robust economic conditions highly value it⁶⁶. Launched in 2017 and updated for 2021–2025, the national action plan promotes the integration of digital technologies into eldercare^{67,68}. Pilot programs in cities like Shanghai use smart platforms to generate personalized service requests and dispatch caregivers, enabling more precise and responsive community-based care^{69,70}. Low digital literacy among the elderly and limited funding are hindering device use and acceptance of new technologies. Continued technological advancements are needed to lower costs and improve device usability for broader accessibility.

The integration of healthcare and LTC represents a critical prerequisite for the acceptance of HCBC among older adults. The elderly population often presents complex medical needs, which significantly influence their decisions regarding aging settings choice. Consequently, addressing the challenge of integrating healthcare and LTC is critical to advancing the development and adoption of HCBC. Policies launched since 2013 have supported collaborative models between medical institutions and LTC providers, encouraging the establishment of multidisciplinary care teams, co-located services, and hybrid facilities⁷¹. Despite governmental advocacy, initiatives to integrate healthcare and LTC remain largely confined to pilot phases. Progress has been inconsistent, hindered by fragmented governance structures, inconsistent funding mechanisms, and the absence of standardized care protocols, all of which impede effective implementation⁷².

Extensive research highlights the critical influence of psychosocial interventions in LTC, demonstrating that strategies promoting emotional support and adaptive coping mechanisms substantially improve health outcomes for older adults. The significance of psychosocial factors in optimizing LTC outcomes is increasingly recognized, particularly in resource-constrained settings. A study examining how interaction with children influences well-being in older adults, indicated that intergenerational engagement significantly boosts emotional health among the elderly⁷³. Another investigation in Malaysia revealed that psychological resilience plays a crucial role in preserving health-related quality of life among patients with chronic diseases⁷⁴. However, vulnerable populations—such as individuals who have lost their only child or those with

disabilities—continue to experience inadequate care and restricted access to psychosocial support. These deficiencies underscore systemic shortcomings in inclusivity and responsiveness within LTC frameworks. Absent robust advocacy for their rights, these groups necessitate targeted societal and governmental interventions, including comprehensive legislation.

In the post-COVID era, chronic disease management needs more attention, especially among the elderly. Existing literature underscores the pivotal role of resilience, psychosocial support, and self-care practices among both patients and healthcare providers in optimizing post-COVID healthcare outcomes.⁷⁵⁻⁷⁸

Despite great progress in infrastructure development, with projections estimating the number of total residential beds will reach 9 million by 2025^{79,80}, the LTC sector in China continues to face demand- and supply-side challenges. From the demand side, many older adults, particularly those with complex needs or limited financial means, face barriers in accessing appropriate services. On the supply side, the decreasing availability of family-provided care underscores the urgent need to expand public LTC services. While the supply has grown significantly, utilization remains suboptimal. For example, between 2008 and 2018, the occupancy rate of residential beds declined from 80.9% to 55.1%, reflecting issues such as affordability, service quality, and geographic accessibility^{1,81}.

Institutionally, the Chinese government maintains a dominant role in the LTC system, serving as provider, purchaser, and regulator. However, the boundaries between these roles remain blurred, limiting the development of a mixed-delivery model that incorporates participation of free market forces. There is an emerging policy shift toward separating service provision from regulation, drawing on international experiences, particularly the purchaser-provider split observed in countries such as the United States. This policy shift may be recommended for LTC reform in China.

CONCLUSION

China's aging population necessitates urgent LTC

reform, with “aging in place” and HCBC as core strategies. Scaling up HCBC and integrating innovative models will be key to meeting diverse care needs. A sustainable LTC system requires shared responsibility among the government, market forces, and individuals. The government can play a major role in the development of this model while leveraging market forces and enabling individual contributions. Bridging the affordability gap is essential to ensure equitable, efficient, and inclusive access to quality care for the elderly.

Source of funding: None reported

Conflict of Interest: None reported

Ethical clearance: Not needed, narrative literature review

Authors' contribution:

1. Haibin Shi, as the first author, was responsible for the overall execution of the study, including the conceptualization, design, data collection, analysis, and taking a lead on writing the manuscript.
2. Linfei Chen, the owner of a Traditional Chinese Medicine clinic, contributed by collecting published data on elderly patients' perspectives, attitudes, choices, and prospects regarding LTC. He also participated in manuscript writing
3. Bianca Shieu provided guidance on the dissertation design, including research methods and data collection, and offered support during the drafting process, including manuscript revision.
4. Ariel Shensa contributed by providing guidance on the dissertation design, including research methods and data collection, and supported the writing process through manuscript revision.
5. Faina Linkov, senior author, provided comprehensive guidance and feedback on the design of this paper, literature review, information synthesis, and manuscript writing.

All authors have reviewed and approved the final version of the manuscript and agree to be accountable for all aspects of the work.

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