

Review

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Review

Evaluating the Impact of Japan's Long-Term Care Insurance System on Older Adults: A Literature Review

Short title: LTCI's Impact on Older Adults in Japan

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Abstract

Japan's long-term care insurance (LTCI) system has been pivotal in addressing the challenges of a rapidly ageing population by providing comprehensive care and financial relief to older adults and their families since 2000. This review examines the system's role in enhancing health equity and accessibility while identifying areas requiring policy adjustments. Stakeholder analysis reveals the interplay between the government, healthcare providers, elderly institutions, and family caregivers in implementing LTCI. Despite improvements in care accessibility and reduced income disparities, the system faces issues of financial sustainability and service disparities, particularly affecting low-income groups. Recommendations include enhancing community-based care, preventive measures, and equitable cost-sharing mechanisms to ensure the system's effectiveness and sustainability.

Keywords: long-term care insurance; Japan; older adults; financial burden

1. Introduction

Japan, as a developed country, grapples with the formidable challenge of an ageing population and its ageing population reached 2.84 billion in 2022. (1) In response, Japan introduced the long-term care insurance (LTCI) system in 2000, aiming to provide comprehensive care support for older adults aged 65 or above to alleviate the financial and physical burden on families and ensure equitable access to healthcare services. (2)

The LTCI system covers 16 "ageing-related" disorders, including advanced cancer, osteoporosis, cerebrovascular issues, and Parkinson's Disease. (3) Notably, it extends its benefits to those aged 40 and older, funded by their taxes and premiums, recognising the impact of age-related diseases on a broader population. (4) As of recent statistics, over 28.9 million participants aged 65 or older benefit from LTCI-covered services, with approximately 3.9 million individuals utilising these services monthly. (5)

However, challenges persist. Rising costs-3.3 trillion yen for residential care, 0.6 trillion yen for community care and 2.6 trillion yen for institutional care pose financial sustainability concerns. (6) Moreover, disparities in service availability disproportionately affect low-income groups. (7)

We explore the LTCI system's evolution, achievements, and prospects in this review. Evidence-based policymaking, informed by nationwide claims data, is essential to sustain the system. As Japan's baby boomer generation reaches age 75 by 2025, integrating long-term care, medical care, and informal caregiving within the community becomes paramount. (8)

2. Methods

2.1. Literature Review

The literature was synthesised to highlight the evolution of LTCI, its direct and indirect consequences on elderly populations, and comparative insights with other countries' care systems. Findings from the studies were categorised into themes such as caregiver burden, healthcare utilisation, economic impacts, and policy efficacy, ensuring a rigorous and replicable methodology. The final analysis aims to provide a comprehensive overview of the LTCI system's efficacy and areas for potential policy enhancements.

2.2. Search Process

This literature review systematically examines the impact of the LTCI system on elderly populations in Japan. We comprehensively searched and analysed peer-reviewed journal articles published between 2003 and 2024 with keywords, such as "LTCI Japan", "health outcome", "caregiver burden" and "healthcare utilisation". Searching databases, including PubMed, JSTOR, and Scopus, were utilised to source relevant publications. The inclusion criteria were studies that focused on the LTCI's effects on elderly care, caregiver burden, economic impacts, and policy outcomes in Japan.

2.3. Quality Appraisal

Selected articles provided empirical data, policy analysis, or theoretical discourse on LTCI in a Japanese context. Quantitative and qualitative studies were included to ensure a multidimensional understanding of the impacts. Quantitative data were primarily analysed for statistical significance in changes in health outcomes, caregiver stress, and economic variables post-LTCI implementation.

This paper utilised the "Critical Appraisal Skills Programme (CASP)" (9) to assess each of the 20 papers that were chosen, and we chose four of the original 10 CASP Checklist questions that applied to our work to determine its quality. The results are displayed in Table 1. The four questions are: (1) Was the paper's concentration on a particular issue? (2) Do you believe all pertinent, significant research was cited? (3) Can the local populace use the results? (4) Were all key outcomes considered? Each question had one of the following possible answers: "Yes", "No", "N/A". Table 1 displays the evaluation findings for all literature materials.

3. Results

3.1. Economic Impact and Sustainability

The LTCI system faces significant financial pressure due to the rising costs of care and the increasing number of elderly people requiring long-term care. The LTCI budget for Japan comprises premiums of 50% and taxes of 50%. Citizens aged 40 and above must pay premiums under this system, the rest is funded by taxes levied by the national government (25%), prefectures (12.5%), and municipalities (12.5%) (10), which has helped distribute the financial burden more equitably as shown in Figure 1. The Category 1 insured person refers to LTCI participants aged 65 and over, accounting for 23%, and those between the ages of 40-64 covered by long-term health insurance plans are called Category 2 insured persons, which occupied 27%. Other than that, seniors approved for LTCI services make a 10% co-payment, with the LTCI budget paying the remaining 90%. (10) However, the rising care costs will surpass \$136.4 billion by 2025. (11) The increase in premiums and co-payments for higher-income individuals has been a necessary adjustment to maintain the system's viability. The government's efforts to promote preventive measures and community-based care are crucial for mitigating these costs and ensuring the system's long-term sustainability.

3.2. Caregiver Burden and Service Disparities

The LTCI system has also impacted family caregivers, who often bear the brunt of long-term care responsibilities. Formal care services have alleviated some of the burden, allowing family

members to balance caregiving with other responsibilities.(12)However, disparities remain, particularly for low-income families who may not fully benefit from the system due to a lack of awareness or access to services.(10)

Despite the improvements, service disparities persist, particularly in rural areas where access to care facilities and services is limited. The LTCI system's reliance on community-based care has been beneficial, but the uneven distribution of resources continues to affect the quality and availability of care. (13) Efforts to enhance community-based care and integrate services more effectively are ongoing, with a focus on preventive measures and equitable cost-sharing mechanisms. (14)

3.3. Policy Efficacy

The efficacy of the LTCI system in Japan is evident in its ability to adapt to the changing needs of an ageing population. The regular revision of Japan's LTCI Service Plan every three years is rooted in the need for adaptability and sustainability in response to evolving demographic and financial conditions. (15) Integrating long-term care with medical care and informal caregiving within the community is a key strategy for sustaining the system's efficacy.

3.4. Stakeholder Analysis of the LTCI

We made specific presentations from the elderly, governments, healthcare providers, and more as shown in Table 2 and Figure 2.

3.4.1. Elderly People

The government issues policies and invests money and workforce to reach health facilities and communities as the policy implementer, which are monitored and managed by the government, while older adults, as the most direct stakeholders, provide feedback information on their needs to the communities and health facilities and finally to the government. (16)

They have a high interest as beneficiaries of insurance but a low power for LTCI, are susceptible to chronic diseases, and have a higher rate of severe illness and mortality from infectious diseases such as SARS and COVID-19. (17) Evidence suggests that the interests of people of low socio-economic status are often neglected, that these groups are primarily made up of older people, and that they are more vulnerable to infectious diseases because of their poor resistance and poorly ventilated, densely populated living conditions. (18)Some elderlies are also affected by their conditions, and some of them lack reliable financial resources, especially in the case of disabled people, who are unable to take care of themselves. As a result, the need for older people not fully covered by the LTCI increases over time.

3.4.2. Government

The government provides funding for LTCI, but it faces a substantial financial outlay and needs to work with health insurance providers. The Japanese government has been involved in developing home care services over the past two decades, and the government has provided various financial incentives for LTCI services, such as low-interest loans, subsidies, and relatively high tariff schemes. (19) The government has more power as the developer and implementer of the LTCI system through subsidies and financial support and by working with insurance companies to secure additional funding. The government should also take an active and socially responsible role in providing the assistance that older people need.

3.4.3. Health Insurance Providers

Hospitals mainly provide long-term care services, and the influence of medical organisations is significant. Although the implementation of LTCI will increase the burden on healthcare institutions, without the LTCI, the healthcare sector already faces more urgency due to Japan's rapidly ageing population, which results in a sharp rise in the number of older adults seeking medical attention and

some hospitals beginning to serve as nursing homes. LTC is independent of the Department of Health and Social Services; it will positively impact social health equity. Moreover, as the leading implementer of the policy, healthcare institutions need to ensure that they can provide timely and effective treatment to older adults.

3.4.4. Elderly Institutions

Care institutions also play a vital role in implementing the system since they provide long-term care for the LTCI. They can be a good option for family members to care for older adults under pressure. The three types of care include home care, community care, and institutional care. Home care refers to the delivery of medical assistance in the patient's residence and significantly improves the health of LTCI recipients. In contrast to community care, in-home care provides one-on-one aid at home. Most local seniors get LTC at home or in the familiar community. The number of institutions licensed by LTCI in Japan is 184392 (2012)(20), and the turnover of staff in institutions is influenced by fluctuations in the price of care, with institutions as the primary caregivers, therefore gaining more power and interest.

3.4.5. Hospitals

Due to a lack of nursing homes and home care services, hospitals in Japan are frequently utilised for non-medical reasons, and patients are frequently kept in hospitals for extended periods. According to statistics, over 30% of senior patients stayed over a year in the hospital as an alternative to long-term care facilities. (12) Many private acute-care hospitals have bought or established long-term care facilities. (21)

3.4.6. Healthcare Staff

The healthcare sector now faces more urgency due to Japan's rapid ageing population, leading to a sharp increase in the percentage of older adults seeking medical attention and some hospitals beginning to serve as nursing homes. Healthcare staff play a more important role progressively under this circumstance, which consists of different categories. For example, psychiatrists who provide rehabilitation for stroke patients consist of multidisciplinary medical teams including nurses, physical therapists, social workers and so on. (22) However, in Japan, stroke rehabilitation is offered by physicians with other specialities considering the lack of board-certified psychiatrists. (21) Therefore, the government is now promoting home long-term care, which could relieve medical staff's strain. The significant positive correlation ($r=0.55$, $p<0.001$) between the number of home medical clinics and home medical clinics appears to understand advances in cooperation between home care and care services in Japan. (23)

3.4.7. Family

The category two insured persons fall within the 40-64 age range, and their premiums are subtracted from the cost of medical insurance. (16) The insurance funds are split equally between general taxes and insured premiums, with the remaining 50% coming from general taxes. (16)

The Japanese LTCI is a mandatory contributory scheme under which half the funding is from social insurance contributions paid by people aged 40 and over and half is from revenues from general taxation (of which 50% are from the national government, 25% from the prefectural government and 25% from the municipalities). The contribution rate is determined by the amount of income required to fund LTC services for those who meet the eligibility criteria. All LTC services are subject to co-payments. (24) These have been set at 10% of the costs of care. However, a reform of the Japanese system in 2014 led to an increase in the contribution rate of people with higher incomes or pensions to 20%, and further reform in 2018 introduced a 30% co-payment rate for those with very high incomes. (25)

Although the method used to determine premiums differs from fund to fund, it generally depends on the wealth and income of each household. The financial burden of families could be kept reasonable by using this funding strategy, so there would not be excessive financial strain, and the public LTCI system could continue to expand steadily and continuously.

3.4.8. Building Alliances and Partnerships

The Japanese government should promote collaboration with various interest groups to understand better and improve the LTCI program's impact on older people. As the government predominantly controls the current system, limiting access to private care options, older adults largely depend on the national LTCI for long-term care. (26) The government must foster greater cooperation among older adults, their families, and medical institutions and ensure sustainable LTCI development to enhance health quality. (27) Additionally, partnerships with health insurance and professional care providers should be strengthened to extend LTCI coverage and alleviate families' psychological and financial burdens. (28) Building these alliances is crucial for empowering older adults and promoting health equity. (28)

The benefits of implementing LTCI include meeting the need for LTC for older adults, especially those with disabilities, and relieving them of the financial burden caused by their payments. (12) In Japan, LTCI has also helped reduce the loss of benefits for families of older people with disabilities. Additionally, it has enhanced the wellbeing and standard of living of seniors. (29) In Japan, each older adult is assessed by a professional care manager (CM) who has received professional induction training and who assigns a level of care to the older adult based on their physical condition by using the Activities of Daily Living (ADL) scale and evaluating older adults' cognitive capacity to decide if they can utilise assistive technology and standards for home care, guiding, and administration. (9, 30)

3.5. Comparative Insights

3.5.1. Germany

Coverage: Introduced in 1995, covers all citizens needing long-term care.(31)

Funding: Primarily through mandatory contributions from employees and employers.(31)

Strengths: Comprehensive and well-established, with a strong emphasis on both home and institutional care.

3.5.2. South Korea

Coverage: Modelled after Japan, launched in 2008, targeting the elderly population. (32)

Funding: Like Japan, funded by insurance premiums and taxes. (32)

Challenges: Rapidly ageing population leading to increasing demand and financial strain.

3.5.3. Netherlands

Coverage: Known for extensive home care services, and high-quality institutional care.(33)

Funding: Funded through mandatory contributions and taxes.(33)

Strengths: High level of care quality and accessibility but faces high costs.

3.5.4. Key Comparisons

Quality of Care: The Netherlands often ranks highest in care quality, while Japan and Germany focus on balancing institutional and home care.

Financial Sustainability: Japan and South Korea are particularly strained although all systems face financial challenges due to population ageing.

Innovation: Japan is increasingly focusing on community-based care and preventive measures.

Benefits are set more generously in Japan because, before its implementation in 2000, health insurance had covered long-stays in hospitals and there had been major expansions of social services. These service levels had to be maintained and be made universally available for all those meeting the eligibility criteria. As a result, efforts to contain costs after the implementation of LTC Insurance have had only marginal effects. This indicates it would be more efficient and equitable to introduce public LTC Insurance at an early stage before benefits have expanded because of ad hoc policy decisions (34).

Although the generous levels of benefits may be unique to Japan, other countries that have been funding LTC through mechanisms such as care allowance and/or have left decisions to local governments would be in a similar situation. This implies that the sooner public LTC insurance is introduced, the better it will be from both the equity and the fiscal perspectives. Middle-income countries which have achieved universal health coverage should contemplate establishing an LTC system before ad hoc provisions to win popular support become firmly entrenched (34).

3.6. Analysis of the Level of Demand for Healthcare in Japan

A review is required for LTCI policy every five years from 2000. The Japanese government amended the plan over once in 2003 and then again in 2006, partly because expenditures were growing due to the increase of LTCI users. The reform's primary goal is to reduce costs, cut benefits for beneficiaries, and encourage living alone through preventative healthcare. (8) A decrease in reimbursement for the utilisation of institutional care and an enhancement in reimbursement for home support and services, home care management, and rehabilitation services to support living at home were among the changes made in 2003 due to an overly high demand for institutional care. (19) A literature review found that demand is more influenced by factors such as age and income in Japan. (35) The latest government data from the LTCI system examines how insurance coverage affects long-term care usage and its consequences on health in Japan. (36) The data shows a significant potential demand for the LTCI of disabled older adults and an urgent need for a system to defuse the financial risks associated with disability in Japan. Therefore, it is urgently needed to use forecasts for the supply and demand balance between 2020 to 2050 to predict the contribution and build a unified and sustainable system. (37)

4. Discussion

4.1. Features of Japan's Health Financing System

Only 10% of the overall cost of care is covered by Japanese insurance, with the other 90% being split between the government and premium payments. (24) Individuals are classified into different care levels, each corresponding to a specific range of services tailored to their needs. These levels determine the type and number of services an individual is eligible to receive under the insurance plan. Once the level of care is determined, LTCI covers a significant portion of the costs associated with the services provided at this level. However, individuals are required to cover 10% to 30% of the costs, depending on their income level. (38) This system facilitates the sustainable development of LTCI, which was investigated by Kobayashi, who described how old patients' medical treatment was paid for in Japanese hospitals, nursing homes, and residences. (19) The authors described the structural alterations in the Japanese healthcare system, which operates under a private-dominant supply system with public financing, aiming to equalise benefits. Asahara (39) outlined the framework, current state, and issues with the system, and pointed out the difficulties and the number of organisations offering LTCI services, as well as the number of institutions and consumers, has been rising significantly. (40) Bayarsaikhan discusses the focus of health promotion policy, financing arrangements, and the prospects for social health insurance to finance health promotion, (41) and developing an LTCI system. (24) Himeno focuses on ascertaining differences in healthcare outcomes, such as different healthcare financing, and analysing disparities in health outcomes depending on income and education across various healthcare systems in China, Japan, and the United States.

(42)She also wants to document and describe decision preferences regarding preventive behaviours, such as preventing breast cancer through different health insurance frameworks. She stated due to its ageing population, Japan must figure out how to pay for long-term care, retirement, and healthcare costs. (41) Using a dynamic equilibrium model with overlapping generations that is precisely parameterised to fit macro and microeconomic level data for Japan, McGrattan examine the effects of policy decisions intended to solve this issue. (43) Japan needs help paying for long-term care, retirement, and healthcare costs as the population ages. They depict the movement patterns of long-term health status changes using data from a multi-period micro-tracking survey. Additionally, there is one study that integrates information from all seven censuses with age-shifting algorithms to estimate the size and composition of older adults with disabilities from 2020 to 2040. (44)

4.2. Impact of LTCI on Caregivers

LTCI has positively influenced caregiver engagement, with younger caregivers reporting higher satisfaction and being affected by gender and age differences. (30)LTCI also helps seniors and families reduce care costs while improving the quality of care.

4.3. Impact on Economic Wellbeing

LTCI services are available for in-home and institutional care, alleviating financial pressures on families and the government. Although caregivers do not receive direct monetary benefits, care administrators facilitate service arrangements tailored to the needs of dependent older adults. (12)Increasing co-payments rather than starting contributions earlier could better manage financial strains.(45)

4.4. Influencing Factors Limiting the LTCI Development

LTCI has experienced several modifications in Japan. Public care management organisations now prioritise younger, male subjects, and those with more significant care requirements above private organisations. Beneficiaries managed by commercial organisations used society long-term care services far more frequently than those managed by public organisations. (12) The importance of private care management companies in promoting the utilisation of care facilities cannot be overstated, even when the efficacy of their care practices might well be questioned. (46) Another issue is the low-income recipients since LTCI payments in Japan only offer in-kind services, lower-income family care are less inclined to join long-term care because they would instead get monetary benefits. (47) Instead, the expense of official programs like LTCI and others may make it challenging to satisfy care needs with lower incomes, as seen in other nations. Low-income Japanese LTCI users are partially excused from out-of-pocket expenses. However, this exemption is only granted if the recipient requests it from the insurance provider. Due to a lack of knowledge or other reasons, some caregivers from these homes could choose not to apply for a waiver, which would limit access to complete LTCI services. (48) Yamada's research also shows that care recipients who get public assistance are more inclined to work longer shifts as caregivers, even when coinsurance is waived. (10) Therefore, the following studies should thoroughly analyse the elements linked to increased care durations for these families.

4.5. Recommending Actions for the LTCI

The Japanese LTCI system has undergone significant changes to address the needs of older adults with moderate care requirements. The government has actively promoted community-based care, which aims to create a home-like environment offering personal care facilities, respite care, and outpatient treatment services. (49)

4.6. Preventive Care Measures

Preventive care measures have been implemented to reduce the demand for higher-level treatments. Family doctors are now actively involved in managing clients' health, emphasising outpatient and short-term preventive care services. Since the LTCI system's inception, preventive spending has surged by an impressive 270% between 2006 and 2009. This far surpasses the growth rates observed in institutional care (129%), home care (180%), and community care (138%). (50)

4.7. Outpatient Rehabilitation

Recognising the importance of maintaining older individuals' health and functional abilities, outpatient rehabilitation services have gained prominence. These programs aim to prevent health decline and enhance overall well-being.

4.8. Modifications to Payment System

Recent system modifications require recipients to cover room and board expenses, aligning costs across care settings.(16, 51)The rationale behind these modifications is that clients receiving assistance at home already pay out-of-pocket for housing maintenance and self-support. This change ensures fairness, as clients receiving care at home already bear similar expenses.

4.9. Region Integrated Support Centres

The government has established Region Integrated Support Centres to connect these new LTC locations, which would provide a range of services at the minor district level or in each subdivision of society with 20,000 to 30,000 people, addressing various senior needs. (15)Public health professionals, social services, and lead nurse managers collaborate to construct nursing preventative care plans. Local government officials assess care needs through surveys on psychological and physical health, medical treatments, and other factors. Applicants are categorised into one of six dependent care levels using a government software program.(9) The adequacy of the initial nursing requirements is determined by the Nursing Needs Accreditation Committee, comprising social and healthcare professionals nominated by the mayor.(2)

Regarding the promotion of equality, it's essential to consider that the modification to charge for services aims to create a more equitable system. While the article doesn't explicitly mention wealth disparities, the intent is to ensure fairness by aligning costs with the type of care received. Clients receiving care at home already bear housing expenses, and this adjustment seeks to maintain parity across care settings.

5. Conclusions

LTCI has become an essential aspect of healthcare systems in Japan. However, challenges remain regarding cost containment, coverage, access, and system complexity.

In summary, tackling the challenges associated with LTCI in Japan requires a multifaceted approach that includes financial management, integration with other social support systems, quality enhancement in care provision, focused research, effective policy-making, and public education. Addressing these areas can help mitigate the effects of an ageing population on healthcare systems and improve the overall wellbeing of older adults. Future research should focus on LTCI-related issues in more depth, explain the effect mechanism, and identify the best treatment options.

List of Abbreviations

long-term care insurance (LTCI)

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