Health and Long-Term Care Systems for Older People in the Republic of Korea: Policy Challenges and Lessons

Boyoung Jeon¹ and Soonman Kwon²,*
¹Department of Health Services Research, Faculty of Medicine, University of Tsukuba, Tsukuba, Ibaraki, Japan
²Graduate School of Public Health, Seoul National University, Seoul, Korea

CONTENTS
Introduction
Aging and the Korean Health System
Long-Term Care System in Korea
Discussions and Policy Lessons
References

Abstract—The Republic of Korea is experiencing a rapidly aging population with increased life expectancy and lowered fertility. National health insurance has provided universal access to health care for all since 1989, and mandatory long-term care insurance (LTCI) was introduced in 2008, in which everybody who contributes to health insurance simultaneously contributes to LTCI. Although health services and long-term care are universally accessible, health differentials remain across socioeconomic groups. LTCI covers about 7% of older people through eligibility assessment and provides benefits for institutional and home-based care and cash benefits in exceptional cases. Long-term care (LTC) benefit eligibility has been criticized for being excessively reliant on physical functionality, and recently eligibility has been extended to people with dementia. Despite the oversupply of LTC providers, quality of care has been a concern and calls for more investment in the quality evaluation system and training of care workers. There continues to be overreliance on inpatient care and unmet health care needs among LTC users as a result of weak gatekeeping by primary care and a lack of effective coordination between health care and LTC.

INTRODUCTION

The Republic of Korea (hereafter Korea) is experiencing a rapidly aging population, and older people aged 65 and over accounted for 12.7% of the population in 2014.¹ The speed of population aging in Korea is projected to be higher than in Organization for Economic Cooperation and Development (OECD) countries, and the old age dependency ratio, measured by population aged 65 and over divided by the population aged 15 to 64, will increase from 17.3% (2014) to 71% (2050), only slightly lower than in Spain and Japan.² The average old age dependency in OECD countries was 24.8% in 2014, and is projected to increase to 47.3% in 2050.²
Family structure and attitudes toward care for older people have changed during the last decade. The proportion of parents who are living with their children decreased from 38.0% (2008) to 29.2% (2016), with surveys suggesting that a greater share of the Korean population thinks that family, government, and society should provide parental support (45.5%) compared to the share of population citing family as the main source (30.8%). The role of family obligation associated with caregiving for parents is expected to decline. Under these circumstances, this article aims to examine the health policy responses to aging in Korea, more specifically health system and long-term care (LTC) systems for older people and lessons for countries in Asia.

This article is structured as follows. The following section describes key developments in aging in Korea and the main characteristics of the health system, including spending patterns and population access to health services. The next section describes the LTC system in Korea, including mandatory long-term care insurance (LTCI) and the service delivery of LTC as well as coordination issues between health care and LTC. Finally, the last section discusses the main challenges posed by the aging Korean population to the health and LTC systems, the policy responses, and potential lessons for other countries in Asia.

AGING AND THE KOREAN HEALTH SYSTEM

Aging and Health

The life expectancy of the Korean population increased from 75.9 to 82.2 during the period 2000 to 2014. The leading causes of death among older people in 2015 were noncommunicable diseases (NCDs), such as cancer (803.0 persons per 100,000), heart disease (351.0 persons), cerebrovascular disease (311.1 persons), pneumonia (209.1 persons), diabetes (133.2 persons; Table 1). NCDs, such as low back and neck pain, ischemic heart disease, lung/liver cancer, diabetes, sensory organ diseases, and depressive disorders, were the fastest growing leading factors in disability-adjusted life years (DALYs) from 2005 to 2015. Diet was the leading risk factor for DALYs, followed by smoking, high fasting plasma glucose, alcohol and drug use, high systolic blood pressure, high body mass index, and air pollution.

From the standpoint of this article, there are two perspectives related to longevity and health status that require consideration: expansion of morbidity is based on the assumption that people live longer with ill health as longevity increases vulnerability, whereas compression of morbidity is based on a different assumption that unhealthy years will be compressed into a shorter period of time because the onset of morbidity is delayed. In Korea, people with high socioeconomic status (SES) were more likely to experience compression of morbidity. Good financial condition was also associated with successful aging, such as a later life with less disease and disease-related disability as well as high levels of cognitive and physical function.

On the other hand, lower education was a significant factor explaining physical and mental difficulties or poor self-rated health (SRH), and low levels of income or occupation were predictors of cognitive impairment. In addition, there is an inverse association between socioeconomic factors and depressive symptoms, and nonstandard forms of employment increase the risk of depression in older populations. Several studies have reported the differential effect of SES on health of older people by sub-groups. For example, women showed faster declines in SRH with age than men, and women’s SRH was more vulnerable to low income than men. The SES gradients in the burden of disease showed different distributions by disease groups. The proportion of hypertension, cancer, and diabetes in the burden of disease increased with higher education level, but the result was in the opposite direction for arthritis or anemia. Although poor health status is highly concentrated among older people with low incomes, strong pro-rich inequality exists for health care expenditure. Inequality in inpatient or outpatient service utilization has remained even after adjusting for health status among older adults. A literature review showed that income, wealth, education, previous or current employment status, housing, and region were predictors of health expenditure among older people. Under the relatively weak Korean social pension system, older people with low incomes faced considerable financial burden due to health expenditures, resulting in lower lower health care service use. However, an income-related horizontal equity index showed negative or zero values for home-based LTC utilization, implying an equitable use of home care services under public LTCI, unlike the pro-rich inequality of health care utilization.

In summary, although Korea has experienced an increase in life expectancy, there are still disparities in health and functional status by SES groups. Moreover, there are inequality issues in health care utilization and expenditure under the national health insurance (NHI) due to high out-of-pocket (OOP) costs at the point of service, although the gaps have been reduced with LTCI.

Health Care Access and Health Expenditure

The Korean health system with mandatory NHI has provided universal access to health care for all people regardless of
age. It achieved universal coverage of the population in 1989 and has operated a single insurer scheme with a uniform contribution schedule and benefit coverage since 2000.\textsuperscript{23}

With population aging, NHI needs to extend the benefit package to cover NCDs and services for older people. For example, the major NCD groups, such as circulatory, digestive, muscular, cancer, endocrine, and mental health, account for 60\% of health spending in Korea.\textsuperscript{24} Although several programs have been implemented for NCD management (such as cancer screening, extension of coverage for NCD medicines, and pilots for community primary care), there are still many uncovered (uninsured) services, resulting in high OOP costs.\textsuperscript{25} Moreover, because a large proportion of the older population lives in poverty (e.g., the rate of relative poverty among older people was 49.6\%, the highest in the OECD),\textsuperscript{26} a contributory social insurance program without sufficient subsidies to the poor (only 3\% of the population is covered by a tax-funded medical aid program) still faces challenges related to health care access.

The share of gross domestic product allocated to health spending (excluding spending on investments) in Korea was 7.2\% in 2015, compared to an OECD average of 8.9\%.\textsuperscript{27} Per capita health spending has been growing continuously and has outpaced the average per capita spending in OECD,\textsuperscript{27} although growth has slowed since 2011.\textsuperscript{28} In 2015, public sources—that is, social health insurance and taxes—accounted for only 55.6\% of overall health spending, well below the OECD average of 72.8\%.\textsuperscript{27} Health expenditure among older people, which was 12.3\% of total population, accounted for 37.8\% of total health spending in 2015 (Table 2).\textsuperscript{29} Older people’s health spending is driven by amount of health care utilization (e.g., number of inpatient days, outpatient visits) rather than per day expenditure.\textsuperscript{29}

Although Korea has introduced several programs for responding to NCDs and aging, there has been an overreliance on hospital care, with weak gatekeeping by primary care and referral systems. The fragmentation and lack of coordination in health care is a threat to the efficiency and quality of care for older people, who have multiple comorbidities. The average annual growth rate of health expenditure among the total population for inpatient care was higher (12.4\%) than that for outpatient care (8.2\%) or retail pharmaceuticals (7.2\%) from 2004 to 2015 (Table 3).\textsuperscript{30}

### TABLE 1. Leading Causes of Death Among Older People (Age 65+), Korea (2015), per 100,000 Population. Data adapted from Statistics Korea\textsuperscript{5}

| Rank | Total | Men | Women |
|------|-------|-----|-------|
| 1    | Malignant neoplasms (cancer) | Malignant neoplasms (cancer) | Malignant neoplasms (cancer) |
|      | (803.0) | (1,175.8) | (533.9) |
| 2    | Heart disease | Heart disease | Heart disease |
|      | (351.0) | (352.7) | (349.8) |
| 3    | Cerebrovascular disease | Cerebrovascular disease | Cerebrovascular disease |
|      | (311.1) | (326.4) | (300.0) |
| 4    | Pneumonia | Pneumonia | Pneumonia |
|      | (209.1) | (247.8) | (181.2) |
| 5    | Diabetes mellitus | Chronic lower respiratory diseases | Diabetes mellitus |
|      | (133.2) | (160.0) | (127.9) |

### TABLE 2. Health Expenditure\textsuperscript{a} Among Older People (Age 65+), Korea (2009–2015). \textsuperscript{b, c}Health expenditure indicates the sum of NHI expenditure and copayment for covered services. \textsuperscript{b}1 USD = approximately 1,100 Korean won. Data adapted from National Health Insurance Service\textsuperscript{29}

|                          | 2009       | 2010       | 2011       | 2012       | 2013       | 2014       | 2015       | Average Annual Growth Rate (%) |
|--------------------------|------------|------------|------------|------------|------------|------------|------------|--------------------------------|
| Population               | 48,614     | 48,907     | 49,299     | 49,662     | 49,990     | 50,316     | 50,490     | 0.6                            |
| 65+ (% of 65+)           | 4,826      | 4,979      | 5,184      | 5,468      | 5,740      | 6,005      | 6,223      | 4.3                            |
| Number of patient days   | 87,208     | 90,656     | 92,610     | 95,179     | 96,879     | 98,796     | 98,999     | 2.1                            |
| (inpatient, outpatient)  | (9.9)      | (10.2)     | (10.5)     | (11.0)     | (11.5)     | (11.9)     | (12.3)     |                                |
| Total health expenditure (billion Korean won) | 39,339     | 43,628     | 46,238     | 47,839     | 50,955     | 54,317     | 57,959     | 6.7                            |
| 65+ (% of 65+)           | 22,434     | 24,073     | 25,350     | 27,090     | 28,670     | 30,411     | 31,382     | 5.8                            |
| Total health expenditure (billion Korean won) | 12,424     | 14,135     | 15,389     | 16,449     | 18,057     | 19,860     | 21,921     | 9.9                            |
| Health expenditure per capita per day (Korean won) | 12,424     | 14,135     | 15,389     | 16,449     | 18,057     | 19,860     | 21,921     | 9.9                            |
| 65+ (% of 65+)           | 14,135     | 15,389     | 16,449     | 18,057     | 19,860     | 21,921     | 21,921     | 9.9                            |

216  Health Systems & Reform, Vol. 3 (2017), No. 3
Proximity of death also has a crucial impact on health expenditure during the life course. The cost of end-of-life care (one year before death) was more than nine times higher than the cost of care for persons in the same age group who did not die during the same period. The expense of end-of-life care was peaked in the age group of 60 to 64, and then declined in older age groups. Among the death-related health expenditures, injection-related cost, hospitalization cost, and examination cost accounted for about 60% of total costs, implying that many patients spend considerable time in hospitals during end of life. Lengthy hospitalization (often social admissions that do not really require medical care) due to limited coordination with LTC and clinical decisions regarding treatment such as intensity of care at the end stage of life are also key determinants in expenditure because the cost of a hospital stay is much higher than that of LTC institutions or hospice care. On the other hand, it was reported that per capita spending on retail pharmaceuticals reached a peak at the age of 70–74 rather than 75 and older. Survival of the healthy elderly or the high burden of OOP costs might lead the old-old population (75 and older) to reduce consumption of retail pharmaceuticals and related expenditures.

**LONG-TERM CARE SYSTEM IN KOREA**

**Long-Term Care Insurance**

In July 2008, Korea introduced public LTCI, in response to rapid population aging and low income security for older people. In addition to demographic changes, family structures contributed to the growing demands for LTC. As female labor participation increased, family size became smaller, and attitudes toward care for older people (regarding family obligations) changed and the availability of informal caregivers has been diminished.

There were some debates on whether Korea, whose proportion of older people was still lower than that in OECD countries, should introduce a universal LTCI rather than a public assistance–type LTC support for poor older people. A progressive government played a key role in the introduction of universal LTCI to cover all older people who have a need for LTC. Kim Dae Jung, who became president in early 1998, had a strong interest in progressive welfare state policies. After becoming president, Kim initiated several expansive reforms in the health and social policy arena, such as unemployment insurance, a national pension, NHI, and minimum living standard guarantee. Formal discussion of LTCI started in 2000 when the Ministry of Health and Welfare appointed a Planning Committee for Elderly Long-term Care. The provision of LTC aiming to expand care for older people was easy to embrace because it had broad appeal to the public and did not encounter political opposition. President Kim Dae Jung was succeeded by Roh Moo-hyun in January 2003, who was from the same political party as Kim and included a promise to enact LTCI in his presidential campaign. After more than one year of consideration, public hearings, and research on other countries, the government decided to introduce social insurance for LTC with a tax subsidy. Funding of the new LTCI is separate from the NHI, although both are administered by the National Health Insurance Corporation.
Insurance Service (NHIS) to reduce administrative costs. Different from European countries (e.g., Germany) where an LTC system has been developed for people with disabilities, including older people, LTCI in Korea was introduced in the context of population aging. As a result, people aged 65 years or older are eligible for all types of LTC, but eligibility for those under 65 is restricted to age-related LTC needs, such as individuals with geriatric diseases (i.e., dementia, cerebrovascular disease). The design of LTCI such that younger people contribute but their eligibility for benefits is restricted has resulted in a large intergenerational transfer and contributed to the financial sustainability of LTCI.

The contribution rate is 6.55% of health insurance premiums; in other words, anyone who makes health insurance contributions also pays an LTCI contribution. The financing mix is composed of contributions (60%–65%), tax subsidies (20%), and copayment by service users, which is 20% for institutional services and 15% for home-based services. The coinsurance rate for institutional care is higher than that for home-based care in order to promote deinstitutionalization and community-based care, and there is a 50% subsidy for copayments to the low-income group (17.1% of LTC users in June 2014) and zero copayment for beneficiaries of the medical aid program. The average monthly OOP cost (for covered and uncovered services) was 477,000 KRW (about 430 USD) for institutional care and 110,000 KRW (about 100 USD) for home-based care in 2014.

To use LTC services, individuals have to pass a needs assessment, which assesses functional status in physical, cognitive, behavior, nursing care, and rehabilitative characteristics using 52 items. The needs assessment for eligibility for LTCI is different from health insurance. The eligible group was classified into three levels, which have been extended to five levels for those with dementia (which are designated as level five) since July 2014. Before the revision, if an individual had cognitive disorders but no severe physical limitations, he or she was not eligible for LTCI. Therefore, many people with dementia as well as their family members suffered from the lack of adequate LTC.

The population coverage of LTCI increased from 2.9% to 7.2% of older people from July 2008 to June 2016 (Figure 1). The utilization rate increased from 53% to 91% (of those eligible) during the same period, as awareness of the LTCI system has improved. However, the increasing number of certified individuals and service users has caused concerns regarding sustainability. The needs assessment became stricter for eligibility at levels one and two (severe condition), leading to a decline in the proportion of levels one and two from 42% (April 2010) to 23% (June 2016; Figure 2).

LTCI provides benefits for institutional and home-based care, and cash benefits are available only in exceptional cases, for example, when no service providers are accessible in the region. The amount of benefits depends on the eligibility level, and the ceiling on benefit coverage differs by level. (In contrast, there is no ceiling on benefits but a ceiling on OOP payment in the NHI.) For example, the maximum monthly benefits range from 784,100 KRW (about 660 USD) for level five to 1,196,900 KRW (about 1,000 USD) for level 1 in the case of home-based care. Individuals at less severe levels—that is, levels three to five—are recommended to use home-based care to avoid overreliance on institutional care. The payment type varies by service type, such as pay per visit (service hours) for home visit care and pay per day for institutional care.

![FIGURE 1](image-url). Population Coverage of Long-Term Care Insurance, Korea (2008–2016). Data adapted from National Health Insurance Service
The proportion of institutional care among the total expenditure for LTCI increased from 43.3% to 51.3%, whereas expenditure for home-based care decreased from 56.7% to 48.7% between 2009 and 2015. Home-based care consists of home visit care, home visit bathing, home visit nursing, day and night care, short-term care, and assistive devices (e.g., walker or cane, wheelchairs, pressure relief mattresses). Within home-based care, more than 70% of benefits are spent on home visit care but only 0.5% is spent on home visit nursing (Table 4).37

**Long-Term Care Service Delivery**

After the introduction of LTCI, the number of LTC providers rapidly expanded, from 2,600 to 5,000 institutions and 11,900 to 12,900 home-based care agencies since 2009.37 It also created diverse jobs related to LTC but led to an oversupply of service providers. The number of care workers and nurse aides increased dramatically because they require a shorter period of education and training than registered nurses and doctors. For example, the number of care workers rapidly increased from 176,500 to 301,700 and the number of nurse aides increased from 4,200 to 9,770, whereas the number of registered nurses decreased from 3,400 to 2,800 (Table 5).37

The increase in quasiprofessional staffing may be due to the small size of institutions—that is, capacity of less than 30 residents or group homes (less than 10 residents)—where entry to the market is relatively easy for private-sector providers.39 The rapid increase in the supply of providers was

---

**FIGURE 2.** Proportion of Eligibility Levels in Long-Term Care Insurance, Korea (2010–2016). Data adapted from National Health Insurance Service37

| Year  | Level 1 (The most severe) | Level 2 | Level 3 | Level 4 | Level 5 (Special eligibility for older people with dementia) |
|-------|---------------------------|---------|---------|---------|-------------------------------------------------------------|
| Apr 2010 | 58%                        | 25%     | 17%     | 4%      | 35%                                                         |
| Apr 2011 | 63%                        | 23%     | 14%     | 3%      | 36%                                                         |
| June 2013 | 70%                        | 20%     | 10%     | 4%      | 36%                                                         |
| May 2014 | 72%                        | 18%     | 10%     | 6%      | 39%                                                         |
| June 2015 | 4%                         | 16%     | 8%      | 8%      | 30%                                                         |
| June 2016 | 5%                         | 15%     | 8%      | 8%      | 31%                                                         |

**TABLE 4.** Long-Term Care Insurance Expenditure by Service Type, Korea (2009–2015).a, b “Total LTCI expenditure indicates long-term care insurance expenditure by National Health Insurance Service for covered services. b1 USD = approximately 1,100 Korean won. Data adapted from National Health Insurance Service”37
not accompanied by quality of care and equitable distribution by regions. About 70%–80% of providers are from the private sector, and the majority of home care providers are concentrated in urban areas.39

To assure quality of care in the LTC sector, NHIS implemented a quality evaluation system in 2009. The number of quality indicators varies by type of service provider—for example, 88 items for institutional care and 32–59 items for home-based care—and are grouped by five domains of quality measurement, namely, management of institutions, environment and safety, rights and responsibilities, process of services, and outcome of services.40 Evaluation scores (A–E) are disseminated through an official LTCI website, and high-performance institutions have received incentives of 1%–2% additional reimbursement.40 Although the LTC quality evaluation system was initiated to improve the quality of care, there are still several limitations. A gap between real quality of care and evaluation results exists due to the insufficient number of outcome-based indicators. Inadequate cooperation between local governments and NHIS has been criticized because local governments are not active in controlling the quality of LTC institutions even though they have the authority to approve or close LTC institutions.41

### Coordination of Health and Long-Term Care

Although the utilization of LTCI has effects on reducing the length of stay in acute hospitals among the older people with severe functional limitations42 and decreasing the costs of LTC hospitals,43 policy challenges remain associated with the lack of coordination between health care and LTC. For example, overlapped inpatient services are provided by LTC institutions (which are covered by LTCI) and LTC hospitals (which are covered by NHI) for older people with similar health and functional status. (LTC [or geriatric] hospitals are required to employ physicians, whereas the maximum requirement for medical personnel in LTC institutions is nurse aides.) With the lack of effective coordination between LTC institutions and LTC hospitals, they were often regarded as substitutes for each other. This resulted in persistent social admissions in LTC hospitals among older people with lower medical care needs.44 On the other hand, a significant proportion of older people with clinical care needs stay in LTC institutions where health care services are not provided.45 Even without the immediate need for medical treatment, some older people still want to stay in LTC hospitals, because they are concerned that they may not get a relevant referral to hospitals if they stay in LTC institutions.

The failure in coordination between health insurance and LTCI has to do with the history and path dependency in the development of an LTC system for older people in Korea. With population aging and increased need for LTC among older people, the government introduced LTC hospitals, reimbursed by NHI. Before LTCI was introduced, many older people in LTC hospitals were reluctant to be discharged to LTC institutions because they had to pay for LTC institutions, whereas the majority of the cost of LTC hospitals was funded by NHI. As a result, social admissions were prevalent in LTC hospitals, which called for the need for public funding such as LTCI for LTC institutions.

There are several institutional factors contributing to persistent social admissions in LTC hospitals. The majority of LTC hospitals and LTC institutions are private, and more patients/residents mean profits for them. They have mushroomed over the last ten years, and competition has been fierce. The benefits package under NHI tends to be more generous than that under LTCI; for example, a ceiling on OOP costs every six months under NHI. As a result, after a few

---

**TABLE 5. Number of Long-term Care Providers and Professionals, Korea (2009–2015).**

|                      | 2009  | 2010  | 2011  | 2012  | 2013  | 2014  | 2015  |
|----------------------|-------|-------|-------|-------|-------|-------|-------|
| **Number of LTC institutions and home-based care agencies (Unit: institution)** |       |       |       |       |       |       |       |
| LTC institutions    | 2,629 | 3,751 | 4,061 | 4,326 | 4,648 | 4,871 | 5,085 |
| Home-based care agencies | 11,931 | 11,228 | 10,857 | 10,730 | 11,056 | 11,672 | 12,917 |
| **Number of professionals in LTC sector (Unit: person)** |       |       |       |       |       |       |       |
| Care workers         | 176,560 | 232,590 | 236,686 | 238,064 | 258,420 | 272,430 | 301,709 |
| Registered nurses    | 3,429  | 3,135  | 2,964  | 2,862  | 2,760  | 2,788  | 2,813  |
| Nurse aides          | 4,218  | 5,480  | 6,275  | 6,973  | 8,028  | 8,825  | 9,779  |
| Doctors              | 954    | 1,025  | 1,100  | 1,175  | 1,277  | 1,382  | 1,481  |
| Social workers       | 5,234  | 6,060  | 6,283  | 6,886  | 7,637  | 11,440 | 14,074 |
| Physical and occupational therapist | 1,363 | 1,481 | 1,596 | 1,693 | 1,806 | 1,893 | 2,052 |

---

®®®**LTC indicates long-term care. Data adapted from National Health Insurance Service.**37 Number of doctors includes part-time visiting doctors.
months in an LTC hospital, OOP payments can be lower than in LTC institutions. There is a financial penalty (reduced fees) for LTC hospitals when patients stay for more than six months. But lower fees (for a given copayment rate) mean lower cost sharing or OOP costs for patients, resulting in a financial incentive for longer lengths of stay in LTC hospitals.

**DISCUSSIONS AND POLICY LESSONS**

Korea has experienced an increase in life expectancy and improved health status among the older population due to universal access to health care for all under the NHI system and public LTCI. Although universal access to health and LTC services has been achieved, there are still health disparities and health care gaps by SES group. Moreover, though several programs have been implemented in response to the increasing burden of NCDs and an aging population, there is still an overreliance on hospital care, with weak gatekeeping, leading to fragmentation and low quality. The lack of coordination between health care and LTC has impeded the original goal of LTCI; therefore, there are still many social admissions in hospitals, and many older people with clinical care needs are staying in LTC institutions without adequate health care services. Insufficient training of health professionals for care and treatment of the older population also contributes to low-quality care, even if hospitals and LTC providers are in oversupply.

At the same time, concerns have been raised about the sustainability of the health and LTC system under the rapidly growing demand and expenditure for geriatric and personal care. The reduction in social admissions and strengthening policies for prevention and health promotion among older people might directly or potentially result in financial savings.48 There is also a tradeoff between population coverage and financial sustainability of the LTC system. A strict assessment for eligibility can improve financial sustainability, but the resultant low coverage of the population can limit the capacity of the LTC system to meet the LTC needs of older people. The current Korean LTCI covers about 7% of older people, which is significantly lower than that in OECD countries (average >10%).49 LTCI eligibility has recently been extended for people with dementia because the original criteria could not fully consider the hardship of caring for older adults with cognitive or psychological conditions. This experience showed the importance of considering the unmet needs of older people when establishing a needs assessment scheme for LTC eligibility.

Within home-based care, more than 70% of benefits have been concentrated on home visit care, and there is an urgent need to encourage utilization of diversified types of home- and community-based services. The development of service programs in day care centers and facilitating the role of home visit nursing, in collaboration with primary care doctors, is necessary. If home-based care services can be linked with community-based primary care (e.g., aiding in medication adherence or monitoring of daily health),50 the health and functional status of older people would be improved and expensive acute hospitalizations and institutional care use could be reduced.

The changing role of families and societal perceptions regarding filial piety or care for older people also should not be overlooked. The recent changes in household structures and attitudes toward caregiving might have an effect on social admissions or LTC utilization. For some older adults, longer length of stays in hospitals or dependence on formal LTC services is inevitable when family members are not available for caregiving.

Korea’s experience provides many other policy lessons for countries in Asia. Primary care is an essential component of universal health coverage and becomes even more important in an era of population aging. The limited role of the primary care system has contributed to the inefficient health system and the lack of coordination between the health system and LTC system in Korea. Primary care providers should play a key role in prevention and promotion of health and in overcoming the inefficiencies of hospital-centric care. A cost-effective continuum of care requires training for primary care doctors to enforce their capacity for teamwork with LTC service providers as well as multi-occupational collaborative training programs (including health and LTC service providers and administrative staff) to facilitate their effective role sharing, as evidenced in Japan.52 Local centers can be another option, as a unified access point to individuals with diverse needs, encompassing community-based health care, home visit nursing stations, and social welfare councils.53 In addition, several forms of discharge services (e.g., discharge planning, discharge summary, and discharge conference) might be useful for supporting the coordination among acute care and primary care or LTC.53-55

The policy choice between universal or targeted LTC systems is an issue as well. In most low- and middle-income countries, governments still prioritize universal health coverage rather than universal access to LTC. Considering the speed of aging and fiscal resources available, governments may choose to start with LTC system targeting older people with low income. In Korea, subsidies and reductions in copayments for low-income groups facilitated the use of LTC services.56 LTC has the characteristics of convenience and quality of life, instead of life or death, and governments in low- and middle-income countries may still need to
balance the return on investment for a different population group, such as children. Social consensus and the changing role of family/informal care, as well as evidence on the relation between health care and LTC for older people—that is, whether LTC saves health care costs by reducing the need for health care—should be considered.

**DISCLOSURE OF POTENTIAL CONFLICTS OF INTEREST**

The authors report no conflict of interest.

**ACKNOWLEDGMENT**

An earlier version of this study (Aging and Health Systems in the Asia–Pacific: Policy Challenges) was presented at 12th Annual Global Health Forum: Health Systems for the Third Age, University of Melbourne, Australia, October 2016.

**REFERENCES**

[1] Organization for Economic Cooperation and Development. Elderly population (indicator) 2017. 2017. Available at https://doi.org/10.1787/88893355971 (accessed 27 February 2017).

[2] Organization for Economic Cooperation and Development. OECD demography and population database. 2016. Available at https://doi.org/10.1787/88893355971 (accessed 27 February 2017).

[3] Statistics Korea. The 2016 Korea Social Survey results [in Korean]. Daejeon: Statistics Korea; 2016.

[4] Organization for Economic Cooperation and Development. OECD.Stat 2017. 2017. Available at http://stats.oecd.org/index.aspx?DataSetCode=HEALTH_STAT# (accessed 27 February 2017).

[5] Statistics Korea. Statistics for the elderly [in Korean]. Daejeon: Statistics Korea; 2016.

[6] Institute for Health Metrics and Evaluation. Leading causes of DALYs in 2015 and percent change, 2005–2015, Korea. 2017. Available at http://www.healthdata.org/south-korea (accessed 27 February 2017).

[7] Doblhammer G, Kytir J. Compression or expansion of morbidity? Trends in healthy-life expectancy in the elderly Austrian population between 1978 and 1998. Soc Sci Med 2001; 52: 385–391.

[8] Jung Y, Cho Y, Oh J. Differential effects of family income on self-rated healthy age by gender: analysis of Seoul Citizens Health Indicators Survey 2001, 2005 [in Korean]. J Prev Med Public Health 2007; 40: 381–387.

[9] Feng Q, Son J, Zeng Y. Prevalence and correlates of successful ageing: a comparative study between China and South Korea. Eur J Ageing 2015; 12(2): 83-94.

[10] Kye B, Arenas E, Teruel G, Rubalcava L. Education, elderly health, and differential population aging in South Korea: a demographic approach. Demogr Res 2014; 30: 753–794.

[11] Jang S-N, Choi YJ, Kim DH. Association of socioeconomic status with successful ageing: differences in the components of successful ageing. J Biosoc Sci 2009; 41: 207-219.

[12] Jang S-N, Cho S, Kawachi I. Is socioeconomic disparity in disability improving among Korean elders? Soc Sci Med 2010; 71: 282-287.

[13] Lee Y, Back JH, Kim J, Byeon H. Multiple socioeconomic risks and cognitive impairment in older adults. Dement Geriatr Cogn Disord 2010; 29: 523-529.

[14] Back JH, Lee Y. Gender differences in the association between socioeconomic status (SES) and depressive symptoms in older adults. Arch Gerontol Geriatr 2011; 52(3): e140-e144.

[15] Kang M-Y, Kang Y-J, Lee W, Yoon J-H. Does long-term experience of nonstandard employment increase the incidence of depression in the elderly? J Occup Health 2016; 58: 247-254.

[16] Lee J, Cho S-I, Chun H, Jung-Choi K, Kang M, Jang S-N. Life course indices for social determinants of self-rated health trajectory in Korean elderly. Arch Gerontol Geriatr 2017; 70: 186-194.

[17] Lee C-E, Kwon S. Differences in the burden of disease of the elderly by socioeconomic status [in Korean]. Health Policy and Management 2008; 18(4): 1-22.

[18] Kim Y. Equity in health status and health care utilization by income: analyzing different populations in old adults [in Korean]. Health Soc Sci 2012; 31: 55-81.

[19] Kim H, Park S-M, Jang S-N, Kwon S. Depressive symptoms, chronic medical illness, and health care utilization: findings from the Korean Longitudinal Study of Ageing (KLoSA). Int Psychogeriatr 2011; 23: 1285-1293.

[20] Son K-B, Shin J-W, Lim E-O, Lee T-J, Kim H. Population aging and health care expenditure in South Korea: a critical review [in Korean]. The Korean Journal of Health Economics and Policy 2015; 21: 51-77.

[21] Jeon B, Noguchi H, Kwon S, Ito T, Tamiya N. Disability, poverty, and role of the basic livelihood security system on health services utilization among the elderly in South Korea. Soc Sci Med 2017; 178: 175-183.

[22] Jung YI, Kim H, Kwon S. Horizontal equity in the use of home care and health care among home care recipients under the public long-term care insurance in South Korea [in Korean]. The Korean Journal of Health Economics and Policy 2016; 22(4): 59-78.

[23] Kwon S, Lee T-J, Kim C-Y. Republic of Korea health system overview. Manila, Philippines: WHO Regional Office for the Western Pacific; 2015.

[24] Organization for Economic Cooperation and Development. Focus on health spending: expenditure by disease, age and gender. 2016. Available at https://www.oecd.org/health-systems/Expenditure-by-disease-age-and-gender-FOCUS-April2016.pdf (accessed 27 February 2017).

[25] Kim S. Policies evaluation of health insurance coverage [in Korean]. Seoul: Korea National Assembly Budget Office; 2016.

[26] Organization for Economic Cooperation and Development. OECD economic surveys: Korea. 2016. Available at https://www.oecd.org/eco/surveys/Korea-2016-OECD-economic-survey-overview.pdf (accessed 27 February 2017).

[27] Organization for Economic Cooperation and Development. Health spending spending (indicator) 2017. 2017. Available at https://doi.org/10.1787/8643de7e-en (accessed 27 February 2017).
[28] Organization for Economic Cooperation and Development. Health statistics 2015. Country note: how does health spending in Korea compare? 2015. Available at https://www.oecd.org/els/health-systems/Country-Note-KOREA-OECD-Health-Statistics-2015.pdf (accessed 27 February 2017).

[29] National Health Insurance Service. 2015 National health insurance statistics [in Korean]. 2016. Wonju: National Health Insurance Service; 2016.

[30] Statistics Korea. National health insurance expenditure [in Korean]. 2017. Available at http://kosis.kr/statHtml/statHtml.do?orgId=350&tblId=TX_35001_A040&vw_cd=MT_OTITLE&list_id=350_35001_3&srclId=&seqNo=&lang_mode=ko&obj_var_id=&itm_id=&conn_path=E1# (accessed 22 February 2017).

[31] Shin H, Choi M, Tchoe B. The cost of end-of-life care in South Korea [in Korean]. Health Policy and Management 2012; 22: 29-48.

[32] Kwon S. The introduction of long-term care insurance in South Korea. EuroHealth 2009; 15: 28-29.

[33] Kwon S, Holliday I. The Korean welfare state: a paradox of expansion in an era of globalisation and economic crisis. Int J Soc Welf 2007; 16: 242-248.

[34] Campbell JC, Ikegami N, Kwon S. Policy learning and cross-national diffusion in social long-term care insurance: Germany, Japan, and the Republic of Korea. Int Soc Secur Rev 2009; 62(4): 63-80.

[35] Kwon J-H, Eun-Jung H, Moon Y-P, Lee J-S, Kim K-A, Park J-D. Plans for reduction of out-of-pocket payment in long-term care insurance in Korea [in Korean]. National Health Insurance Service, Health Insurance Policy Research Institute; 2014. No. 2014-1-0011. Seoul: Health Insurance Policy Research Institute, National Health Insurance Service; 2014.

[36] Lee Y-K. The introduction of special level for people with dementia in the eligibility criteria of long-term care insurance system in Korea [in Korean]. Korea Institute for Health and Social Affairs (KIHASA) Health and Welfare Issue and Focus 2014; 245: 1-8.

[37] National Health Insurance Service. Long term care insurance statistical yearbook [in Korean]. Wonju: National Health Insurance Service; 2013-2016.

[38] Ministry of Health and Welfare. 2017 Long-term care insurance fee schedule [in Korean]. 2016. Available at http://www.mohw.go.kr/front/new/ai/sal0301/vw.jsp?PAR_MENU_ID=04&MENU_ID=0403&CONT_SEQ=333339&page=1 (accessed 22 February 2017).

[39] Sunwoo D. Analysis and policy suggestions for present condition of establishment of long-term care institutions [in Korean]. Korea Institute for Health and Social Affairs (KIHASA) Health and Welfare Issue and Focus; 2015; 299: 1–8.

[40] National Health Insurance Service. 2015/2016 regular evaluation plan for long-term care institutions/Home-based care agencies [in Korean]. Wonju: National Health Insurance Service; 2015/2016.

[41] Jung H-Y, Jang S-N, Seok JE, Kwon S. Quality monitoring of long-term care in the Republic of Korea. In: Mor V, Leone T, Maresso A, eds. Regulating long-term care quality: an international comparison. New York: Cambridge University Press; 2014; 385-408.

[42] Hyun K-R, Kang S, Lee S. Does long-term care insurance affect the length of stay in hospitals for the elderly in Korea?: a difference-in-difference method. BMC Health Serv Res 2014; 14: 630.

[43] Kim M, Kwon S, Kim H. The effect of long-term care utilization on health care utilization of the elderly. The Korean Journal of Health Economics and Policy 2013; 19(3): 1-22.

[44] Jeon B, Kim H, Kwon S. Patient and hospital characteristics of long-stay admissions in long-term care hospitals in Korea [in Korean]. Health Policy and Management 2016; 26: 39-50.

[45] Kim H, Jung YL, Kwon S. Delivery of institutional long-term care under two social insurances: lessons from the Korean experience. Health Policy 2015; 119: 1330-1337.

[46] Kim H, Kwon S. Projection of demand and expenditure for services under long-term care insurance for the elderly in Korea [in Korean]. The Korean Journal of Health Economics and Policy 2012; 18(3): 29-51.

[47] Shin E, Lim JY. The association between population aging and health care expenditure considering “death-related costs” [in Korean]. The Korean Journal of Health Economics and Policy 2014; 20(4): 51-80.

[48] Commission Services (Directorate-General for Economic and Financial Affairs), Economic Policy Committee (Ageing Working Group). Joint Report on Health Care and Long-Term Care Systems & Fiscal Sustainability. Institutional Papers 37. Volume 1. Luxembourg: Publications Office of the European Union; 2016.

[49] Mui T. Measuring social protection for long-term care. Paris: OECD Publishing; 2017. OECD Health Working Paper No. 93.

[50] Jung H-J, Park J-D, Kim S-H, Choi E-I, Park H-Y, A-Reum K. Revitalization of integrated home-based care in the aging society [in Korean]. Seoul: Health Insurance Policy Research Institute, National Health Insurance Service; 2014.

[51] Higashino S. Initiatives to establish support systems for primary health care and home care in community-based-integrated care in Shizuoka prefecture, Japan [in Japanese]. J Natl Inst Public Health 2016; 65(2): 120-126.

[52] Bureau of Social Welfare and Public Health, Tokyo Metropolitan Government. Tokyo metropolitan dementia multi-occupational collaborative training: aiming to build up a health care support system to support people with dementia [in Japanese]. 2017. Available at http://www.fukushihoken.metro.tokyo.jp/zaishien/ninchishou_navi/gyouji/tasyokusyu/index.html (accessed 21 May 2017).

[53] Goncalves-Bradley DC, Lannin NA, Cameron ID, Shepperd S. Discharge planning from hospital. Cochrane Database Syst Rev 2016; (1): CD000313.

[54] Al-Damluji MS, Dzara K, Hodshon B, Punnanithinont N, Krumholz HM, Chaudhry SI, Horwitz LI. Association of discharge summary quality with readmission risk for patients hospitalized with heart failure exacerbation. Circ Cardiovasc Qual Outcomes 2015; 8: 109-111.

[55] Ministry of Health, Labour and Welfare, Japan. Discharge arrangement (medical and long-term care collaboration) [in Japanese]. 2011. Available at http://www.mhlw.go.jp/stf/shingi/2r985200000011ga6-att/2r98520000011gkm.pdf (accessed 17 January 2016).

[56] Kim H, Kwon S, Yoon NH, Hyun KR. Utilization of long-term care services under the public long-term care insurance program in Korea: implications of a subsidy policy. Health Policy 2013; 111(2): 166-174.