

Aging of the Global Population: Implications on Healthcare and Provisions of Cost-Effectiveness

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At the forefront of population aging, Japan has faced a significant challenge ahead for the healthcare and economic system as a whole, as shifting attitudes and approaches toward health promotion and caring for the elderly population in Japan are offering new ways forward in managing the overall effectiveness and efficiency of the health system.

Population aging, as characterized by low fertility and mortality and longer life expectancy, is a significant achievement of public health and social development. Recently, with the profound demographic and epidemiological transition, unprecedented population aging has transcended regional boundaries and greatly influenced healthcare and public financing. It inherently and inevitably entails increasing disease burden and expanding demands of healthcare and social welfare services due to declines of intrinsic capacity, triggering a pessimistic anticipation of its detrimental effects on labor productivity and economic growth in a traditional sense.

At the forefront of population aging and with over a quarter of the entire population aged 65 years and above, Japan has been striving to address sustainability of its healthcare and social security system while harnessing the full potential of the citizens, including the seniors. Relevant experiences suggest that productivity and well-being of seniors could be improved by effective interventions promoting the positive and dismantling the negative determinants in health behaviors and social environment throughout the life course in a robust health system.¹ The concept of healthy, active aging has gradually shifted the stereotype of the elderly as frail and dependent; now it is no longer a rare phenomenon to see seniors enjoy substantial physical, cognitive, and functional well-being at their eighth, ninth, or even centenarian celebration. The super-aging society has brought tremendous changes on social value and policy portfolio.

Cost-effectiveness evaluation is a powerful tool to inform investment in health. This past April, after a trial run that started in 2016, Japan has formally launched a cost-effectiveness evaluation of the health insurance scheme. Underlying such movement toward promoted value-based healthcare are soaring health expenditures as the result of population aging together with technical advancement, in which exorbitant costs of advanced medical products and related treatment—eg, immunotherapy—are of major concern. The new approach is expected to leverage sustainability of universal healthcare and

medical technology innovation. Although the current cost-effectiveness evaluation in principle targets pricing of medicines and medical devices, it has been argued that health technology assessment (HTA), comprehensively capturing outputs while weighing inputs of healthcare based on the value of patients and citizens, should be widely applied to pricing of clinical practices in the national medical fee scheme, community health planning, and reform of healthcare facilities.² Regarding this broad sense of HTA, which subjects encompass a variety of medicines, medical devices, clinical practices, public health interventions and systems aiming health goals in the population, it is crucial to generate up-to-date methodologies and evidence assessing multifaceted outcomes/impacts with consideration for social and policy contexts in Japan.

Cost-effectiveness evaluation needs to present the changing value of healthcare in a more-broadened horizon. Today, the principle function of healthcare is no longer limited to facility-based clinical treatment, but rather an integration of both facility- and non-facility-based cares covering health promotion, prevention, treatment, rehabilitation and palliative care, and distinctions between healthcare and social welfare services have become more and more blurred. For example, the utilization of home-based care has dramatically increased during the past decade, for which most cases are aged above 75 years, and now more than half of the seniors prefer their home to facilities as the place for their final days. Responding to the increasing demands, the government has committed to strengthen an integrated support and care system at the community level by 2025, which constellates all relevant functional sectors of living, healthcare, nursing care, health promotion/prevention and daily life supports.

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Meanwhile, solutions for better health conditions in older age are not at the contemporary phase, but at an early stage of life; the physical and social environments that people live in and health behaviors throughout life such as a balanced diet and physical activities profoundly influence development of diseases and geriatric syndromes, and consequently, productivity and well-being in later life, as indicated by previous empirical evidence. Regarding the life course strategy for healthy and active aging, at macro level, as health intertwines with other social sectors and the economy, the benefits that the improved productivity of the elderly and the expectant nursing caregivers bring to growth and distribution are anticipated, especially in

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the current policy context of a comprehensive public investment strategy to boost economic growth called, "Japan's plan for dynamic engagement of all citizens." These benefits include both health and nonhealth aspects, both senior people and their nursing caregivers, both the current and the next generations, as well as both the short-term and the long-term. Especially, the long-term impact of a life course strategy on population health, productivity, and well-being at both micro and macro levels is substantial in health economic outcome measurement.

On the other hand, several limitations have been raised from the current methodological framework. One of the most argued is that quality-adjusted life years (QALYs), a widely accepted generic measurement of health outcomes incorporating both length and quality of life, has limited power to capture various aspects of the health benefits and fails to reflect equity and distributional issues in social preference.³ In the era of an aging society with pluralistic values of healthcare and social preferences as mentioned above, future research will be necessary to develop multi-criteria measurements integrating multidisciplinary knowledge and representing relevant stakeholders and aspiration levels both in Japan and also at the global level.

To this end, it is worthy to note the importance of boosting collaborations across disciplines, professionals, and regions, developing human resources and fostering a culture of value-based decision making in social and policy contexts.⁴ Cost-

effectiveness evaluation, potentially with the expanded horizon and the updated methodological strengths, is now expected to play an even more crucial role to guide and shape policies for constructive responses to healthy and active aging than ever before. •

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