## **EDITORIAL**

## Japan's longevity challenge

apan is the frontrunner of aging societies in terms of longevity and the proportion of the elderly in the population. In 2030, one-third of the population will be older than age 65, and 20% will be older than 75 years. Moreover, 75-year-old seniors in Japan are as physically healthy as those a decade younger, according to a recent government survey. If Japan is to deal effective-

ly with the highly aged society of the future, and benefit from this growing sector of its society, it must come up with a new socially inclusive system for people living into their nineties or more.

Currently, Japan treats the period after retirement at age 65 as the "sunset years" of one's life, effectively discouraging even healthy retirees from working. This situation challenges Japan's social security system and the national economy. In 1965, 9.1 persons could support one senior citizen in the social security system. This dependency ratio is now 2.4 persons to one senior, and should decrease to 1.3 to one in 2050. Social security benefits will exceed 100 trillion yen in 2030. With 15% of the work force expected to be lost by then, meeting this need will be a

problem. The good news is that according to a government survey, over 80% of seniors would like to work after retirement and contribute to the economy rather than be a recipient of government assistance.

Putting these considerations together, an expansion of job opportunities for seniors is essential if Japanese society is to enhance the labor force, social security finance, and economic development. There are workable strategies to address these challenges. Currently, 80% of Japanese are expected to be healthy until their mid-70s and want to contribute to society. Thus, maintaining a healthy life span for this population is essential not only for supplementing the shrinking labor force, but for containing health care costs and bolstering the consumer market with active seniors.

To achieve this healthy life span, maintaining senior quality of life is crucial. New living environments are needed that will allow seniors to "age in place" while nurturing good physical, mental, and social habits that could delay, or even avert, the onset of declining conditions such as frailty and dementia. Lifelong learning will allow seniors not only to maintain their overall well-being, but to integrate into a working society. Here,

universities should expand programs that help seniors to improve skills, gain new knowledge, and nurture new interests. Japan also must accommodate a diversity of health and lifestyle issues of the senior community by providing a variety of workplaces and work styles. Employers can capitalize on an individual's strengths while compensating for weaknesses. Innovative approaches can be devised for the work-sharing of abilities as well as of time. Advances in information technology and robotic technology can address an employer's concerns about safety and productivity that hamper employment of older workers. For example, telecommuting and biomechanical assistive technology (such as a "smart suit" for manual labor) would not



"The next generation of elderly will be healthier and better educated."

only improve the work environment for senior workers, but lead to healthy and enjoyable work places for workers of all ages. A new government project in Kashiwa City, in cooperation with Tokyo University, is an experimental community designed to support a long-lived society in these ways, and its social infrastructure could serve as a model for other community projects.

The current employment system and senior life environment in Japan are built on an obsolete model of life span. Today, someone celebrating a 65th birthday can expect about 20 years of a "second life" ahead. The next generation of elderly will be healthier and better educated. Given the right platform, they can continue to be active contributors to society well into their golden age.

- Hiroko Akiyama



Hiroko Akiyama is a professor at the Institute of Gerontology at the University of Tokyo, 7-3-1 Hongo, Bunkyoku, Tokyo, Japan. E-mail: akiyama@iog. u-tokyo.ac.jp

10.1126/science.aad9386