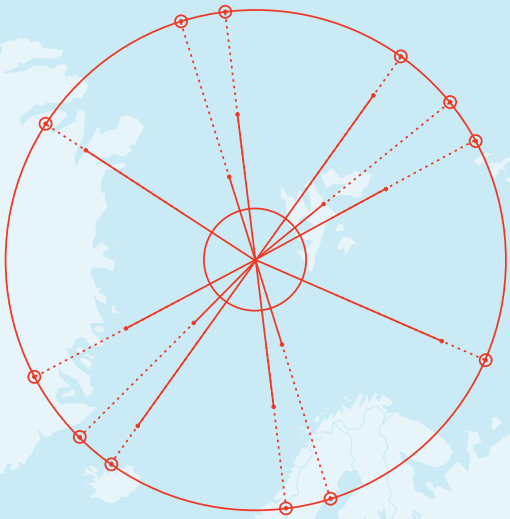

The Aging Readiness & Competitiveness Report

HEALTHCARE AND WELLNESS

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FP ANALYTICS

Introduction

In 2016, the World Health Organization (WHO) announced that since 2000, average global lifespans had extended by a full five years – the fastest rise since the 1960s.[1] While there remain tremendous variation by country, and inequality within countries across different gender, ethnic, and socio-economic groups, people across the globe are generally living longer. But underlying this good news is a knotty policy challenge. Healthy life expectancies or healthspans – the number of years one can expect to live in good health – are extending at a markedly slower pace in most countries. This growing gap fuels fiscal concerns and policy debates over rising costs – how can societies best meet the healthcare and long-term care needs of today's older adults, and improve the health outcomes of future generations? Three consistent patterns regarding older adult care are emerging across countries, including: a shift toward home- and community-care to support aging in place; a sweeping focus on promoting healthy lifestyles in future generations; and growing interest in leveraging digital technology to improve access and the efficiency and quality of care.

[1] World Health Organization. (2016). *Life expectancy increased by 5 years since 2000, but health inequalities persist*. Retrieved from http://www.who.int/mediacentre/news/releases/2016/health-inequalities-persist/en/

Health Status and Healthcare System

While inequality persists, people in general are living longer, but not all of the additional years are being experienced in good health. As of 2015, an average person at age 60 can expect to live another 20.4 years, an increase of 1.7 years from 2000, while the number of years living generally healthy extended by 1.4 years to 15.8 years. In other words, in just fifteen years, the average time spent in need of care at the end of life grew by 7 percent. During this period, 70 percent of countries around the world saw healthspan improvements lag behind those in lifespans, including all of the ARC countries.[2] Non-communicable diseases (NCDs) are the predominant threat to older adults' health. Since 1990, NCDs have steadily accounted for around 88 percent of health losses among the population age 65 or older. Musculoskeletal disorders, cardiovascular diseases, diabetes, and mental and neurological disorders are among the most common NCDs affecting the older population.[3]

Coupled with this widening gap is a significant divergence in older-age health across countries, which is an outcome of uneven access to, and quality of, healthcare, among other factors. As health systems generally improve with economic development, the majority of high-income countries and about half of upper-middle-income countries have seen greater improvement in older-age health than the world average in the 21st century (Fig. 1). However, within each country group by income level, significant variance is observed. The health system is an important factor contributing to the divergence, with other factors ranging from behavioral risks to physical and social environments.[4]

Access to Healthcare

Older adults' access to healthcare is determined by the affordability, accessibility, and quality of medical treatment and care services, which in turn is associated with a country's status of socio-economic development as well as the specific design of the health system and public resources allocated. In addition, significant disparities exist in the access to healthcare within countries across population groups by gender, ethnicity, and socio-economic status, as well as between urban and rural areas.

Affordability is the biggest barrier faced by older people in emerging-market countries, and it also affects those in industrialized countries where financial protections fall short. According to the WHO World Health

[2] WHO Global Health Observatory data. Accessed in December 2017. FP Analytics calculation.

[3] FP Analytics calculated based on the measure of years lived with disability. Data retrieved from Global Burden of Disease Study 2016, available at http://ghdx.healthdata.org/gbd-results-tool. Accessed December 2017.

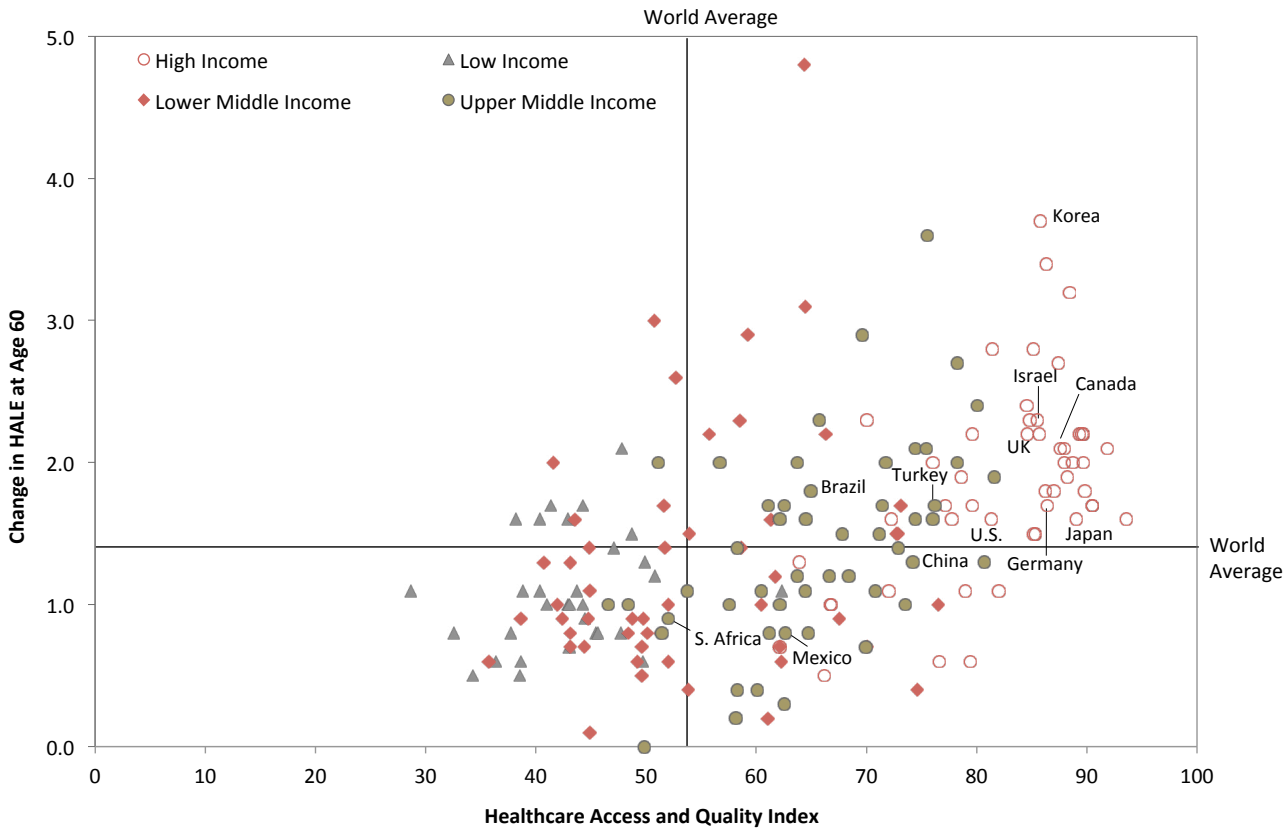
[4] Kaplan R, Spittel M, David D (Eds). Population Health: Behavioral and Social Science Insights. AHRQ Publication No. 15-0002. Rockville, MD: Agency for Healthcare Research and Quality and Office of Behavioral and Social Sciences Research, National Institutes of Health; July 2015.

Survey, the cost of healthcare visits is the primary reason for older adults not to use healthcare services in low- and lower-middle-income countries, which was cited by over 60 percent of respondents. Similarly, in upper-middle-income countries, 31 percent of older people reported affordability as a reason, second only to "not sick enough," cited by 32 percent of respondents.[5] This is less of an issue in high-come countries, with notable exceptions. In the U.S., the only industrialized country in the ARC study that does not have universal healthcare, one in five older adults misses healthcare treatments because of high costs associated with deductibles and

[5] World Health Organization. (2015). *World report on ageing and health*. Geneva, Switzerland.

Fig. 1. *There has been consistent improvement in the general older-age health across the board since 2000, but the degree is diverging between and within country groups by income level.*

Change in Healthy Life Expectancy at Age 60 (2000–2015) vs. Healthcare Access and Quality Index in 2015



(Sources: World Health Organization; GBD 2015 Healthcare and Access Quality Collaborators;[6] FP Analytics)

[6] Barber, Ryan M et al. Healthcare Access and Quality Index based on mortality from causes amenable to personal health care in 195 countries and territories, 1990–2015: a novel analysis from the Global Burden of Disease Study 2015. *The Lancet*, Volume 390, Issue 10091, 231–66.

co-payments, especially for pharmaceuticals, which are among the most expensive in the world.[7] Indeed, U.S. per capita healthcare spending is more than twice the average of other industrialized countries.[8] The affordability challenge can be further exacerbated by rising income inequality in most countries – within OECD countries, unmet care needs for financial reasons are consistently higher among low-income people, compared with high-income people.[9]

Accessibility, reflecting both geographical diffusion of healthcare facilities and availability of transportation, is a common challenge in both industrialized and emerging-market countries, although greater for the latter. Lack of transportation or unaffordable transport are among the top three reasons that older adults do not access healthcare in middle- and low-income countries, in addition to healthcare cost and having a condition that is deemed not serious enough.[10] People living in rural and remote areas, particularly with low incomes, face the greatest challenge in accessibility – this is observed not just in emerging-market countries but also in industrialized countries. Even in Japan, which has the best health access and quality among the ARC countries,[11] nearly 15 percent of older people living in semi-rural areas where medical facilities are sparsely distributed delay healthcare due to the distance required to travel or a lack of transportation.[12]

Where healthcare is generally affordable and accessible, **quality** can remain a challenge, as can the failure to provide timely service. A survey by the Common Wealth Fund in 11 industrialized countries shows that the percentage of older adults who reported being unable to get a same- or next-day appointment to see a doctor when sick ranged from 17 percent to 55 percent, with the highest reported from Canada.[13] Moreover, according to the WHO World Health Survey, previous experience of bad treatment is the most important reason for older adults in high-income countries not to use healthcare services, reported by nearly one-quarter of the respondents.[14]

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[7] Osborn, R., Moulds, D., Squires, D., Doty, M., & Anderson, C. (2014). International survey of older adults finds shortcomings in access, coordination, and patient-centered care. *Health Affairs, Vol. 33, No. 12*. https://doi.org/10.1377/hlthaff.2014.0947.

[8] Peter G. Peterson Foundation. (2016). *Per capita healthcare costs – international comparison*. Retrieved from https://www.pgpf.org/chart-archive/0006_health-care-oecd

[9] OECD. (2017). *Preventing Ageing Unequally*. Available from http://www.oecd.org/health/preventing-ageing-unequally-9789264279087-en.htm.

[10] World Health Organization. (2015). *World report on ageing and health*. Geneva, Switzerland.

[11] Barber, Ryan M. et al. Healthcare Access and Quality Index based on mortality from causes amenable to personal health care in 195 countries and territories, 1990–2015: a novel analysis from the Global Burden of Disease Study 2015. *The Lancet*, Volume 390, Issue 10091, 231—66.

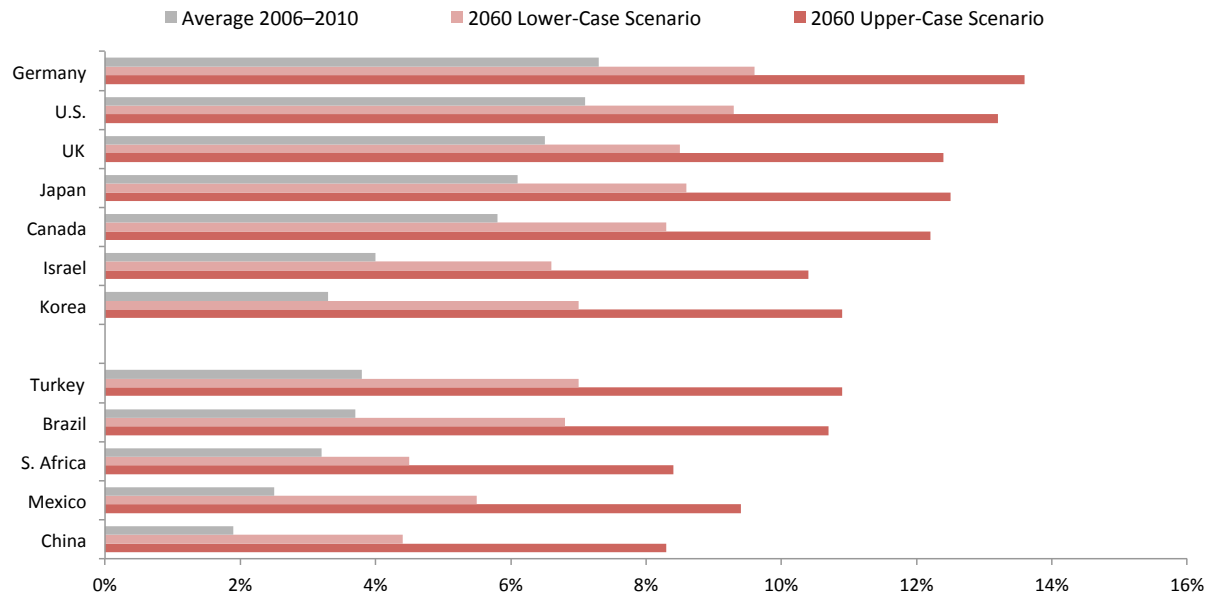
[12] Murata, C., Yamada, T., Chen, C.-C., Ojima, T., Hirai, H., & Kondo, K. (2010). Barriers to Health Care among the Elderly in Japan. *International Journal of Environmental Research and Public Health, 7*(4), 1330–1341. http://doi.org/10.3390/ijerph7041330.

[13] Osborn, R., Moulds, D., Squires, D., Doty, M., & Anderson, C. (2014). International survey of older adults finds shortcomings in access, coordination, and patient-centered care. *Health Affairs, Vol. 33, No. 12*. https://doi.org/10.1377/hlthaff.2014.0947

[14] World Health Organization. (2015). *World report on ageing and health*. Geneva, Switzerland.

Fig. 2. *Public spending on healthcare will continue to grow over the coming decades. While industrialized countries are currently leading in overall spending, emerging-market countries will see faster growth in spending as governments endeavor to improve the healthcare systems' soundness.*

Historical and Projected Public Spending on Healthcare as a Percentage of GDP



(Sources: OECD;[15] FP Analytics.)

[15] Maisonneuve, C. & Martins, J. (2013). *Public spending on health and long-term care: a new set of projections. A going for growth report*. Retrieved from https://www.oecd.org/eco/growth/Health%20FINAL.pdf.

Universal Healthcare Coverage

Universal healthcare coverage (UHC) is crucial to addressing the healthcare challenges facing older adults. UHC enables people to access essential healthcare services – including health promotion, prevention, treatment, rehabilitation, and palliative care – without suffering from financial hardships. Each year, 100 million people around the world are pushed into poverty, and 150 million suffer financial catastrophe because of out-of-pocket healthcare expenditures, and the older population is among the most vulnerable.[16] Yet one in four countries does not have a national policy or strategy for universal healthcare.[17]

Although all UN Member States agreed to work toward UHC by 2030 as part of the Sustainable Development Goals, growing fiscal concerns challenge their

[16] World Health Organization. Available from: http://www.who.int/mediacentre/factsheets/fs395/en/ http://www.who.int/mediacentre/factsheets/fs395/en/.

[17] World Health Organization. (2016). *Global diffusion of eHealth: making universal health coverage achievable. Report of the third global survey on eHealth*. Geneva, Switzerland.

commitment. Public spending on healthcare as a percentage of GDP is projected to increase by at least 44 percent across OECD countries through 2060.[18] All of the ARC countries are projected to see rising public spending for healthcare, with the most substantial increases likely seen in the middle-income (except South Africa) and the fastest-aging (Fig. 2) countries. Indeed, the intense political battles over the U.S. Affordable Care Act indicate the complex political and fiscal challenges regarding UHC, even in the world's largest economy.

In spite of fiscal and political challenges, the most remarkable progress has been seen in emerging-market countries, with a focus on providing financial protection and expanding access to preventive and primary care. Among the five emerging-market countries included in the ARC study, Brazil, Turkey, and China have achieved universal health insurance coverage over the past decade, while Mexico and South Africa are working toward that goal. Elevating primary care is a health policy priority shared by many emerging-market countries that are seeking to expand access to health services beyond hospitals to promote health management. Turkey is a leader in this regard. The country endeavored to build a family medicine system in 2005 and expanded it nationwide in 2010. The services are provided free of charge at family health centers that are located in communities and operate on a walk-in basis. The easy access to primary care has proven to be particularly beneficial

[18] Maisonneuve, C. & Martins, J. (2013). *Public spending on health and long-term care: a new set of projections. A going for growth report.* Retrieved from https://www.oecd.org/eco/growth/Health%20FINAL.pdf.

Box 1. Brazil's Pilot Project Improve Older-Age Healthcare

Despite Brazil's significant progress in the healthcare system, the country is not adequately prepared to accommodate the growing need for medical care from its aging population. Today, older people primarily access healthcare through emergency care or hospitalization, or by going directly to specialists, rather than general practitioners, for primary care.

In an attempt to resolve this problem by integrating and centralizing the fragmented system, the National Agency of Supplementary Health, which regulates providers of private health plans, launched a pilot project called *Projeto Idoso Bem Cuidado* (roughly translatable as the "Well-Cared-For Elderly Project") in 2016. The project aims to create a model for the provision of healthcare to older adults with private health plans. A doctor and nurse serve as the primary point of reference to refer to specialists and organize care. Participation is voluntary, but almost 70 healthcare institutions are already engaged in the project, and there has been a noticeable drop in visits to specialists since it began running. The government hopes to expand it to private healthcare in general, and perhaps lead to advances for other parts of the Brazilian healthcare system.

for older adults, enabling them to receive timely health services, better manage NCDs, and prevent more serious diseases.

As countries work toward the broader goal of universal healthcare coverage, special programs dedicated to older adults have also emerged to fill the gaps. Brazil stands out with some successful and novel practices. Starting in 1999, the government has provided free regular vaccinations to older adults, protecting them from influenza, pneumonia, and tetanus. The program has significantly helped older adults to stay healthy while reducing hospital expenditures – studies show that for people age 60 or older, vaccination reduces the number of hospitalizations for pneumonia by up to 45 percent. More recently, the government started a pilot program to better accommodate healthcare demands of older adults by promoting primary care to this group (Box 1).

Around the world, information and communications technology (ICT) could play a pivotal role in promoting universal health coverage. It helps to enable remote access to care services – particularly benefiting those living in rural areas – and to improve healthcare efficiency and quality. With rapid expansion in the adoption of digital technology – particularly mobile devices – and substantial advancement in areas like sensors and cloud computing, eHealth promises to become an essential component of the health system.

Box 2. U-health Advocacy Program in Korea

The government's effort to integrate digital technology into the healthcare system is centered on its U-health Advocacy Program. ("U" stands for "ubiquitous.") Launched in 2010, the program consists of three components: "U-silver services" target recuperation of older people, enabling online ordering of affordable, age-friendly products, such as bedsore-preventing mattresses and special diapers; "U-medical services" are intended to enable remote access to medical treatment services; and "U-wellness services" focus on utilizing ICT to enable a physical checkup without going to hospitals. While "U-medical services" and "U-wellness services" do not target specific age segments, they have the potential to greatly benefit the one-third of older adults in Korea who live in rural areas.

The government has been seeking to encourage investment in, and development of, the U-healthcare market by providing grants to hospitals and companies' relevant R&D activities. It has also attempted to reduce regulatory burdens, particularly with regard to medical and health laws, which currently have very strict requirements on the use of digital technology to provide medical services. Major corporations, including SK Telecom and LG Electronics, have signed MOUs with the government on R&D investment in U-healthcare technologies, and major hospitals around the country, including Seoul National University Hospital and National Medical Center, have decided to participate in the U-health advocacy program.

Between 1990 and 2015, at least 73 countries adopted eHealth policies or strategies, with nearly two-thirds of the adoption occurring in the last five years. More than 90 percent of these policies and strategies include objectives that address how eHealth can contribute to UHC.[19] However, a lack of funding and infrastructure are among the biggest barriers to promoting eHealth. In a 2015 eHealth diffusion survey conducted by the WHO, funding and infrastructure were ranked as the two biggest barriers to promoting telehealth, which were cited by over 70 percent and 55 percent of the respondents, respectively.[20] Today public funds are the predominant funding source in high- and upper-middle-income countries; eHealth development in low- and lower-middle-income countries is primarily reliant on donors and non-public development agencies.

Countries with advanced ICT infrastructure are at the forefront of developing eHealth, thanks to strong government support, and they are building competitiveness in this rapidly growing sector. The global eHealth market is projected to expand at an annual compound growth rate of 21 percent and to exceed USD200 billion by 2020.[21] An innovative and illustrative national initiative has emerged from Korea, the global leader in high-speed internet. The program is aimed at leveraging the country's advanced ICT infrastructure and harnessing the power of digital technology to improve healthcare efficiency and accessibility, providing a useful model (Box 2).

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[19] World Health Organization. (2016). *Global diffusion of eHealth: making universal health coverage achievable. Report of the third global survey on eHealth*. Geneva, Switzerland. FP Analytics calculation.

[20] Ibid.

[21] Business Wire. (2016). *Global digital health market – forecast to 2020 – expected to grow with a CAGR of 21.4% – Research and Markets*. Retrieved from https://www.businesswire.com/news/home/20160413006490/en/Global-Digital-Health-Market---Forecast-2020.

Long-Term Care

Unlike healthcare, which governments often deem to be a core component of social policy, long-term care (LTC) receives much less public attention and spending, and the provision of LTC varies widely. LTC generally refers to the care of people with or at risk of a significant and ongoing loss of physical capacity to function in their daily activities, both at home and within dedicated facilities. While a looming fiscal challenge, there are models emerging around the world for cost-effective LTC, with an increasing focus on supporting aging in place. Early progress is also being made in countries that are already grappling with a shrinking labor force and a rising dementia crisis, providing valuable experience for the rest of the world.

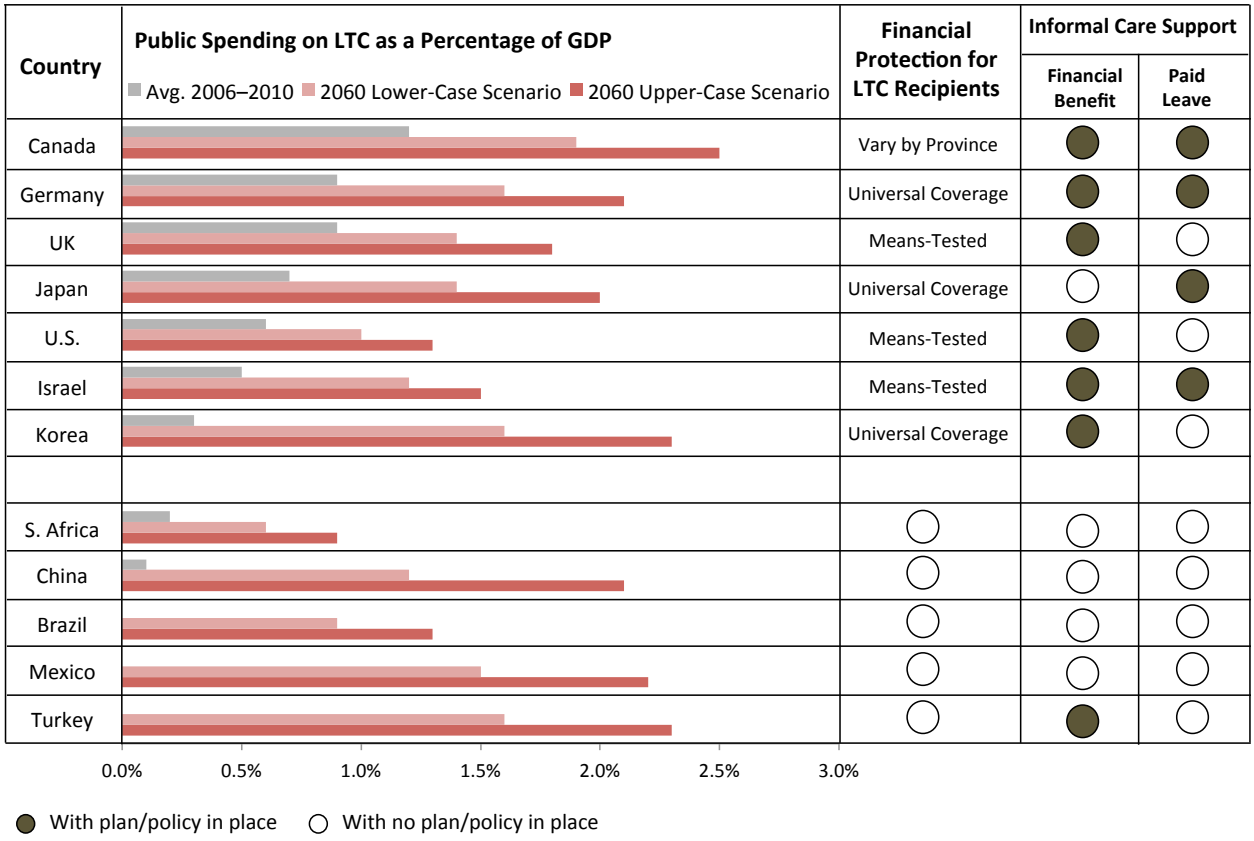
State of Play

Significant unevenness exists in LTC systems across country groups by income levels and within them. Currently, in emerging-market countries, LTC systems are barely existent or remain nascent, with the care for older adults overwhelmingly coming from family members. Although industrialized economies have more formal LTC, there is great variability in the design of LTC systems in terms of target groups, benefit coverage, and financial protection. This unevenness is reflected in the variance in public resources allocated to LTC across countries. Across the ARC countries, average public spending on LTC as a percentage of GDP during the period between 2006 and 2010 was negligible in the emerging-market countries and ranged widely among the industrialized countries, from 0.3 in Korea to 1.2 in Canada, as shown in Figure 3.[22]

The LTC system will be an essential component of a country's social policy moving forward, because of both the rising need from older adults and its growing impact on the broader economy. An effective LTC system enables access to affordable and sustainable supply of quality care – including from both professional providers and family caregivers – through support in various forms ranging from cash benefits to in-kind services. Older people are the primary users of long-term care, and their needs are on the rise. Across OECD countries, 79 percent of LTC recipients are 65 years or older, and 52 percent are age 80 or older. The need will continue to increase as the older population expands, particularly as this population ages. The global population age 80 or older will more than double to reach 4.3 percent by 2050. The largest percentage will be in Japan,

[22] Maisonneuve, C. & Martins, J. (2013). *Public spending on health and long-term care: a new set of projections. A going for growth report.* Retrieved from https://www.oecd.org/eco/growth/Health%20FINAL.pdf.

Fig. 3. *Mirroring healthcare and pension spending, public expenditure on LTC will grow across the board over the next several decades, and the most dramatic increases will occur in rapidly aging countries including Korea, as well as the emerging-market countries, where the LTC system is either very nascent or missing.*



(Sources: OECD; FP Analytics.)

where every two in five older people will be age 80 or older.[23]

Demand for care from outside the traditional family support system is also rising. Family members – particularly women – have been the primary care providers for older adults, also known as "informal caregivers," but changing family structures and rising labor force participation among women are changing this. Middle-income countries will see the most dramatic impact, as they are witnessing the transformation of family structures due to declining fertility and a shift away from multi-generational households. The concurrence of this trend with population aging will make it imperative for these countries to rapidly move to develop a robust, formal LTC system.

[23] United Nations, Department of Economic and Social Affairs, Population Division. (2017). *World population prospects: the 2017 revision*. Custom data acquired via website. Accessed December 2017.

Today's debates on LTC policies have been largely focused on fiscal concerns, but insufficient attention is being paid to the economic boost associated with an effective LTC system. In an OECD LTC survey across 20 countries, the priority of fiscal sustainability of LTC systems was rated at an average of 4.8 out of 5, higher than any other factors, including quality of services and support for informal and formal caregivers.[24] Indeed, public spending on LTC is due to grow, projected to at least double through 2060 across OECD countries.[25] Among ARC countries, rapidly aging countries, including the emerging-market countries and Korea, will see the most dramatic increases (Fig. 3). However, an effective LTC system could bring about broader benefits that could lead to net gains for an economy as a whole, including savings from healthcare expenditure, allowing family caregivers to remain in the workforce, and other broader economic opportunities, including:

- Accessible and affordable LTC, which can shorten the length of older adults' hospital stays and reduce readmission rates, improving efficiency in the health system and reducing total costs, while a lack of access to LTC can have the opposite, negative impact. The UK, which was the only industrialized ARC country to have cut LTC spending over the past few years, provides a lesson. Its public spending on older adults' LTC declined over the past five years by around 10 percent before slightly recovering in 2014 and 2015. As a result, an increasing number of older adults who could not afford LTC services are using hospitals as care facilities, crowding out patients (including older people) who need critical care and raising costs to the health system.

- An effective LTC system can free informal caregivers to remain or re-enter the workforce or increase working hours. Informal care is not costless for both individuals and the society, as family members may have to reduce working or completely withdraw from the workforce. For example, in Japan, which has the world's most rapidly shrinking population ages 15 through 64, nearly half a million of people age 15 or older left their jobs between 2007 and 2012 to care for their parents or other relatives. A strong LTC system enables access to affordable professional care and provides necessary support for informal caregivers to help them remain in the workforce.

- The LTC sector itself also presents a market opportunity. The global LTC market is projected to exceed USD 1.2 trillion by 2024, not yet including additional economic activity generated in technology and other relevant

[24] OECD LTC project. Available from http://www.euro.centre.org/data/1267541347_82875.pdf.
[25] Maisonneuve, C. & Martins, J. (2013). *Public spending on health and long-term care: a new set of projections. A going for growth report*. Retrieved from https://www.oecd.org/eco/growth/Health%20FINAL.pdf.

sectors.[26] Professional LTC is also becoming a new source of job creation. Although the LTC sector currently averages just over 2 percent of the total employment in OECD countries, it is adding new jobs rapidly. In Japan and Germany, the two countries that are leading among ARC countries in the provision of LTC, the number of LTC workers increased by 55 percent and 47 percent, respectively, over the period from 2005 through 2015.[27]

Encouragingly, progress is continuously being made to develop better-functioning LTC systems, which is largely concentrated in industrialized countries, while some rapidly aging middle-income countries, such as China and Turkey, are beginning to catch up. An evident trend is emerging to increasingly support aging in place, with focuses on developing home- and community-based care and supporting informal caregivers. In addition, industrialized countries, particularly those with super-aged populations, including Japan and Germany, are leading the efforts to enhance professional care capacity and provide targeted support for dementia patients.

[26] Grand View Research. (2016). *Long term care market size to reach $1,255.9 billion by 2024*. Available from: https://www.grandviewresearch.com/press-release/global-long-term-care-market.

[27] OECD. (2017). *Health at a glance 2017*. Accessed from http://www.oecd.org/health/health-at-a-glance-19991312.htm.

Shifting Toward Home- and Community-Based Care

There is growing movement toward home- and community-based care, driven by the desire of older adults to age in place, fiscal constraints, and a shortage of institutional capacity. Across OECD countries, LTC residential facilities accommodate fewer than 33 percent of older LTC recipients but account for two-thirds of government and compulsory insurance spending on LTC.[28] A shortage of institutional capacity is also driving governments to shift toward home- and community-based care, as particularly observed in middle-income countries that are struggling to keep up with growing LTC demand. Turkey, for example, has more than doubled the number of public nursing homes and rehabilitation centers since 2012, but unmet demand was equivalent to more than half of the total capacity as of 2016.

To promote home- and community-based care, governments have focused on expanding access to professional care services outside LTC institutions. Best practices are coming from programs that integrate demand- and supply-side efforts and base services around older adults' needs, as demonstrated in Japan, a global leader in LTC provision. First introduced in 2000, Japan's mandatory LTC insurance (LTCI) includes in-home care services in the coverage of benefits, with a 10 percent copayment from recipients. In an attempt to contain budgetary pressure, it started to expand community care in 2005 by

[28] Ibid.

creating new communal services such as day care, short-stay care, and dementia support, and including community-based care in the coverage of LTCI benefits. The measures have successfully shifted the use of LTC services from institutions to homes and communities – from 2006 through 2014, the number of in-home and community-based service users increased by 50 percent, while the number of facility service users rose by only 13 percent.

A user-oriented system has also proven to be effective in enabling older adults' access to care services that best meet their needs and budget. In fact, one most-often-mentioned quality of Japan's universal LTC insurance system is that older adults are allowed to choose the services and providers they want, including the use of for-profit companies. Allowing the beneficiary agency in selecting their care is also found in the U.S., where the Medicaid Cash and Counseling Program was first introduced in the mid-1990s. Medicaid is a means-tested program managed between the federal government and the states, with eligibility thresholds varying by states. The Cash and Counseling Program provides direct payments to Medicaid beneficiaries that can be used to compensate family members or other caregivers for the time they spend providing care, as well as counseling on spending options and financial services to manage those resources. Empirical studies show that by enhancing older adults' personal control of care and spending decisions, the program effectively reduces the unmet needs of Medicaid participants, improves their quality of life, and results in positive health outcomes.[29]

In spite of the evolving efforts, affordability remains a challenge even though receiving care at home or in neighborhoods tends to be cheaper than institutional care. Across OECD countries with data available, professional home care for moderate needs on average is 1.5 times the median disposable income of an older adult, although this varies widely by country.[30] This challenge can be greater in emerging-market countries where financial protection is currently largely absent. In China, where the government has been actively promoting home- and community-based care, LTC expenditure is not covered in the universal health insurance, and there is no program in place to help finance professional long-term care. A rare exception comes from Turkey, as the government looks to formal caregiving as a means to draw more women into the labor force, albeit at low wages, providing subsidies for low-income seniors and their families (Box 3).

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[29] National Resource Center for Participant-Directed Services. Available from http://www.bc.edu/schools/gssw/nrcpds/cash_and_counseling.html/.

[30] OECD. (2017). *Preventing Ageing Unequally*. Available from: http://www.oecd.org/health/preventing-ageing-unequally-9789264279087-en.htm.
Moderate need corresponds to 22.5 hours of care per week.

Box 3. Turkey's Caregiver Service Program

Turkey introduced the Caregiver Service Program in 2007 to subsidize caregiving for low-income older adults and their families. The program was designed to compensate family members for the financial loss associated with leaving a job to care for an older relative and to create an incentive for women to enter the labor force as external caregivers. Family members or external caregivers dedicating at least eight hours per day to caregiving receive a monthly wage. Those with incomes no higher than two-thirds of the minimum wage are eligible for external caregivers, and for those families living at this limited income level, relatives can receive the subsidy. The monthly wage/subsidy is subject to adjustment every six months and stood at TRY 881 (approximately USD 280) as of the second half of 2016, or just over half of the minimum wage. Even though the subsidy is only half of the minimum wage, it is believed by experts to be an incentive for caregivers, who are usually women not active in labor force, hence helping to both increase women's labor participation and improve care for the aging population.

Support for Informal Caregivers

Governments often see informal care as a cost-effective way of providing care from a fiscal perspective, but tend to ignore the indirect costs associated with informal caregivers' health and employment. Data collected from the 2010–2011 fourth wave of the Survey of Health, Ageing and Retirement in Europe indicate that people who provide informal care inside the household are 68 percent more likely to report worse health and depression than non-providers. In addition, analysis of results from the 2011–2012 wave of the European Quality of Life Survey suggests that caring for older relatives has a large negative effect on employment.[31]

Policy support is essential to improve well-being of informal caregivers and ensure that older adults' LTC need are met, and industrialized countries are leading in this area while the support is largely absent in emerging-market countries. However, existing efforts tend to be focused on financial and technical support rather than enabling family caregivers to remain in the labor force. According to an OECD survey in 2009 and 2010, nearly all of responding countries provide certain allowance or tax credits for family caregivers, and 85 percent offer training or counseling, but fewer than half mandate paid leave.[32] Even when paid leave is available, the length is often too short and eligibility requirements are strict. Four of the seven industrialized ARC countries provide paid leave, with the length ranging from a mere six days

[31] Rodrigues, R., Schulmann, K., Schmidt, A., Kalavrezou, N., & Matsaganis, M. (2013). *The indirect costs of long-term care*. Retrieved from: http://www.euro.centre.org/data/1417699093_57222.pdf.

[32] OECD. (2011). *Help wanted?* Available from: http://www.oecd.org/els/health-systems/help-wanted-9789264097759-en.htm.

in Israel to twenty-six weeks in Canada. Although Canada offers the longest care leave, it is limited to those caring for a family member who is "gravely ill" and who has a significant risk of death.

This is another area in which Japan, as the world's first super-aged society that is adapting to a shrinking workforce, offers a window into how countries might better manage this challenge going forward. Recognizing the economic loss from informal caregivers' withdrawal from the workforce and seeking to strike the balance between care and labor force supply, the country first introduced the Child Care and Family Care Leave Act in 1999 and allowed a three-month annual leave for caregiving – which is more generous than most countries – with 40 percent of wages paid through employment insurance in the event that the employer does not offer compensation. In an attempt to strengthen the incentive for people to remain in the workforce, the country introduced greater flexibility into the program by allowing the three-month leave to be divided into three periods, as well as raising the compensation rate to 67 percent.

Enhancing Professional Care Capacity

A shortage of care workers – which undermines older adults' access to formal care either at home, in communities, or at residential facilities – is a challenge shared by aged and fast-aging countries. Across OECD countries, the number of LTC workers increased by 18 percent during the period from 2005 through 2015, one-quarter slower than that of the population age 80 or older, who are the primary recipients of LTC.[33] This shortage is partly a result of shrinking working populations, particularly in aged industrialized countries, and partly due to recruitment and retention challenges that are attributed to poor working environments, low wages, and family responsibilities, among other factors. As observed in Japan, which boasts among the world's most established LTC systems, the turnover of care workers was 17 percent in 2012, well above the average of all industries. A survey on care workers in Japan revealed that family issues like marriage, childbirth and child rearing, dissatisfaction with the working environment, and low wages were the most important factors in leaving the field.[34]

Governments are coping with the capacity shortage with a focus on improving recruitment and increasing retention. In a 2009–2010 OECD survey, recruitment measures were the most commonly used tool to increase the LTC service supply, with 13 out of 20 countries adopting policies ranging from media campaigns to increasing care worker immigration. Wages and benefits increases and working condition improvements were also among the most popular tools.[35]

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[33] OECD. (2017). *Health at a glance 2017*. Accessed from: http://www.oecd.org/health/health-at-a-glance-19991312.htm.

[34] The Japan Times. (2014). *Nursing care worker shortage*. Retrieved from: https://www.japantimes.co.jp/opinion/2014/09/28/editorials/nursing-care-worker-shortage/#.WjQxSmQ-csM

[35] OECD. (2011). *Help wanted?* Available from: http://www.oecd.org/els/health-systems/help-wanted-9789264097759-en.htm

However, perhaps the most innovative approach comes from efforts to leverage technology. Technology in areas like automation and robotics promises to help improve the productivity and quality of LTC and address a shortage of care capacity. Japan stands out of the ARC countries as the only one dedicating specific funding to developing robotics for LTC. In the revised 2014 Japan Revitalization Strategy, the Abe administration established a goal to realize a "New Industrial Revolution Driven by Robots." The strategy was further updated in 2015 to investigate how technology, including robotics, can assist in LTC. Under this plan, the government developed a five-year strategy to support the development of robots, particularly setting one-third of the budget (approximately USD 47.3 million) for funding research and development of robots for nursing and medical care. Beyond government support, the private sector has started to realize the tremendous productive and business potential, and it is increasingly keen on capturing this opportunity. The Canadian Revera Living company presents an interesting model (Box 4).

Tackling the Dementia Crisis

Dementia is one of the biggest global health crises of the 21st century and promises to be a primary driver of demand for LTC going forward. Today, there are around 50 million people affected by dementia, with a new case of dementia occurring somewhere in the world every three seconds. At any given time, between five and eight per 100 people age 60 or older have dementia. According to the WHO, the total

Box 4. Revera Innovators in Aging Program

Revera Living, a Canadian company focused on the senior living sector, launched the Revera Innovators in Aging program in 2016. Through the program, Revera intended to invest up to CAD 20 million (approximately USD 14.7 million) over the next five years in technologies that have potential benefits to its residents and staff, and the potential to be scaled across the more than 500 retirement communities and long-term care homes in Revera's network. The program allows entrepreneurs to test new products, services, and technologies through pilot projects at Revera communities.

The Innovators in Aging program has already helped bring to market several successful start-up businesses. Revera Living partnered with Continyou Care, a Canadian healthcare start-up established in 2016, to develop a meal service-management platform to help healthcare staff better serve residents in care institutions. Another start-up that has benefited from the program is Senssasure, an Ontario-based enterprise that is developing a tele-monitoring system for the management of urinary incontinence for older adults. This technology enables caregivers to detect wetness quickly by providing real-time data about their residents, hence allowing for more efficient, targeted care.

number of dementia patients is predicted to grow 60 percent by 2030 and to more than triple by 2050.[36] It is estimated that dementia is set to cause a loss of USD one trillion in 2018, rising to USD 2 trillion by 2030 unless it is tackled.[37]

Successfully addressing the looming dementia crisis requires strong government commitment, but there is an enormous deficiency in government attention, as well as public awareness. So far, only 22 countries have national dementia-specific plans, which are concentrated in high-income countries.[38]

While 62 percent of people with dementia live in low- and middle-income countries, and the percentage will rise to 71 percent by 2050, these countries account for only 11 percent of dementia-related spending.[39] The notable absence of LTC systems in these countries further exacerbates this challenge. In addition, a lack of public awareness of dementia creates another major hurdle to increasing social investment to address this crisis. According to Alzheimer's Disease International, a think tank focused on dementia issues, two out of three people with dementia and family caregivers feel that there is little or no understanding of dementia in their countries.[40]

Super-aged countries, such as Japan and Germany, are at the forefront of confronting dementia. Japan and Germany have the world's first- and third-highest prevalence of dementia respectively. (The second position is taken by Italy.) While both have integrated dementia patients into their LTC insurance systems, notable efforts are also being made to raise public awareness of dementia. Japan ran a 10-year nationwide public campaign from 2005 through 2015 and offered a fully funded 90-minute training session to nearly 7 million people to be volunteer supporters for dementia patients. In Germany, federally funded multi-generational houses (more than 550 nationwide) and counseling services are offered for dementia patients and their family members.[41] The houses also help to promote intergenerational interaction between the older and younger generations, particularly youths who are usually at ease interacting with those with dementia.[42] These practices can serve as valuable experience and worthy models for the rest of the world.

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[36] World Health Organization website. Retrieved from http://www.who.int/mediacentre/factsheets/fs362/en/.

[37] Hughes, J. (2017). *This is one of the biggest global health crises of the 21st century*. Retrieved from https://www.weforum.org/agenda/2017/09/dementia-trillion-dollar-global-crisis/.

[38] Based on information from WHO Global Dementia Observatory and Alzheimer's Disease International (accessed December 2017).

[39] Alzheimer's Disease International. (2013) *Policy brief: the global impact of dementia 2013–2050*. Retrieved from: https://www.alz.co.uk/research/G8-policy-brief.

[40] Ibid.

[41] Michel, J., Beattie, B., Martin, F. & Walston J. (Ed.) (2018). *Oxford Textbook of Geriatric Medicine: Third Edition.* Oxford University Press.

[42] Oltermann P. (2014, May 2). Germany's 'multinational houses' could solve two problems for Britain. *The Guardian*. Retrieved from: https://www.theguardian.com/world/2014/may/02/germany-multigeneration-house-solve-problems-britain.

Life-Course Health Promotion

While access to healthcare and long-term care is crucial for today's older people, health promotion across the entire population benefits future generations and facilitates the sustainability of health and LTC systems in an era of rapid aging. Promoting healthy lifestyles is a proactive, cost-effective approach to address the spread of noncommunicable diseases, a growing major health threat around the world. Government action is on the rise in this area, although significant variability suggests that more work needs to be done.

Rising Risk of Noncommunicable Diseases

Noncommunicable diseases (NCDs) have been the predominant cause of health losses and are becoming increasingly prevalent among younger adults, posing a significant threat to the health of future generations of older adults. The NCD-related disease burden grew by 55 percent over the period from 1990 through 2015, reaching 80 percent of the global disease burden measured by years lived with disability.[43] The prevalence of NCDs among the population ages 15 through 64 is increasing – between 1990 and 2015, this group saw the NCD-related disease burden rise by 54 percent.[44] Cancers, diabetes, and heart disease dominate the NCDs that have seen the fastest growth rate among younger adults.[45]

Leading factors responsible for the growing risk of NCDs include high blood pressure, tobacco use, high blood glucose, physical inactivity, and obesity, which affect countries across all income groups.[46] Take obesity, the occurrence of which has more than doubled globally since 1980. In 2014, 11 percent of men and 15 percent of women were obese, with an additional 38 percent of men and 40 percent of women of the same group considered overweight.[47] Across all the ARC countries, the prevalence of obesity has risen since 2000, with the U.S. and Mexico having substantially higher rates than their peers (Fig. 4).

[43] FP Analytics calculation. Global Burden of Disease Study 2016 (GBD 2016) Results. Seattle, United States: Institute for Health Metrics and Evaluation (IHME), 2017. Available from http://ghdx.healthdata.org/gbd-results-tool. Accessed December 2017.

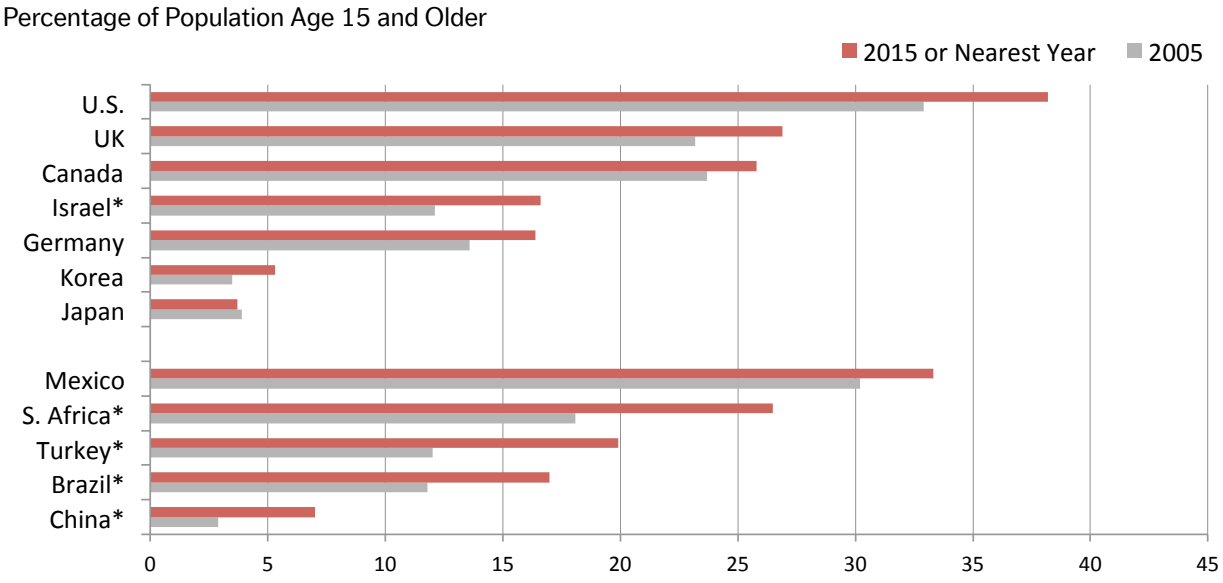
[44] FP Analytics calculation. Data retrieved from IHME and UN Population Prospect 2017 Revision database December, 2017.

[45] FP Analytics calculation. Measured by years lived with disability. Global Burden of Disease Study 2016 (GBD 2016) Results. Seattle, United States: Institute for Health Metrics and Evaluation (IHME), 2017. Available from http://ghdx.healthdata.org/gbd-results-tool. Accessed December 2017.

[46] World Health Organization. (2009). *Global health risks: mortality and burden of disease attributable to selected major risks*. Geneva, Switzerland.

[47] World Health Organization. (2014). *Global status report on noncommunicable diseases 2014. Geneva, Switzerland*.

Fig. 4. *Obesity is rapidly spreading and becoming a major health risk shared by countries across income levels. With a close link to behavioral factors like diets, the prevalence is striking in the U.S. and Mexico.*



Notes: * indicates self-reported data, and the others are measured data; self-reported data tend to underestimate the actual situation. Due to data limitation, the starting year also varies by country: China 2002, Turkey and South Africa 2003, the U.S. 2004, Brazil and Israel 2006, and the others 2005.

(Source: OECD Health Statistics; FP Analytics.)

As these NCD risk factors are mostly modifiable through behavioral changes, an opportunity exists to contain NCDs by promoting healthy lifestyles. For example, eliminating excess salt and sugar intake reduces the risk of hypertension and cardiovascular diseases. Current estimates suggest that the global mean intake of salt is around 10g daily (or 4g of sodium), double the WHO's recommended amount. In addition, regular physical activity reduces the risk of ischaemic heart disease, stroke, diabetes, and breast and colon cancer. However, in 2010, 23 percent of adults age 18 and over were insufficiently physically active, and the percentage was even higher among adolescents ages 11 through 17 years at 81 percent, indicating that these trends could only worsen moving forward in the absence of a robust intervention.[48]

Promoting Healthy Lifestyles

Healthy lifestyle promotion is a low-hanging, cost-effective solution to addressing the spread of NCDs and cultivating a healthy population. While it has been widely recognized by, and acted upon, by

[48] Ibid.

governments around the world, significant variation exists by region and focus area. Ninety-three percent of 160 countries responding to a 2015 WHO survey reported to have established a unit or department in the Ministry of Health responsible for NCDs, up from 88 percent five years ago. Striking progress has been made in government actions since 2010 to tackle major behavioral risk factors, including reducing harmful use of alcohol, increasing physical activity, promoting healthy diets, and reducing tobacco use (Fig. 5).[49] However, relatively less attention has been given to factors of physical activity, healthy diets, and harmful alcohol use than tobacco use, with 27 to 34 percent of responding countries having not adopted plans in these areas. Across regions, while European countries are leading in all areas except for tobacco use, eastern Mediterranean countries are significantly lagging in all areas.[50]

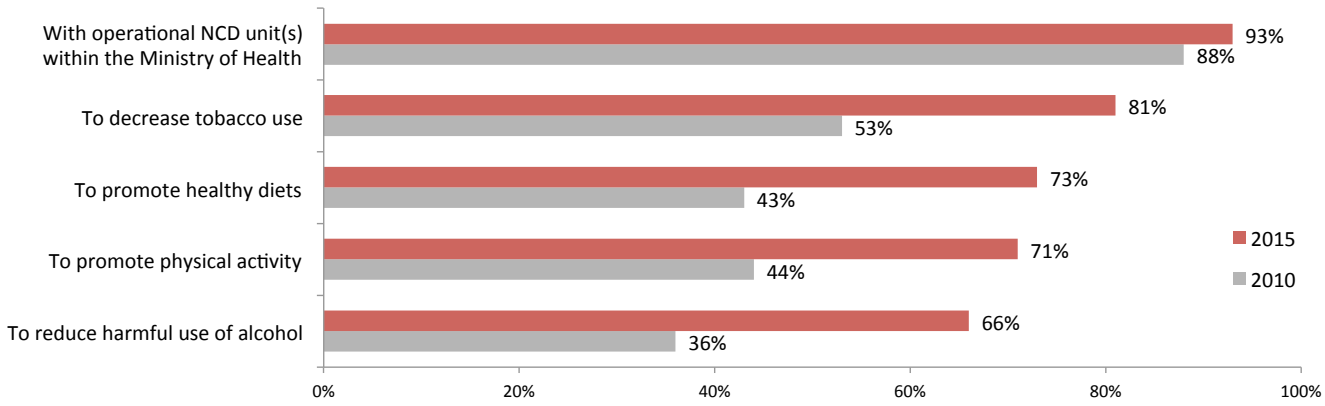
The most successful models combine a top-down policy push with specific goals and measures, dedicated budgets, and promotion of cross-sector collaboration. Germany stands out with enactment of the Act to Strengthen Health Promotion and Preventive Healthcare in 2015. The law requires the allocation of half a billion euros – a nearly 75 percent increase from

[49] FP Analytics calculation. World Health Organization. (2015). *Accessing national capacity for the prevention and control of noncommunicable diseases: report of the 2015 global survey*.

[50] Ibid.

Fig. 5. *Governments around the world are stepping up to tackle NCDs and associated behavioral risks, although unevenness notably exists across risk factors, demanding further efforts.*

Percentage of Countries with an Operational Policy, Strategy, or Action Plan Addressing Risk Factors



(Sources: World Health Organization; FP Analytics)

Box 5. "Healthy China 2030"

In October 2016, China introduced the "Healthy China 2030" Planning Framework, the country's first national medium- to long-term strategic plan in the health sector since its founding in 1949. This plan is aligned with the government's growing commitment to improving the health and quality of life of the entire population in light of demographic and social changes.

The Plan highlights the promotion of healthy lifestyles among the key measures and outlines specific targets on issues ranging from increasing physical activity to introducing healthy dietary habits. It aims to raise the number of people participating in regular physical exercise by nearly 50 percent to 530 million by 2030, through measures including expanding public fitness infrastructure and ensuring at least one-hour of daily physical activity in schools. The plan also aims to reduce the average daily intake of salt by 20 percent through 2030 and will develop demonstration restaurants and cafeterias to promote healthy diets. Following the national plan, provincial governments have started to establish local implementation plans. Major cities including Beijing and Shanghai are leading the local-level efforts and just released "Healthy Beijing 2030" and "Healthy Shanghai 2030" plans in September 2017.

the previous budget[51] – from health insurance and nursing funds each year. At least three-fifths of the budget will be used in health promotion within schools, municipalities, workplaces, and nursing homes, including diet, exercise, stress reduction, and addiction prevention.[52] To ensure effective implementation, the law also emphasizes collaboration across government actors and on federal and local levels to identify joint goals and approaches.[53]

Another encouraging initiative has emerged from China, which is home to one-fifth of the world's total population and whose older population is set to more than double through 2050. The government launched a national blueprint of "Healthy China 2030" in late 2016, highlighting the promotion of healthy lifestyles and outlining specific goals and measures to achieve them (Box 5).

[51] Robert Koch Institute (2015). *Health in Germany*. Retrieved from: http://www.gbe-bund.de/pdf/Zusammenfassung_GB_2015_E.pdf.
[52] German Federal Ministry of Health. Retrieved from: https://www.bundesgesundheitsministerium.de/prevention/the-preventive-health-care-act.html
[53] Ibid.

Key Takeaways

Meeting the healthcare and wellness needs of today's older adults and working to promote healthy lifestyles in younger generations are twin challenges that require an immediate, redoubled commitment from governments around the world. As in other areas of aging policy, fiscal constraints threaten to force short-term, siloed approaches that produce larger costs and threaten the long-term competitiveness and prosperity of societies. While no country has cracked the code for healthy aging, it is clear that there are manifold opportunities to achieve greater efficiency and improved well-being:

- Promotion of preventive care and a healthy lifestyle is a proactive, cost-efficient solution to close the gap between lifespans and healthspans across generations.
- Supporting caregiving, by ensuring the flexibility to allow family members to provide short-term care while remaining active in the labor market, and creating incentives to increase the formal caregiving labor force will both be vital to accommodate rising demand for LTC outside of costly institutional settings.
- Technology, such as eHealth and robotics, promises to be an integral element of health and long-term care. It offers an opportunity to expand access and lower costs, as well as drive economic growth and competitiveness for those countries and companies that effectively seize it.