

Preventive care and healthy ageing

A global perspective

A report from the Economist Intelligence Unit



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Preface

Preventive care and healthy ageing: A global perspective is an Economist Intelligence Unit report, sponsored by Pfizer. It investigates the challenges and pressures that an ageing population puts on healthcare systems and economies worldwide, and how eight countries—Brazil, China, India, Japan, Russia, South Africa, the UK and the US—are promoting preventive care and healthy ageing.

We would like to thank all the experts interviewed for this research. Their insights were invaluable to providing a global view as well as country perspectives.

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The Economist Intelligence Unit is solely responsible for the contents of this report, and the views expressed in it may not reflect those of the sponsor. The report was written by Sarah Murray and edited by Katherine Dorr Abreu and Joe Kolman. Mike Kenny was responsible for the layout. ■

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Introduction

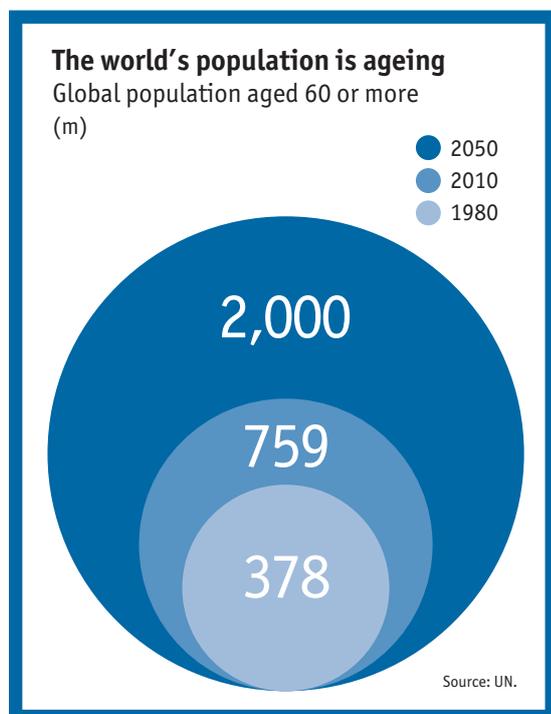
The world is ageing rapidly, and this is good news. It means that people are living longer and recovering more frequently from acute diseases. But it also poses a grave challenge: a world that is barely able to meet the healthcare needs of its existing population is having to take on the costlier healthcare needs of hundreds of millions of older people. Government policymakers will have to find new ways to promote healthy ageing—and will have to find them soon.

Rapidly ageing populations pose a particularly

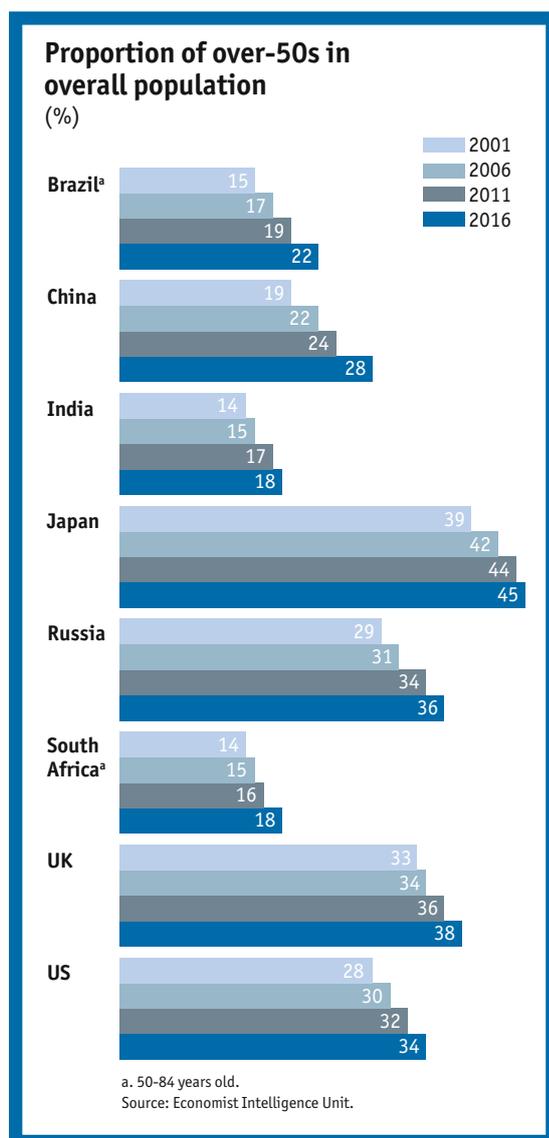
difficult challenge to the developing world. Countries such as China, Brazil, Russia, Vietnam, Iran and Thailand are all struggling to battle infectious diseases (also known as communicable diseases) that kill millions of their infants and children every year. Now these countries must also battle non-infectious chronic diseases, such as chronic obstructive pulmonary disease (COPD) and diabetes, which are becoming more prevalent as their populations become wealthier and adopt less healthy lifestyles.¹

Developing countries are largely unprepared to cope with this healthcare “double whammy”. They lack the funding, technology, infrastructure and trained workers needed to offer the most basic healthcare services to their citizens. As a result, healthy ageing programmes often get scant attention. “Chronic diseases are becoming embedded in low- and middle-income countries,” says David Stuckler, a sociology lecturer at the University of Cambridge and co-editor of *Sick Societies: Responding to the global challenge of chronic disease*, “yet this doesn’t seem to be a live issue among [developing country] policymakers because the immediate is crowding out the long term.”

In the developed world, the challenges are different. Developed countries have made significant progress in battling chronic afflictions.



¹ The development of new therapies means that infectious diseases that were previously fatal have now become chronic, such as tuberculosis and HIV/AIDS.



To reduce the risks of heart disease in older people, they have promoted blood pressure and cholesterol monitoring, as well as the use of preventive drugs such as statins. But this very success has bred a new surge of age-related health problems. Yes, people are living longer, but as they age, they become more vulnerable to pneumonia, dementia and a host of other age-related illnesses.

They will also be afflicted by the consequences of obesity, which is affecting all age groups worldwide. In addition to age-related diseases, a wave of diabetes is destined to beset millions of older people in the coming decades. Obesity already accounts for more than 10% of Europe's entire health budget.² And unlike heart disease, public health officials are not sure which policy tools are most effective against it.

Solutions to these problems require new sources of funding. But resources are becoming increasingly scarce. As a country's population ages, the demand for healthcare services tends to grow, and the working-age population tends to shrink. Developed and developing economies thus face an identical problem: they have greater demand for healthcare services but less income to support them.

Stagnant global economic growth and the costs of supporting rapidly ageing populations are only

² Chronic Disease Alliance. *A unified prevention approach: The case for urgent political action to reduce the social and economic burden of chronic disease through prevention*, 2010.

Defining "aged"

One of the first challenges for policymakers in tackling the issue of healthy ageing is defining who the "ageing" are. While for most developed countries "aged" is defined as 65 years and over, there is no general agreement on what constitutes an older person. In the US, the Healthy Ageing Program of the Centers for Disease Control and Prevention defines ageing people as individuals of 50 years and above. Meanwhile, UN and World

Health Organisation (WHO) literature uses 60 as a measure of old age. Yet in developing countries, the health and mobility of older people may deteriorate much sooner (in South Africa, for example, life expectancy averages 49 years). In this report, we cite diverse data sources, each of which defines "aged" differently. The *Country perspectives* provide official definitions, where those exist. ■

Healthcare spending by country, 2011^a

(% of GDP)

Per capita (US\$)

Brazil	9.1	1,168
China	5.2	277
India	5.0	77
Japan	7.3	3,388
Russia	5.3	688
South Africa	8.5	708
UK	9.7	3,750
US	18.0	8,703

a Estimates. Source: Economist Intelligence Unit.

making things worse. “Ageing is the driver of the deficit issue in most developed economies,” says Rodney Zempel, leader of McKinsey & Company’s Healthcare Systems & Services practice in the Americas. It is also a looming issue for developing countries.

For this reason, it is critically important to determine which healthy ageing initiatives offer the greatest return on investment, and then implement them. Immunisation, for example, is one of the most cost-effective preventive measures for older people. In a study of a Medicare managed plan in Hawaii, **the estimated cost savings per vaccinated subject over the age of 65 was US\$85, minus the cost of the vaccine, and reflected lower demand for hospitalisation.**³ But immunisation remains woefully underused. In developing countries, large-scale vaccination schemes have focused on reducing childhood

mortality from infectious diseases. Adult vaccination continues to be a low priority as scarce funds go to programmes that centre on child and maternal healthcare. Although mature markets fare better, immunisation efforts face cultural barriers as older people underestimate the need to maintain their vaccination schedules in order to prevent disease.

Promoting healthy ageing requires countries to do more than simply react to health issues by diagnosing and tackling diseases. To fend off diseases before they arise, or to mitigate their worst effects, countries must promote mental and physical health initiatives and provide services that encourage older people to remain mobile, independent and socially active. This type of preventive care is the best way to improve health outcomes in a rapidly ageing world. But it faces a host of obstacles. ■

³ *Influenza vaccination for the elderly: When doing more costs less*, Outcomes Research in Review (9) 2, February 2002.

2

Global health challenges

The world suffers from twin healthcare scourges: infectious diseases, such as tuberculosis, pneumonia and influenza, and non-infectious and chronic diseases, such as heart disease and stroke.

Although science has made great progress in battling infectious diseases, the latter still kill around 13m people per year, mostly in the developing world.⁴ Malaria, HIV/AIDS and tuberculosis remain the main sources of poor health among the 3bn people in the world living on less than US\$2 a day.⁵ In 2010 malaria caused an estimated 655,000 deaths, mostly among African children,⁶ while older people are more susceptible to yellow fever, pneumonia and influenza.⁷

Infectious diseases also threaten the citizens of mature economies and often hit the oldest populations hardest. As people age, they become increasingly vulnerable to pneumonia, influenza, tuberculosis, bacteraemia (bacteria in the blood) and nosocomial (hospital-acquired) infection. Contributing factors include weakened immune function (so-called immunosenescence), bodily and functional changes and exposure to infections through higher rates of hospitalisation.

Vaccination programmes could reduce the number of older adults who die from, or become

frail owing to, infectious diseases worldwide. In the US, for example, the WHO estimates that vaccine-preventable diseases kill between 50,000 and 70,000 adults each year, compared with 1,000–3,000 children.⁸ Tetanus, which is rare in developed countries but a major cause of death in developing states, is more severe in older people, and most tetanus-related deaths occur in this group.⁹ Most influenza-related deaths are also accounted for by older people, often as a result of complications like pneumonia. Moreover, influenza can exacerbate underlying conditions such as pulmonary and cardiac disease.

But in spite of the obvious benefits of immunisation, vaccination rates differ dramatically across regions, countries and age groups. In Europe, seasonal influenza vaccination for people aged 65 years and over is recommended by 17 countries, but the recommended immunisation programmes differ by age. National estimates on vaccine coverage for older people also vary wildly, from 1.1% in Estonia to 82.6% in the Netherlands.¹⁰

Although infectious diseases pose a threat to millions, chronic diseases—often brought on by

4 World Health Organisation. "Infectious diseases are the biggest killer of the young", 1999, and *Global status report on noncommunicable diseases 2010*.

5 WHO. *Global report for research on infectious diseases of poverty*, 2012.

6 WHO. Fact sheet.

7 World Bank. *Disease control priorities in developing countries*, 2006, Chapter 20, Page 396.

8 Thomas-Crusells J, et al. *Report of the ad-hoc consultation on aging and immunization for a future WHO research agenda on life-course immunization*, Vaccines, 2012.

9 Centers for Disease Control and Prevention vaccine recommendation sheet, National Center for Immunization & Respiratory Diseases, 2011.

10 "Differences in national influenza vaccination policies across the European Union, Norway and Iceland 2008–2009", *Eurosurveillance* (15) 44, November 2010.

smoking, poor diet and reduced physical activity—present a far greater challenge. Heart disease, stroke and other non-infectious diseases are responsible for 60% of deaths worldwide.¹¹ Older people suffer more frequently from one or more of these conditions, and so the incidence of chronic disease is destined to rise as the world ages.

Chronic diseases afflict all populations, regardless of income level or economic

development, but present the greatest challenge to developing countries. Almost 80% of deaths from non-infectious diseases occur in low- and middle-income countries.¹² This phenomenon will only intensify as the world ages. In 1990 non-infectious diseases, mental health disorders and injuries accounted for 51% of the disease burden in developing and newly industrialised countries, a figure predicted to rise to around 78% by 2020.¹³ ■

11 Harvard School of Public Health. *The global economic burden of non-communicable diseases*, 2011.

12 WHO. *Global status report on noncommunicable diseases 2010*.

13 WHO. *Active ageing: A policy framework*, 2002.

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Preventive care as a potential solution

The best way to reduce the scourge of infectious and chronic diseases is to prevent them from occurring in the first place. This has inspired policymakers around the world to design prevention programmes that reduce the economic and social costs of poor health by promoting healthy ageing. Measures such as vaccination drives and educational campaigns help prevent contagious diseases, while promoting healthy lifestyles helps battle chronic illnesses. Helping individuals avoid disease in this way is the most cost-effective form of healthcare.

In some respects, governments are already doing this. Preventing smoking has long been an important public health issue for governments, and many continue to tighten their anti-smoking policies. China, which has the world's highest prevalence of male smokers, is introducing a range of prevention measures, including raising taxes on cigarettes and placing a ban on smoking in public places. Despite the successes of many anti-smoking initiatives, however, going the "last mile" in eradicating smoking can prove challenging as individuals adapt to higher taxes and overlook the health risks.

Meanwhile, many public health officials now argue that governments need to focus more aggressively on preventing obesity. In Europe, for example, some predict that by 2020 all the health gains of successful anti-smoking policies will be wiped out by the effects of obesity.

Better food labelling may be an important way to improve poor diets. The UK's "traffic light" labelling scheme—using red, amber and green colour-coding—as well as guideline daily amounts (GDAs) indicate the relative healthfulness of food products. New York City has applied the labelling principle to restaurants, requiring all chains to print calorie counts for their dishes on menus. Yet causes of obesity are complex, and no single campaign can address it effectively. "In the UK, we had a huge public health initiative and really reduced male smoking," says Sarah Harper, professor of gerontology at the University of Oxford and director of the Oxford Institute of Population Ageing. "But the lifestyle disease of the 21st century probably won't respond the same way."

Preventive programmes against smoking and obesity need to be supplemented by "secondary preventive" schemes that focus on identifying commonly occurring asymptomatic diseases such as diabetes, hypertension and breast cancer. Early detection and intervention of these conditions can reduce their severity, slow their course and prevent them from becoming life-threatening.

Screening is clearly a powerful card in healthcare authorities' hands. But more research is needed to determine exactly which screenings are most successful in improving health outcomes and which provide the most value for money. For example, experts are still debating the relative benefits of prostate cancer screening for men and how

frequently women should have mammograms. “A lot of the time, preventive care is relegated to the check-box approach,” notes Louise Walter, professor of medicine in the geriatrics division of the

University of California San Francisco’s Department of Medicine. “In fact, it’s about trying to figure out how we can give more appropriate care—and it’s not always the case that more is better.” ■

Vaccines: the low-hanging fruit

Vaccines offer a quick, cost-effective and easy way of reducing infectious disease. But adult immunisation rates remain low in both developed and developing countries. Why is this highly effective preventive measure under-used?

Older people with chronic conditions such as respiratory diseases, heart disease, kidney failure and diabetes are more susceptible to infectious diseases. Adults aged 60 years or older continue to be the highest-risk group for tetanus, while those older than 50 years are at greater risk for death and severe disability from influenza than younger people.¹⁴ In the UK, between 3,000 and 4,000 people die from influenza each year, and large numbers are hospitalised owing to the disease. More than 85% of influenza-related deaths occur in individuals over the age of 65 years.¹⁵ Thus, vaccination can significantly lower the risk of influenza-related hospitalisation and death and reduce the associated costs of the disease. A Spanish study showed that for older people with cardiac disease, influenza vaccination reduced the risk of winter mortality by 37%.¹⁶

Despite its proven benefits, vaccination for ageing populations remains below the rate recommended by the World Health Organisation. As a result, millions of people worldwide continue to die from vaccine-preventable diseases. Although a vaccine against hepatitis B was developed in 1981, around 600,000 adults died from the disease in 2002 (latest available figure).¹⁷

In developing countries, overstretched healthcare systems that struggle to meet immediate needs have tended to underfund immunisation programmes, which are sometimes perceived as burdensome. For example, vaccines require an extensive infrastructure to ensure the “cold chain” that extends from manufacturing through shipment to final distribution and administration. They also require careful waste

management and specific medical training. Once established, however, vaccination programmes are highly cost-effective.

Furthermore, existing programmes rarely target older people. In India, for example, the government does not have an adult immunisation strategy; vaccination schemes are limited to children. By contrast, in Brazil the government has successfully used the country’s passion for soap operas to increase awareness and immunisation rates among the elderly (see *Country perspectives*).

Meanwhile, developed countries have also struggled to achieve universal adult immunisation. The problem is often a lack of awareness. “One of the biggest challenges of implementation and delivery is to develop a vaccine mindset for adults,” says Pierce Gardner, who served for many years as the American College of Physicians’ liaison representative to the Advisory Committee on Immunization Practices at the Centers for Disease Control and Prevention.

Developed countries have had some success in using the private sector to increase immunisation rates. In the US and the UK, retailers have created profitable flu vaccination business lines that help to bring shoppers into their stores and pharmacies.

Community pharmacists can also act as vaccination advocates. In Japan, a 2009 study showed that pharmacists who provided information about influenza risks and vaccination benefits to their elderly customers had a take-up rate of 82%, compared with 70% in a control group.¹⁸

It is widely known that an ounce of prevention is worth a pound of cure. This principle is at the heart of the Global Vaccine Action Plan. The plan—endorsed by the World Health Assembly in May 2012—calls for a life-course approach to vaccination and argues that, for national governments, immunisation is a critical investment for the future. In short, global health experts see immunisation to prevent adult infectious diseases as an investment with a massive health return. ■

14 “Cost-effectiveness of influenza vaccination of older adults in the ED setting”, Department of Emergency Medicine, Northwestern University, Feinberg School of Medicine, September 2011 and CDC.

15 University of York. “Effectiveness matters: Influenza vaccination and older people”, NHS Centre for Reviews and Dissemination (2) 1, October 1996.

16 “Increasing influenza vaccination coverage in recommended population groups in Europe”, Expert Reviews, Vaccines (8) 4, 2009.

17 Hepatitis B Foundation.

18 Usami, T, et al. “Impact of community pharmacists advocating immunization on influenza vaccination rates among the elderly”, Division for Evaluation and Analysis of Drug Information, Kitasato University School of Pharmacy, 2009.

4 Implementation challenges

Most public health officials believe that preventive care for both chronic and contagious diseases should be at the heart of healthy ageing programmes. But efforts to promote preventive care face multiple barriers, ranging from lack of resources to lack of infrastructure, from behavioural barriers to policy hurdles. Despite the need to increase immunisation rates in adults, rigid rules in some countries dictate who can and cannot carry out vaccinations, and can limit the ability to scale up infectious disease prevention programmes.

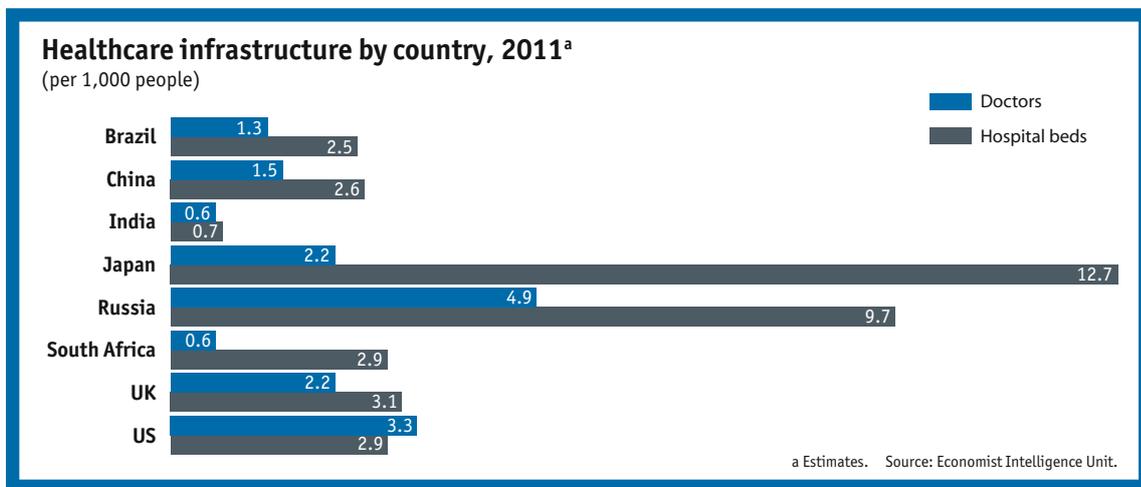
Resource and infrastructure barriers

Developing countries that struggle with basic medical tasks, such as administering medicine or testing blood, view preventive care measures as

unaffordable luxuries. Inadequate roads, lack of ambulances and poorly equipped clinics and hospitals make it difficult to deliver preventive services and vaccinations to older people, particularly in rural areas. Health infrastructure can even be weak in cities. Until recently, Mumbai—one of the world’s most populous cities and with more than 40,000 emergencies recorded a month—had just 1,000 ambulances with only a dozen offering life-saving equipment (a social enterprise called 1298 is now filling this gap in Mumbai and other cities in India¹⁹).

The price of vaccines is another barrier. Although they can be a powerful economic empowerment tool by preventing debilitating diseases, developing countries may not be able to

19 1298: http://www.1298.in/about_us.html.



afford them. A hepatitis B vaccination, for example, costs about £30 per dose in the UK. Developing countries do have access to many generic and lower-cost drugs, but some immunisations still remain beyond financial reach for many.

These countries also give preventive measures against chronic diseases a low priority. Although such diseases cause three-fifths of deaths and disabilities in low-income countries identified by the WHO, one-third of the countries do not have programmes in place to prevent them.²⁰

Preventive care faces different obstacles in developed countries. These countries have focused their financial, organisational and human resources on using advanced technology to improve healthcare. Issues such as preventing illness, supporting healthy ageing or dealing with acute chronic and long-term diseases come second. "Our healthcare system is very good at taking care of us when we are acutely ill, fixing a broken leg or operating on a gall bladder," says Richard Gilfillan, director of the US Center for Medicare and Medicaid Innovation at the Centers for Medicare & Medicaid Services. "But we didn't structure a system for someone who is going to live for 30 years with type-2 diabetes. We are just finding our way to building that care system."

Cultural and behavioural barriers

Efforts to promote preventive care have also been stymied by cultural and behavioural barriers in developed and developing countries alike. In Hong Kong, many of the territory's older citizens who decline flu vaccinations cite their own good health and the effectiveness of traditional methods of prevention. In Russia, thousands of local health centres to promote preventive healthcare have been underused, according to Alexander Lindenbraten, professor at the Higher School of Economics at the Moscow-based National Research

University. In the US, older people frequently overlook the importance of vaccinations and regular screenings. The Centers for Disease Control and Prevention (CDC) estimates that only about 25% of Americans between the ages of 50 and 64 years are up to date on preventive services such as cancer screening and immunisations.

Political barriers

The biggest barrier to preventive care may be a lack of political will. More often than not, competing priorities, short-term thinking or limited budgets hinder progress. In Europe, where non-infectious diseases account for 86% of deaths, only 3% of total healthcare spending goes towards prevention.²¹ Authorities in India have largely ignored the challenges of the country's ageing population. "The Ministry of Health and Family Welfare continues to be preoccupied with woman and child health programme implementation," says Perianayagam Arokiasamy, a professor in the Department of Development Studies at the International Institute for Population Sciences in Mumbai. "Other than the Ministry of Health's recently introduced National Programme on Health Care for the Elderly (NPHCE), population ageing is not a priority area, and the government of India has yet to recognise its potential to become a major economic and health challenge."

Authorities may be reluctant to launch large-scale efforts to promote extensive prevention initiatives because they are uncertain which would provide the best returns. When McKinsey compared cardiac care across four global healthcare systems in its Leading Systems Network, it found an eightfold difference in some areas of prevention spending among systems but little difference in outcomes. "The economics of prevention are hotly debated," says Mr Zimmel. "Prevention is relatively cheap but there's not enough scrutiny of which interventions really do make sense." ■

²⁰ WHO. *Global status report on noncommunicable diseases 2010*.

²¹ Chronic Disease Alliance. *A unified prevention approach*, 2010.

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Policy measures

Preventive care measures that do exist are often focused on particular diseases or health challenges, rather than integrated as part of overall care for the elderly. Thus, even if countries overcome many of the aforementioned barriers, **healthy ageing programmes will fail unless preventive strategies are incorporated into the larger healthcare system and initiatives like urban planning and education are also implemented.**

Policymakers in wealthier countries have begun to act. They are now considering a variety of preventive care models designed to improve workplace programmes and increase community-based care systems, as well as pilot schemes to integrate social and health services.

Active and engaged

Keeping older people socially and mentally engaged, whether through exercise, employment or social activities, can have measurable results in maintaining their health. Local governments often take the lead in these programmes, although national efforts are also being implemented (see the Silver Human Resources Centres programme in the *Japan Country perspective*).

Companies also have a role to play. “Businesses need to be engaged,” states Joseph Coughlin, director of the Massachusetts Institute of Technology’s AgeLab, which explores solutions that improve people’s health and ability to participate in society throughout their lifespan.

“We need those 45- to 55-year-old employees to be kept well for as long as possible.”

Community and tailored services

Older people also need transport, recreation and other community support services to help them remain mobile and independent. As more and more of the world’s population, including the elderly, lives in cities, the WHO’s *Age-Friendly Cities Guide* calls for urban centres to make structures and services accessible to older people with varying needs and capabilities.

These services will become more important as traditional family structures break down. In China, relaxed mobility restrictions have led many young people to leave home, weakening the family support system that older people have relied on for centuries. China’s one-child policy also means that older parents have fewer children to support them. Yet affordable institutionalised living facilities for older citizens are scarce. Although the private sector is beginning to provide more services, only 2% of China’s older people live in these institutions,²² and most are cared for at home. In Japan, where traditional family structures are also breaking down, the government set up a Long-term Care Insurance Scheme (LCIS) in 2000 to relieve the burden on families looking after their older parents.

²² Population Reference Bureau. *Today’s research on aging, and China’s rapidly aging population*, Issue 20, July 2010.

Technology as a prevention tool

Technology has the potential to help to promote healthy ageing in many ways. But the healthcare sector has been slower to adopt technological solutions than other industries.

Customer-relationship-management software could help give medical professionals a more complete view of older adults suffering from multiple conditions. Mobile devices linked to health-monitoring equipment could transform the care and treatment of older people and reduce costs.

In developing countries, mobile devices are already extending healthcare access into distant rural areas, where poor roads and lack of modern ambulance services prevent older patients from getting care. Community health workers are using mobile devices in the field to conduct diagnoses remotely and receive advice on administering treatment.

Mobile devices can also be used as a tool to promote healthy behaviours. “Many serious non-communicable diseases—diabetes, blood pressure and obesity—are related to behaviour and lifestyle choices,” says Harry Greenspun, MD, a senior adviser for healthcare transformation and technology at the Deloitte Centre for Health Solutions. “They lend themselves perfectly to the kinds of engagements you can get through technology.”

The technology does not have to be complicated to be effective. Automated text messages on mobile phones could

remind older patients with tuberculosis or HIV/AIDS to take their medicine and keep their immunisations up to date. In remote areas where vaccination centres may lie several hours’ walk away, text messages could allow people to determine whether vaccine supplies are still available in a particular clinic before setting out to get immunised.

In developed countries, remote monitoring devices could help older adults with complicated long-term conditions reduce the need for hospital visits, while improving care and cutting costs. Helping patients remain at home reduces the risk of hospital-acquired infections and makes it easier for them to lead active and independent lives.

David Lee Scher, MD, a digital health consultant at DLS Healthcare Consulting and a former cardiologist, describes the potential for home-based “mission control” systems monitoring everything from vital signs to glucose levels, patient location and ambulating function, using sensors placed on the body and in shoes. This information is also transmitted via wireless technology to caregivers’ smartphones and healthcare providers on an actionable alert basis. “The possibilities are infinite,” he says. “They are not limited by the technology so much as by all the other things coming into play. These include reimbursement, regulation and provider awareness.” ■

Integrated care

In countries such as the US and the UK, many public health officials are stressing the need for “integrated care”. This means different things to different people. In one UK model, patients are assigned a case manager responsible for co-ordinating care, replacing a system that required older patients to interact with a variety of different specialists who might not have a holistic view of their overall health treatment (see UK *Country perspective*). Increasingly, however, policymakers

stress the type of integrated care that brings social services to preventive care programmes, helping older people remain mobile and physically independent, in addition to reducing their vulnerability to illness and accidents.

Whatever the model, successful ageing policies require a wide range of preventive and other measures. To make these measures effective, policymakers need to work with a variety of partners, from businesses and non-profits to social workers and community nurses. ■

6

Conclusion

The challenges of a rapidly ageing world are becoming obvious. Millions of older people are increasingly in need of care but are woefully underserved. The costs of taking care of them are mounting. At the same time, rapidly rising chronic diseases are putting additional pressure on healthcare budgets. Governments that fail to address this challenge could find increasing disease loads a threat to economic growth.

Healthy ageing programmes offer a powerful solution to these challenges. They can provide the elderly with affordable, effective healthcare and help them lead active, productive lives. They can also help to reduce the rising costs of care, and prevent ageing individuals from becoming a drain on a country's resources. All these benefits should make preventive care particularly attractive to governments during a prolonged period of sluggish global growth.

Preventive care will require new investment, but countries can reap significant cost savings if they

rethink their existing delivery systems and remove structural obstacles. By breaking down the barriers between social and medical services, governments can deliver care to their elderly that is both better co-ordinated and more cost-effective.

Successful preventive care strategies are certainly complex. The best solutions will come when people from different disciplines work together: economists, epidemiologists, technologists, community care workers and medical, public health and resource professionals.

For governments that find the right mix of preventive care and healthy lifestyle promotion, the benefits will be twofold. The individual wellbeing of older people will improve, but there will also be an impact on the country's bottom line. A collectively healthy, independent older population can make positive contributions to the economy and to society that, as global populations continue to age, will become increasingly valuable. ■



IN A NUTSHELL

Improved longevity has been a Brazilian success story. By the mid-2040s, however, Brazil will have proportionately as many older people as the world's oldest country, Japan, does today. "We have a very short window of opportunity," says Alexandre Kalache, president of Brazil's International Longevity Centre and a senior adviser on global ageing at the New York Academy of Medicine. "If we don't put the policies in place now, the whole issue of ageing will shift from being an achievement to a being a problem."

Country perspective Brazil

The healthcare context

Demographic factors

Brazil's population is ageing extremely rapidly. Average life expectancy is 73, up from 45 in 1950—and the fertility rate has already fallen to below the replacement level as a result of rapid urbanisation and individual aspirations of growing wealth. The proportion of the population aged 60 years and over is expected to double from 11% currently to 22% in 2025.

State of the nation's health

In 2011 Brazil's healthcare expenditure was equivalent to 9.1% of GDP, although as spending included items such as sanitation, this is not directly comparable with other countries. However, tremendous strides in raising average life expectancy mean that Brazil is facing increased prevalence of chronic disease (which in 2007 accounted for 72% of all deaths).²³ A sharp rise in disability, dependence, and hospital admissions and infections is further straining national budgets, while obesity is a growing problem that will present severe health challenges as the population ages.

Healthcare coverage

Brazil adopted a universal care policy in 1988 and the constitution recognises health as a basic citizen's right. But although the country's single public healthcare system, Sistema Único da Saúde, reaches 75% of the population, only 47% of total healthcare spending is public. Almost one-quarter of the population relies on private insurance programmes, and nearly two-thirds of private healthcare expenditure is out-of-pocket.

Healthy ageing and preventive care initiatives

Policy commitments

The health challenges posed by Brazil's ageing population are significant, but the country has made progress in building the legislative infrastructure needed to promote healthy ageing. Laws such as the National Policy for the Elderly (1994) and the Elderly People's Act (2003) are administered through the Ministry of Health.

Preventive care

Public-awareness campaigns are an important part of preventive care strategies in Brazil and have helped the country achieve considerable success with adult vaccination. Although the figures are less impressive for conditions such as pneumonia, almost 90% of people aged 60 years or more are vaccinated against influenza, giving Brazil one of the world's highest immunisation rates. Part of this success is attributed to cultural preferences. "There's a public health tradition in Brazil and immunisation is taken seriously," says Dr Kalache. "Around April or May, when the flu season starts in the southern hemisphere, you see older people in very big numbers responding to the campaigns."

The popularity of soap operas helps. The health ministry has tapped into this national obsession, using older soap stars in television advertisements to talk about the importance of influenza immunisation.

More broadly, the Family Health Strategy, providing basic healthcare to around 40% of the population,²⁴ focuses on increasing access to primary care and raising awareness of chronic diseases. Improved access to primary care and successful tobacco control have been among the main factors leading to an annual average decrease of 1.8% in age-standardised mortality rates since 1996.²⁵

23 Schmidt, M.I. "Chronic diseases in Brazil: Burden and current challenges", 2011.

24 WHO brief.

25 Schmidt, M.I. "Chronic diseases in Brazil", 2011.

Fundamental healthcare data: Brazil

	2007 ^a	2008 ^a	2009 ^a	2010 ^b	2011 ^b	2012 ^c	2013 ^c	2014 ^c	2015 ^c	2016 ^c
Population (m)	184.5	186.5	188.6	190.8	192.8	194.7	196.5	198.2	199.8	201.4
Population age 50-84 (m)	32.2	33.3	34.5	35.7	36.9	38.2	39.4	40.8	42.1	43.4
Doctors (per 1,000 pop)	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Hospital beds (per 1,000 pop)	2.3	2.2	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Healthcare spending (US\$ per head)	629.6	735.4	756.6	1,022.0	1,168.0	1,092.0	1,191.0	1,286.0	1,355.0	1,430.0
Healthcare spending (% of GDP)	8.5	8.3	8.8	9.1	9.1	9.1	9.2	9.2	9.2	9.2
Consumer expenditure: Health (US\$, bn)	86.0	102.7	106.2	134.5	157.9	155.5	170.1	187.1	200.3	214.5
Life expectancy, total (yrs)	71.4	71.7	72.0	72.3	72.5	72.8	73.1	73.3	73.6	73.8
Life expectancy, male (yrs)	67.9	68.2	68.4	68.7	69.0	69.2	69.5	69.8	70.0	70.3
Life expectancy, female (yrs)	75.2	75.5	75.7	76.0	76.3	76.5	76.8	77.0	77.3	77.5

a Actual. b Economist Intelligence Unit estimates. c Economist Intelligence Unit forecasts.

Policy guidelines lay out priorities such as the promotion of healthy ageing and the retention of functional abilities, the training of specialised care professionals and the development of informal care. To support these policies, the healthcare system provides free medicines, prostheses and rehabilitation services for the elderly, especially those taking long-term medication (for diseases such as hypertension and diabetes). Health insurance companies are not allowed to discriminate against or charge higher rates of older people.

Barriers to preventive care

Funding and resource constraints

Brazil's healthcare system needs reform to strengthen the capacity of primary and community care in order to respond to the health demands of ageing citizens. Moreover, professionals equipped to manage the complex care challenges of older people are in short supply as those graduating from medical schools usually emerge with specialist qualifications. This reflects Brazilian universities' failure to respond to ageing challenges, says Dr Kalache.

"We are training our health professionals for the 20th century—they learn everything about child development and maternal health, but not how to treat an increasing number of older people in whatever specialty they embrace."

Cultural and behavioural barriers

The wide gap between rich and poor has implications for Brazil's ability to promote preventive care, particularly in stopping obesity from becoming a major threat among ageing citizens. Not everyone can afford to pay to use exercise facilities, while the cheapest foods are part of the "white diet"—sugar, rice, flour and alcohol.

Most overweight Brazilians come from socioeconomically and educationally disadvantaged groups. "The natural preference for the Brazilian population is a lot of fat and a lot of sugar," notes Dr Kalache. "The government is aware of this and there is a lot of emphasis on [a] healthy diet. But while the information is out there, you have an economic barrier because health foods are often more expensive." ■



IN A NUTSHELL

Economic, cultural and regional factors mean that reshaping the country's healthcare systems to accommodate an ageing population is not easy, particularly since they were designed to battle acute and infectious diseases. "China is not ready for that [transition]," says Wu Fan, general director of Shanghai Municipal Centre for Disease Control & Prevention, former director of the National Centre for Chronic and Noncommunicable Disease Control and Prevention (China's Centre for Disease Control and Prevention).

Country perspective China

The healthcare context

Demographic factors

In 2000 just 90m people in China were over the age of 65, representing around 7% of the total population. This is forecast to surpass 300m by 2050²⁶—roughly equivalent to the entire US population and approximately 22% of China's total.

State of the nation's health

China is facing a sharp rise in the incidence of non-infectious illnesses such as cardiovascular diseases, diabetes mellitus, chronic obstructive pulmonary diseases and lung cancer. These now account for more than 80% of the country's 10.3m annual deaths.²⁷ Growing physical inactivity (particularly in cities) and a shift from traditional diets (which are low in fat and sugar) to consumption of fast foods and sugary drinks have sparked an obesity epidemic, with an estimated 200m people in China classified as either overweight or obese.²⁸ As the population ages, healthcare systems will be under increasing pressure. Infectious disease meanwhile remains a significant health burden, with 4.6m cases resulting in around 10,700 deaths in 2007. Outbreaks of respiratory and intestinal infectious diseases are frequent, while the incidence of blood-borne and sexually transmitted infectious disease continues to rise.

The country is struggling to meet these challenges. Total healthcare spending in China equalled an estimated 5.2% of GDP in 2011, or US\$277 per head, and is expected to rise to 5.9% by 2016. With expenditure in urban centres almost four times as high as that in rural areas, China's regional healthcare divide is widening.²⁹

²⁶ Population Reference Bureau. *Today's research on aging, and China's rapidly aging population*, Issue 20, July 2010.

²⁷ World Bank. *Toward a healthy and harmonious life in China: Stemming the rising tide of non-communicable diseases*, Human Development Unit, East Asia and Pacific Region, June 2011.

²⁸ Ibid

²⁹ WHO. "Health expenditure trends in select countries", 2006.

Healthcare coverage

Under Article 45 of the constitution, all old, ill or disabled citizens have the right to material assistance from the state and society. To meet this promise, China is attempting to revive medical insurance systems and implement radical social health insurance reforms that move the country back towards universal coverage (see *Policy commitments*).

Healthy ageing and preventive care initiatives

Policy commitments

In recent years the government has focused on chronic disease prevention and long-term care delivery for the elderly. It has tried to extend the system's reach—including among the elderly—by increasing community health networks in urban and rural areas, establishing primary health centres and boosting the numbers and skills of healthcare personnel, particularly in poor parts of the country such as Tibet and Xinjiang province.

In a shift away from the privatised payment systems that emerged during the market reforms of the 1980s, China has developed social health insurance systems, such as an urban employee-based medical insurance and an expanded rural co-operative medical scheme. Health insurance has recently been extended to anyone with social insurance over the age of 60, whether or not they are employed. "That has improved the quality and the equality of the care targeted to elderly persons," says Dr Wu.

Preventive care

Some Chinese cities have introduced innovative healthy ageing programmes. Shanghai has established community support centres for cancer patients and immunisation programmes, while city agencies collaborate with sports authorities in promoting physical activities as well as with education groups in helping older people take up painting or piano lessons, for example. Shanghai is also exploring

Fundamental healthcare data: China

	2007 ^a	2008 ^a	2009 ^a	2010 ^b	2011 ^b	2012 ^c	2013 ^c	2014 ^c	2015 ^c	2016 ^c
Population (m)	1290.0	1297.0	1305.0	1313.0	1321.0	1329.0	1336.0	1343.0	1350.0	1356.0
Population age 50+ (m)	295.4	305.4	311.0	316.5	319.0	325.6	342.0	356.6	370.2	384.1
Doctors (per 1,000 pop)	1.4	1.4	1.4	1.5	1.5	1.5	1.6	1.6	1.6	1.7
Hospital beds (per 1,000 pop)	2.5	2.5	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Healthcare spending (US\$ per head)	119.2	160.7	198.1	226.0	277.0	326.0	381.0	450.0	521.0	613.0
Healthcare spending (% of GDP)	4.4	4.6	5.1	5.1	5.2	5.3	5.4	5.6	5.7	5.9
Consumer expenditure: Health (US\$, bn)	103.6	131.8	153.4	173.5	208.8	245.5	290.8	344.6	405.5	476.3
Life expectancy, total (yrs)	74.0	74.2	74.4	74.5	74.7	74.8	75.0	75.2	75.3	75.4
Life expectancy, male (yrs)	72.1	72.2	72.4	72.5	72.7	72.8	73.0	73.1	73.2	73.4
Life expectancy, female (yrs)	76.2	76.4	76.6	76.8	76.9	77.1	77.3	77.4	77.6	77.7

a Actual. b Economist Intelligence Unit estimates. c Economist Intelligence Unit forecasts.

the cost-effectiveness of free vaccinations for older people compared with treating them once they are ill.

Barriers to preventive care

Funding constraints

Although the authorities in wealthier cities have made progress in promoting healthy ageing, regional variations persist. "In some isolated rural areas, the priority for local government is economic development, and they are less willing to fund programmes such as promoting physical activities or monitoring blood pressure," says Dr Wu. "There are large differences [in government policy] when it comes to prevention."

Cultural and behavioural barriers

The success of China's one-child policy means that the country will have too few people to look after its ageing population. Meanwhile, cultural barriers often undermine preventive care implementation. Besides buying certain foods or traditional Chinese medicines, older people are reluctant to pay for preventive health services and tend to

disregard health warnings, such as the link between salt intake and high blood pressure. Many Chinese do not admit that they or their relatives have dementia owing to the shame associated with mental illness.

In addition, the prevalence of tobacco smoking is among the world's highest: 54% of men aged 15 to 69 are smokers in China.³⁰ "People who are not well educated don't believe in figures such as the percentage of smokers getting lung cancer," says Dr Wu. "They never think that this will happen to them."

Other obstacles

Despite government spending on new hospitals and clinics, elderly citizens still have long waits for treatment. China also lacks healthcare workers, particularly community doctors and nurses trained in patient management and preventive care. The country has few nursing homes and although the government encourages older people to live with their families, more community nurses and social workers will be needed to support this policy. ■

³⁰ World Bank. *Toward a healthy and harmonious life in China: Stemming the rising tide of non-communicable diseases*, 2011.



Country perspective India

IN A NUTSHELL

“India needs comprehensive policy and health-system reorientation (from primary health centres to specialty hospitals in geriatric care) to meet the challenges of non-communicable disease and adult health issues related to communicable diseases. But at the moment, there is a complete void,” says Perianayagam Arokiasamy, a professor in the Department of Development Studies at the International Institute for Population Sciences in Mumbai.

The healthcare context

Demographic factors

India’s population is undergoing a dramatic transition. The proportion of older people is expected to rise three- to four-fold in the next 40 years; its population of people aged 65 and over will be second only to China’s.³¹ Even conservative estimates predict that the number of people aged 60 years and over will reach 323m by 2050.³² By then, people in their 50s are expected to account for 30% of the population, while those in their 60s will make up 20%.³³

State of the nation’s health

Although still struggling to reduce child and infant mortality, India now faces a sharp rise in the proportion of older people in its population. This results in rising rates of chronic disease such as lung cancer and diabetes, often driven by rapid urbanisation and increasingly unhealthy lifestyles.

Moreover, chronic disease starts earlier in India. While in developed countries the average age for the onset of non-infectious disease is 55 years or older, Prof Arokiasamy says that in India the onset is premature, at around 45 years.

Total healthcare spending in India was equivalent to 5% of GDP in 2011, or just US\$77 per head. With no healthcare or retirement benefits for adults and the older population, private healthcare spending accounts for more than 70% of the country’s total health expenditure. Most of this is out-of-pocket spending.³⁴

Healthcare coverage

There is currently no social security system in India. Only retired government employees receive state pensions, and state and private-sector health insurance covers just 11% of the population.³⁵

Healthy ageing and preventive care initiatives

Policy commitments

It was only in the 1990s that health and social policies for the elderly in India were announced. The National Policy for Older Persons (NPOP) and the National Initiative on Care for the Elderly were formulated in 1999. Legislation also pushes families to support older relatives; since 2007, the Maintenance and Welfare of Parents and Senior Citizens Act means that individuals who fail to look after their parents can be prosecuted.

Preventive care

The Public Health Foundation of India and the Ministry of Health and Family Welfare launched a Healthy India website that highlights the challenges of ageing, in addition to promoting active ageing and preventive care. Although such initiatives are meant to educate, few preventive care measures targeted at either older people or the general population have been implemented. For example, vaccinations target the child and maternal population, but not adults.

Barriers to preventive care

Funding constraints

Given the country’s overstretched financial resources and other pressing priorities, India’s government has had difficulty in providing even basic healthcare to many of its citizens, and little funding has been earmarked for preventive care for the ageing population. As a result, the

31 Euromonitor International. *The world’s oldest populations*, 2011.

32 Population Reference Bureau. *Today’s research on ageing: India’s ageing population*, March 2012.

33 Arokiasamy, P. “Longitudinal ageing study in India”, International Institute for Population Sciences, 2012.

34 Health Research Policy and Systems. “Activating the knowledge-to-action cycle for geriatric care in India”, 2011.

35 Eleventh Five-Year Plan, 2007-12, Volume II, Social Sector, Planning Commission, Government of India.

Fundamental healthcare data: India

	2007 ^a	2008 ^a	2009 ^a	2010 ^b	2011 ^b	2012 ^c	2013 ^c	2014 ^c	2015 ^c	2016 ^c
Population (m)	1129.9	1148.0	1166.0	1184.0	1202.0	1220.0	1238.0	1256.0	1274.0	1292.0
Population age 50+ (m)	174.1	180.0	186.1	192.6	199.3	206.4	213.7	221.4	229.4	237.7
Doctors (per 1,000 pop)	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Hospital beds (per 1,000 pop)	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Healthcare spending (US\$ per head)	48.7	55.4	57.7	70.6	77.2	74.6	85.0	106.0	124.0	163.0
Healthcare spending (% of GDP)	4.6	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Consumer expenditure: Health (US\$, bn)	30.9	32.1	33.9	42.2	47.2	49.4	57.9	71.0	84.3	114.6
Life expectancy, total (yrs)	65.4	65.7	66.1	66.5	66.8	67.1	67.5	67.8	68.1	68.5
Life expectancy, male (yrs)	64.5	64.8	65.1	65.5	65.8	66.1	66.4	66.7	67.0	67.3
Life expectancy, female (yrs)	66.4	66.8	67.2	67.6	68.0	68.3	68.7	69.1	69.4	69.8

a Actual. b Economist Intelligence Unit estimates. c Economist Intelligence Unit forecasts.

country's elderly frequently die from preventable conditions such as asthma, bronchitis and pneumonia.

Most policies relating to elderly healthcare announced by the government so far are statements of intent that receive no funding. No government department is responsible for implementation of the NPOP, and no budget is allotted to it.

Private-sector healthcare services are increasing. Few can afford these, however, and low-income communities generally depend on local private practitioners, who are rarely equipped to deal with the complexity of non-infectious diseases.

"The healthcare system is still heavily geared to women and child programmes," says Prof Arokiasamy. "As a matter of policy priority, health-policy planners continue to be concerned with infant and maternal mortality, family planning and safe delivery, which take the major share of health infrastructure and financial resources."

Cultural and behavioural barriers

India's combination of urbanisation, increased mobility among young people, falling fertility rates and growing numbers of women in the workforce means that the

support given the elderly by the extended family is starting to break down. Meanwhile, much of the older population lives in poor rural areas, where access to healthcare is limited and long-term care is absent, except where provided informally by family members.

Other obstacles

India has a large human resources deficit in the healthcare sector. The country meets less than one-half of the WHO benchmark of 25 physicians and nurses per 10,000 people.³⁶

Geriatric and gerontology research is in its infancy. "There is no sense of ageing care in the public healthcare system, except in a few bigger hospitals, which have some specialisation and research competence," notes Prof Arokiasamy. "But in primary health centres or the next level of care, it's hard to find anyone who can handle non-communicable diseases or geriatric care."

India's end-of-life care services are particularly poor. Morphine access is extremely limited and, even in large oncologist hospitals, few staff are trained to administer painkillers, according to Human Rights Watch, a US-based advocacy organisation. ■

36 Health Research Policy and Systems. "Activating the knowledge-to-action cycle for geriatric care in India", 2011.



IN A NUTSHELL

Japan is often cited as an example for successfully managing care for its ageing population. But the question is whether it can afford to maintain quality and increase the quantity of these services, given the country's already stretched public finances. Indeed, the rapidly growing elderly population is seen as one of the main threats to Japanese economic success.

Country perspective Japan

The healthcare context

Demographic factors

Japan has the world's highest proportion of older adults. In 2010 the 28m people in Japan aged over 65 accounted for more than one-fifth (22%) of the total population. Given the rapidly slowing birth rate, this proportion is predicted to rise to more than one-third (34%) by 2030.³⁷

State of the nation's health

Older people in Japan are currently at their healthiest and wealthiest. The number of those considered healthy and active is predicted to rise from 18.9m in 2000 to 30.3m in 2025.³⁸ This will have an impact on healthcare spending, which is relatively low, at around 7.3% of GDP in 2011, or US\$3,388 per head (compared with 18% and US\$8,703 per head in the US, which spends the most on healthcare per head and as a percentage of GDP of the countries surveyed in this report). Japan's healthcare spending will continue to increase gradually in the next five years, albeit more rapidly than GDP, putting further strain on public finances.

Healthcare coverage

Since 1961, when Japan achieved universal coverage, citizens have accessed healthcare through their employer or regional governments. The country's social security system includes a range of medical plans for older adults, including the Long-term Care Insurance Scheme for the frail and elderly, which was introduced in 2000.

Healthy ageing and preventive care initiatives

Policy commitments

National policies supporting the elderly date back to 1874, when the Relief Order provided assistance for individuals 70 years or older who had no family support. In 1932 a public relief law gave government responsibility for supporting poor older people and lowered the age of eligibility for relief from 70 to 65 years. In the 1950s new public assistance laws improved living conditions for older people.

In recent decades, rapidly shifting demographics have pushed ageing further up the policy agenda. The Japanese government has introduced policies designed to contain costs, such as the incorporation of disability prevention services into long-term care benefits in 2005.

Preventive care

Japan has a comprehensive system of screening, tracking and follow-up. Employers are required to conduct annual health screenings for every employee; dependents are covered by corporate schemes. Those not covered by employers receive screening reminders from their municipal government.

"It can be pretty efficient," says Naoko Muramatsu, an associate professor in the University of Illinois at Chicago's Division of Community Health Sciences (School of Public Health) and a fellow at the Institute for Health Research and Policy at the university. "In two or three hours you are done, and after that you get a report. If you fail some items, you are called up and asked to participate in a health education programme."

Health awareness is part of Japanese culture. Healthcare tests are seen as part of daily life and participation in the life of the community.

The government has also taken targeted measures. In 2005 it defined "metabolic syndrome" (medical disorders that, when present concurrently, increase the risk of

³⁷ Economist Intelligence Unit. *From silver to gold: The implications of Japan's ageing population*, 2010.

³⁸ Ogawa, N and R Matsukura. "Ageing in Japan: The health and wealth of older persons", Nihon University, 2007.

Fundamental healthcare data: Japan

	2007 ^a	2008 ^a	2009 ^a	2010 ^b	2011 ^b	2012 ^c	2013 ^c	2014 ^c	2015 ^c	2016 ^c
Population (m)	127.4	127.3	127.1	126.8	126.5	126.1	125.7	125.2	124.7	124.2
Population age 50+ (m)	53.6	54.0	54.4	54.8	55.1	55.3	55.6	55.9	56.3	56.4
Doctors (per 1,000 pop)	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
Hospital beds (per 1,000 pop)	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7
Healthcare spending (US\$ per head)	2,278.5	2,589.8	2,773.2	3,117.0	3,388.0	3,514.0	3,492.0	3,475.0	3,448.0	3,380.0
Healthcare spending (% of GDP)	6.7	6.8	7.0	7.2	7.3	7.5	7.7	7.9	7.9	7.9
Consumer expenditure: Health (US\$, bn)	102.0	119.6	137.6	149.3	165.1	164.5	160.9	156.8	155.4	152.7
Life expectancy, total (yrs)	82.5	82.6	82.9	83.3	83.6	83.9	84.2	84.5	84.7	85.0
Life expectancy, male (yrs)	79.2	79.3	79.6	80.0	80.3	80.6	80.9	81.1	81.4	81.7
Life expectancy, female (yrs)	86.0	86.1	86.4	86.9	87.2	87.4	87.7	88.0	88.3	88.5

a Actual. b Economist Intelligence Unit estimates. c Economist Intelligence Unit forecasts.

developing cardiovascular disease and diabetes) and introduced measures to prevent the rise in incidence of this syndrome.

Government-sponsored self-help organisations, such as the Silver Human Resources Centres, promote active ageing and offer part-time paid employment to older local residents. Businesses, households and public organisations contract work to the centres, which match members' abilities and available time with work content and volume. The authorities believe that creating meaningful activities boosts older people's confidence, keeps them socially and physically active and establishes informal social-support systems in the community.

Barriers to preventive care

Funding constraints

Although Japan's healthcare expenditure is low compared with many countries (see Chart 3 in body of report), it could rise rapidly as ageing citizens demand lengthy medical treatments, rehabilitative care and nursing services. The government will also be under increasing pressure to make advanced technologies available to the elderly to detect or prevent chronic diseases.

Pensions, medical insurance, and welfare services and employment programmes meanwhile already eat up a large chunk of the national budget. They account for around 70% of social security expenditure.³⁹

Data-collection processes leave room for improvement, too, argues Hirofumi Nakayama, executive director of the Japan Stroke Association. He says that a "blind spot" exists in the analysis of information in that policy tends to focus on medical costs rather than data covering medical and nursing care costs in a holistic way. "Japan lacks appropriate data to carry out proper cost-benefit analysis to advance preventive care," he notes.

Cultural and behavioural barriers

In Japan, traditional family structures—in which the eldest son's wife is the primary caregiver for older parents—are breaking down. Between 1960 and 2006 the proportion of people over the age of 65 living alone or with only a spouse rose from 4% to 16% and from 7% to 37% respectively, while the proportion of those living with a child or other relatives fell from 87% to 48%.⁴⁰ "This is why we need community-based systems," says Prof Muramatsu. "That is a major direction the government is going to have to take."

Dr Nakayama believes that more could be done to improve awareness of the benefits of preventive care. "Affirming health literacy is crucial to reinforce the effectiveness of preventive measures," he says. Without a certain level of healthcare literacy, he explains, consultation rates fall and health checks fail to lead to the behavioural changes needed to prevent illness. "In terms of policy balance, we are one step behind," he says. ■

39 EIU. *From silver to gold: The implications of Japan's ageing population*, 2010.

40 Muramatsu, N. "Japan: Super-ageing society preparing for the future", *The Gerontologist* (51) 4, 2011.



IN A NUTSHELL

Russia's state healthcare system is in disarray. The WHO ranks Russia's medical care 130th in the world. Lack of funding has been compounded by the country's sluggish reaction to demographic changes and falling life expectancy, as well as extremely low personal motivation among Russian citizens to take responsibility for their own health. Such factors make it hard to redesign the healthcare system in order to promote longevity and healthy ageing.

Country perspective Russia

The healthcare context

Demographic factors

Russia's population is shrinking and ageing. According to the WHO, by 2016 one in five Russians will be 60 years old or over.

State of the nation's health

After the break-up of the Soviet Union in 1991 and the 1998 Russian financial crisis, life expectancy in the country started to fall sharply. By 2003 the WHO estimated that, on average, an individual born in Russia could expect to live to 65 years—far lower than in much of Europe.

One cause of rising mortality and falling longevity was the collapse of the Soviet-era social, economic and healthcare system, precipitating a sharp increase in infectious diseases such as tuberculosis, hepatitis and HIV/AIDS. Drinking, smoking and poor diet contribute to unhealthy ageing in the country.

Non-infectious diseases (accounting for 80% of deaths in Russia) and mortality from unintentional injuries increased fivefold between 1991 and 2003.⁴¹ Collectively, cardiovascular diseases, cancer, diseases of the digestive system, respiratory diseases and diabetes mellitus accounted for an estimated 91% of deaths in 2006.⁴²

Spending on healthcare—the equivalent of around 5.3% of GDP in 2011, and forecast to remain constant through 2016—is insufficient to meet these challenges. Public spending has increased by only 4% in the past decade. Private insurance is underdeveloped in Russia, and private spending is largely out-of-pocket, with patients paying for treatment.

Healthcare coverage

Article 41 of the constitution protects the universal right of Russian citizens to healthcare, with provision of universal, free basic services. In 1993 the country adopted a national system of obligatory medical insurance, and has decentralised healthcare responsibility to the regions. The result has been an ineffective and complicated insurance system that is unable to meet the medical needs of the population.

Healthy ageing and preventive care initiatives

Policy commitments

The 1993 Law on Health Protection of Citizens of the Russian Federation included statutes relating to disease prevention and health promotion. In 2006 the National Health Project "Zdorovie" allocated funding from the federal budget to healthcare, with an emphasis on promoting healthier lifestyles.

Preventive care

Health reforms implemented since 1991 work to reduce inequalities in healthcare access and improve infrastructure. But policymakers have focused on medical services rather than preventive measures, which remain limited.

The Zdorovie project focuses on primary healthcare, provision of high-technology medical care and immunisation against infectious diseases such as hepatitis and HIV/AIDS. But although influenza vaccination for adults is widely promoted, measures to increase general adult immunisation are not part of the plan, says Alexander Lindenbraten, a professor in the Department of Health Care Administration and Economy at the Higher School of Economics at Moscow's National Research University.

⁴¹ Levintova, M and T. Novotny. "Noncommunicable disease mortality in the Russian Federation: From legislation to policy", WHO, 2004.

⁴² World Bank. *Public spending in Russia for health care: Issues and options*, Human Development Department, Russian Federation Country Management Unit, July 2008.

Fundamental healthcare data: Russia

	2007 ^a	2008 ^a	2009 ^a	2010 ^b	2011 ^b	2012 ^c	2013 ^c	2014 ^c	2015 ^c	2016 ^c
Population (m)	142.4	141.8	141.9	142.9	143.0	142.8	142.5	142.2	141.8	141.4
Population age 50+ (m)	45.1	45.7	46.6	47.8	48.7	49.4	50.0	50.4	50.7	50.9
Doctors (per 1,000 pop)	4.3	4.5	4.8	4.9	4.9	4.9	5.0	5.0	5.0	4.9
Hospital beds (per 1,000 pop)	10.0	9.9	9.9	9.8	9.7	9.6	9.5	9.4	9.3	9.2
Healthcare spending (US\$ per head)	483.9	608.9	457.0	552.0	688.0	709.0	762.0	826.0	909.0	1,011.0
Healthcare spending (% of GDP)	5.3	5.2	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
Consumer expenditure: Health (US\$, bn)	19.6	26.0	22.3	26.6	32.4	33.9	37.7	41.9	46.6	52.6
Life expectancy, total (yrs)	65.9	65.9	66.0	66.2	66.3	66.5	66.7	66.9	67.2	67.4
Life expectancy, male (yrs)	59.1	59.2	59.3	59.5	59.8	60.1	60.5	60.9	61.3	61.7
Life expectancy, female (yrs)	73.0	73.1	73.1	73.2	73.2	73.2	73.2	73.3	73.4	73.5

a Actual. b Economist Intelligence Unit estimates. c Economist Intelligence Unit forecasts.

Barriers to preventive care**Funding constraints**

Russia's financing for disease treatment is insufficient, and few funds are allocated to preventive care. Prof Lindenbraten says that although more attention has been being paid to preventive care in recent years, little evidence has yet emerged of substantial progress in addressing ageing. "Three years ago, when discussion on formation of a healthy lifestyle was brought [forward], risk factors in the elderly population group were also considered," he says. "But unfortunately, it is too early to speak about effectiveness of these efforts."

Doctors have no incentive to provide preventive measures, as insurance payments cover patient visits rather than healthy outcomes. "From an economic perspective, the medical system does not need a healthy population," according to Prof Lindenbraten, who is also the deputy director of the National Research Institute of Public Health at the Russian Academy of Sciences. "Our medical insurance system is based on financing particular cases, whenever a person goes to see the doctor."

Although they are making strides, policymakers in Russia do not prioritise healthcare. A new system implemented in 2010 required employers to increase contributions to the Pension Fund as well as other social security funds, but contributions were cut in 2012 after the then president, Dmitry Medvedev, determined that the payments were hurting the country's business environment.

Cultural and behavioural barriers

Social stratification in Russia has intensified in recent years, with a widening gap between wealthy cities and poor rural areas. As young people have sought work in urban centres, the proportion of older people in rural areas has grown.

Meanwhile, the paternalistic Soviet legacy persists in cultural reluctance by individuals to take responsibility for their own healthcare. "Russian citizens don't have any motivation to lead a healthy lifestyle or apply preventive healthcare measures in their lives," says Prof Lindenbraten.

Other obstacles

The Zdorovie project has focused on health examinations, rather than preventive measures. "The idea of regular obligatory medical examinations is to find a problem and stimulate a person to treat it, or prevent complications," notes Prof Lindenbraten. "But our population is completely uninterested in treating their problems after they have been found."

Gerontology specialists, geriatric professionals and social workers are in short supply and the state system's doctors are in general poorly trained. Hospitals are often in need of modernisation, and waiting lists are long. ■



IN A NUTSHELL

South Africa has scarce healthcare resources, and the HIV/AIDS epidemic has marginalised the older population in health service provision and delivery. The system prioritises maternal and child health, as well as younger people's healthcare needs, leaving few resources for older adults, particularly in rural areas.

Country perspective South Africa

The healthcare context

Demographic factors

Life expectancy in South Africa is remarkably low, at an average of 49.3 years in 2011, and is only expected to reach 50 years in 2016. People aged 60 and above represented around 7.6% of the population in 2010. By 2015 the cohort is forecast to grow to 13%, according to Jaco Hoffman, a senior research fellow at the Oxford Institute of Population Ageing. Relatively low life expectancy is one of the reasons why the government focuses healthcare efforts on the younger population.

State of the nation's health

South Africa is combating a host of infectious diseases such as malaria, tuberculosis and (belatedly) an HIV/AIDS pandemic that will contribute to a contraction of the population in the coming years. Non-infectious diseases such as diabetes, cancer and lung disease account for around 30% of the country's disease burden.

The government is allocating resources to meet these challenges. Healthcare expenditure was estimated at US\$34.5bn in 2011, equivalent to 8.5% of GDP. Spending is expected to grow by 6% each year on average through 2016.

Healthcare coverage

The public health system covers 80% of South Africa's population. A means-tested social pension programme gives beneficiaries access to free treatment at public healthcare facilities and state-subsidised residential care facilities, if available. However, beneficiaries other than older workers are required to be economically inactive.

Healthy ageing and preventive care initiatives

Policy commitments

Since 1994 South African health reforms have focused on delivering primary care to once-excluded segments of the population. But no such dedicated services exist for older people. As part of a plan to modernise tertiary health services, the development of geriatric care was singled out as one of the areas in need of urgent expansion. However, there are no signs of this plan being implemented.

Preventive care

Healthcare reforms have included a shift towards preventive care. They have increased access to clinic and community health by expanding the number of clinics and providing new equipment to existing ones.

In partnership with non-governmental organisations, the Department of Health is running a programme to promote healthy lifestyles and management of non-infectious diseases. Measures include training community health workers to provide educational material to local residents and to create health goals for individuals, who can then manage their conditions with the help of a community-based support group.

As part of the Vision 2020: Right to Sight: Prevention of Blindness campaign, a cataract surgery programme is being run in collaboration with national, provincial and district committees. Older people are screened for eye problems at pension collection points and old-age homes and can be referred to specialists for visual acuity assessments and possible surgery.

Such programmes are rare in South Africa, however, and the need to address the health of the older population is urgent, says Mr Hoffman. "With a diminishing informal support base for the ageing population, there will be an increased demand for formal support in the shape of institutional care, home-based care and community support groups for conditions such as dementia and stroke care."

Fundamental healthcare data: South Africa										
	2007 ^a	2008 ^a	2009 ^a	2010 ^b	2011 ^b	2012 ^c	2013 ^c	2014 ^c	2015 ^c	2016 ^c
Population (m)	48.4	48.8	49.1	49.1	49.0	48.8	48.6	48.4	48.3	48.3
Population age 50-84 (m)	7.4	7.6	7.7	7.9	8.0	8.2	8.3	8.4	8.5	8.6
Doctors (per 1,000 pop)	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Hospital beds (per 1,000 pop)	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
Healthcare spending (US\$ per head)	508.9	488.6	493.3	630.0	708.0	657.0	662.0	674.0	672.0	658.0
Healthcare spending (% of GDP)	8.6	8.7	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5
Consumer expenditure: Health (US\$, bn)	14.0	13.3	14.5	18.1	20.6	20.9	22.3	24.4	26.1	27.7
Life expectancy, total (yrs)	49.2	48.9	49.0	49.2	49.3	49.4	49.5	49.6	49.7	50.0
Life expectancy, male (yrs)	49.7	49.6	49.8	50.1	50.2	50.3	50.4	50.5	50.7	51.0
Life expectancy, female (yrs)	48.6	48.2	48.1	48.3	48.4	48.5	48.5	48.6	48.7	49.0

a Actual. b Economist Intelligence Unit estimates. c Economist Intelligence Unit forecasts.

Barriers to preventive care

Funding constraints

Increasing prevalence of chronic disease and disability is demanding investment in related healthcare services as well as long-term care and community support services. Neither is sufficient in South Africa. The country's largely poor citizens rely on the state for pensions, healthcare and social services. As the population ages, the burden on public finances will increase dramatically.

In South Africa, expansion of the older population has coincided with the worst effects of the HIV/AIDS epidemic. This has left the healthcare authorities with few financial resources to devote to preventive care for the elderly.

Other obstacles

Demographic challenges are exacerbated by South Africa's political history. A large population of black older people (representing almost 63% of the over-60s group) who have been disadvantaged over the course of their lives are suffering the effects of this in old age.

The focus on diseases such as HIV/AIDS means that preventive care is usually targeted at younger people. Older adults are given little information on healthy ageing

or preventive measures, and must compete for services with all other age groups. "The preventive, curative and rehabilitative needs of older healthcare clients are mainly integrated into general sessions at primary clinics," explains Mr Hoffman. "However, in practice, older patients are marginalised at the facilities, and very few are referred to secondary or tertiary levels for investigation and management."

The country's dearth of health professionals equipped to address older people's medical needs compounds this problem. A handful of geriatricians are registered and only four of South Africa's eight medical schools are registered for training in geriatric medicine. "Healthcare services targeted at older adults, as well as research, education and training in geriatrics and gerontology, have received scant attention," notes Mr Hoffman.

In rural areas—where there is underdeveloped infrastructure, large distances between communities and the nearest hospital healthcare centre, and lack of affordable transport options—older people tend to seek care only when their condition is critical. Lack of sufficient pharmaceutical supplies also means that patients often go without medical treatment for chronic conditions. ■

**IN A NUTSHELL**

Having successfully tackled certain diseases and increased its citizens' longevity, the UK is faced with a wave of complex lifestyle and age-related conditions as well as growing health resource consumption by the frail and elderly. Policymakers are looking for possible solutions in the integration of services, whereby health and social care providers collaborate to ensure that individuals get the right treatment and care. However, the structural separation of healthcare and social services is a potential barrier to this approach. Meanwhile, reforms of the state-funded National Health Service (NHS) will change how healthcare services are commissioned.

The healthcare context**Demographic factors**

Although the number of older people in the UK is growing rapidly, the proportion of very old people in the population is rising faster. With 10m people over the age of 65 at present, by 2050 this number will have almost doubled, to 19m. The number of people aged 80 years and over is projected to double (from 3m to 6m) even sooner, by 2030, and will reach 8m by 2050.⁴³ The UK Department of Health's "Ageing Well" literature applies to individuals aged 45 years and over, increasing the number of people it considers to be "ageing".

State of the nation's health

Chronic illnesses, such as cardiovascular diseases and cancer, are the UK's leading causes of death. Although smoking rates have declined, adult obesity is rising sharply—it is forecast to increase by 73%, from 15m to 26m, between 2008 and 2030⁴⁴—leading to the increasing incidence of diabetes. Meanwhile, the prevalence of age-related diseases such as Alzheimer's and Parkinson's is also rising. "In the UK, the additional years of life haven't been particularly healthy," says David Buck, a senior fellow in public health and health inequalities at the King's Fund. "We're not ageing well compared to some other countries."

Healthcare coverage

With universal healthcare, UK healthcare services are delivered through the NHS. However, strained public finances continue to hamper healthcare delivery. In 2011 spending on healthcare equalled around 9.8% of GDP. Meanwhile, expenditure on private healthcare is growing.

Healthy ageing and preventive care initiatives**Policy commitments**

Current NHS reforms under the Health and Social Care Act decentralise control of healthcare and give doctors greater power to commission services for their patients. However, some worry that a more localised system will weaken national strategies, making it harder to address certain areas of care, such as treatment for older people with long-term conditions. In the public spending squeeze, local government budgets are meanwhile likely to be hardest hit, constraining the resources available for healthcare.

In order to manage costs and improve care delivery, UK policymakers are turning to technology. As part of the Department of Health's 3millionlives initiative, the government plans to use telehealth and telecare to improve life for those with long-term conditions and social care needs. Trials so far have shown a 45% drop in mortality rates, a 20% reduction in emergency admissions and a 14% drop in elective admissions.⁴⁵

Preventive care

Integrating social services and healthcare more closely is a major focus for UK policymakers. Integrated services can be powerful tools in preventive care. "Older people need help not just with their disease or medical problem, but with activities of daily living," says Kenneth Howse, a senior research fellow at the Oxford Institute of Population Ageing. "And that may help to slow the deterioration in the medical condition. So the two things are interrelated and there's a preventive element in the social care."

In pilot projects across the UK, NHS centres (including sites focused on care for older people) are examining the potential for integrated care to deliver better services for older people. For example, the Torbay Care Trust, a healthcare organisation based in south Devon, has pooled

⁴³ UK Parliament. "The ageing population", 2010.

⁴⁴ "Urgently needed: A framework convention for obesity control", The Lancet (378) 9793, August 2011.

⁴⁵ Department of Health. *Whole system demonstrator programme: Headline findings*, December 2011.

Fundamental healthcare data: UK

	2007 ^a	2008 ^a	2009 ^a	2010 ^b	2011 ^b	2012 ^c	2013 ^c	2014 ^c	2015 ^c	2016 ^c
Population (m)	61.0	61.4	61.8	62.3	62.7	63.1	63.6	64.0	64.4	64.9
Population age 50-84 (m)	20.8	21.1	21.5	21.9	22.3	22.8	23.3	23.8	24.3	24.7
Doctors (per 1,000 pop)	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.2	2.2
Hospital beds (per 1,000 pop)	3.7	3.8	3.3	3.2	3.1	3.0	2.9	2.8	2.7	2.6
Healthcare spending (US\$ per head)	3,893.0	3,875.7	3,474.2	3,496.0	3,750.0	3,810.0	3,912.0	4,061.0	4,226.0	4,398.0
Healthcare spending (% of GDP)	8.4	8.9	9.8	9.6	9.7	9.8	9.9	10.0	10.0	10.1
Consumer expenditure: Health (US\$, bn)	30.8	27.9	24.9	24.9	27.5	28.0	29.3	30.9	32.8	34.7
Life expectancy, total (yrs)	79.5	79.6	79.8	79.9	80.1	80.2	80.3	80.4	80.5	80.7
Life expectancy, male (yrs)	77.5	77.6	77.7	77.8	78.0	78.1	78.2	78.3	78.4	78.5
Life expectancy, female (yrs)	81.6	81.8	82.0	82.1	82.3	82.4	82.5	82.7	82.8	83.0

a Actual. b Economist Intelligence Unit estimates. c Economist Intelligence Unit forecasts.

budgets for health and social care and established integrated care teams that work closely with general clinicians. As a result, the use of hospital beds, care homes and emergency services has fallen for people over the age of 65.

The UK has one of the world's best healthcare data-collection systems, and when it comes to vaccination, this has contributed to the success of the country's immunisation programmes (particularly with respect to influenza). However, during the winter of 2010-11 slow take-up of the vaccine followed by a rush and supply shortages prompted a re-examination of adult immunisation, with calls for a "life course" approach to vaccination and recommendations for immunisation of all citizens over 50 years old, vaccination record cards for adults, expansion of vaccination programmes into community pharmacies and trials of workplace vaccination for workers over 50.⁴⁶

Meanwhile, some companies are playing a role by providing flexible working, graduated retirement and part-time work options. These efforts are driven by more than altruism. B&Q, a local do-it-yourself (DIY) retailer, has found that hiring older workers has enhanced sales and customer loyalty. Other companies are trying to retain skilled employees by keeping older employees in the workplace longer.

Barriers to preventive care

Funding constraints

The UK's pace of ageing is slower than in some European countries. Yet the higher proportion of very old people in the population is likely to put tremendous pressure on the NHS since, according to the Department of Health, the average cost of hospital and community health services for an 85 year old is around three times greater than for someone between the ages of 65 and 74.⁴⁷ Public-spending cuts will therefore have an impact on elderly care, just as the ageing population is growing.

Other obstacles

Given its citizens' increasing longevity, one of the UK's biggest challenges is achieving a "compression of morbidity"—that is, increasing healthy life expectancy so that people spend a greater proportion of their later years in good health. "Because the system has been so successful, we're living much longer," says Mr Buck. "We end up at 90 to 95, and however healthily we've lived, we're going to be frail and mental health issues and dementia are lying in store for us—and at the moment there are no obvious cures or ways to avoid that."

One of the challenges for the UK is that healthcare and social care are delivered and financed through different systems. State healthcare is provided to all free of charge while social services are means tested. This dual system can lead to inequalities, split incentives, duplication of services or confusion as to whether individuals should be receiving care from nurses or social workers. ■

⁴⁶ The International Longevity Centre. *Life course immunisation: Improving adult immunisation to support healthy ageing*, August 2011.

⁴⁷ UK Parliament. "The ageing population", 2010.



IN A NUTSHELL

Polarised political agendas are casting a shadow of uncertainty over the US healthcare system. In June 2012 the Supreme Court ruled that the 2010 Affordable Care Act was constitutional. However, the implementation of the Obama administration's healthcare package will depend on the outcome of the US presidential and congressional elections in November. Meanwhile, care services for older people remain highly fragmented. Efforts are being made to introduce a more co-ordinated approach that cares for individuals (including older adults) across their lifespan, with payment systems that reward health outcomes rather than individual treatments.

Country perspective The US

The healthcare context

Demographic factors

In 2011 an estimated 101.1m Americans were aged 50 years or over, representing more than 32% of the population. This number is predicted to rise to 111.3m by 2016. Government definitions of older people range from those aged 40 years or more (for older workers) to 72 and older (when Social Security drops its reduction of benefits for earnings). The Healthy Ageing programme of the Centers for Disease Control and Prevention (CDC) defines ageing people as individuals of 50 years old or more.

State of the nation's health

Increased US life expectancy has shifted the leading causes of death from infectious diseases and acute illnesses to chronic diseases and degenerative illnesses. Some 80% of older Americans live with at least one chronic condition, according to the CDC. One in eight aged 50 years old or more lives with Alzheimer's disease.⁴⁸ The obesity epidemic will also create health problems for millions of Americans as they age. Indeed, patients with chronic conditions already account for more than 80% of total healthcare spending, according to Rodney Zimmel, leader of McKinsey & Company's Healthcare Systems & Services practice in the Americas, who adds that on a per-patient basis these patients account for five times more than the average.

Healthcare coverage

The US does not have universal coverage. Most healthcare costs are covered by private insurance schemes. Two federally funded programmes cover individuals aged 65 and above (Medicare) and low-income families (Medicaid). The CDC estimates that more than 22% of adults between the ages of 18 and 64 years old are uninsured.

Healthy ageing and preventive care initiatives

Policy commitments

The ageing population has been on the US policy agenda for some time. In 1965 the Older Americans Act established the Administration on Ageing and set grants for community planning and social services, research and development, and personnel training in the field of ageing.

Through Healthy People 2020, the Department of Health and Human Services has set ten-year science-based national objectives. These include immunisation goals, such as coverage against conditions like pneumococcal disease for 90% of non-institutionalised adults aged 65 and over (for those who are not in hospitals or long-term care facilities).

Preventive care

The cost crunch is driving the US health authorities to seek alternative ways of promoting health among older adults. The Pioneer Accountable Care Organisations initiative, announced in 2011 and encompassing 32 healthcare organisations nationwide, aims to improve health for Medicare patients through status assessments, controlling blood pressure and diabetes, and scrutinising immunisation rates and take-up of preventive services. The emphasis is on delivering better services and saving money through more co-ordinated care.

More holistic care for older people is also on the agenda for the Healthy Ageing programme and the Healthy Ageing Research Network (CDC-HAN), part of the CDC, which is working closely with the Administration on Ageing. The Healthy Ageing programme collects data on areas such as clinical preventive services for individuals between the ages of 50 and 64 so that state authorities and local communities can determine which areas to focus on.

"One of our big efforts is to combine our energies across approaches, given that many of the underlying risk factors for cardiovascular disease and for cancer and other chronic

⁴⁸ Alzheimer's Association. 2012 Alzheimer's disease: facts and figures, 2012.

Fundamental healthcare data: US

	2007 ^a	2008 ^a	2009 ^a	2010 ^b	2011 ^b	2012 ^c	2013 ^c	2014 ^c	2015 ^c	2016 ^c
Population (m)	301.6	304.4	307.0	309.4	311.8	314.3	317.0	319.5	322.1	325.0
Population age 50-84 (m)	91.7	94.0	96.3	98.7	100.9	103.1	105.3	107.4	109.4	111.3
Doctors (per 1,000 pop)	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.4	3.4
Hospital beds (per 1,000 pop)	3.2	3.1	3.0	3.0	2.9	2.9	2.9	2.9	2.9	2.9
Healthcare spending (US\$ per head)	7,489.3	7,747.4	8,010.8	8,387.0	8,703.0	9,002.0	9,311.0	9,638.0	10,075.0	10,544.0
Healthcare spending (% of GDP)	16.1	16.5	17.6	17.9	18.0	18.0	18.1	18.1	18.3	18.5
Consumer expenditure: Health (US\$, bn)	1,845.7	1,936.7	2,021.9	2,100.9	2,213.7	2,312.7	2,412.6	2,527.9	2,653.9	2,786.4
Life expectancy, total (yrs)	78.0	78.1	78.1	78.2	78.4	78.5	78.6	78.8	78.9	79.0
Life expectancy, male (yrs)	75.2	75.3	75.7	75.8	75.9	76.1	76.2	76.3	76.5	76.6
Life expectancy, female (yrs)	81.0	81.1	80.7	80.8	80.9	81.1	81.2	81.3	81.4	81.5

a Actual. b Economist Intelligence Unit estimates. c Economist Intelligence Unit forecasts.

conditions are the same," says Lynda Anderson, director of the Healthy Ageing programme in the Population Health division at the CDC's National Center for Chronic Disease Prevention and Health Promotion.

Meanwhile, US healthcare experts emphasise the need to foster healthy lifestyles and behaviours earlier in life. "We talk about developing healthy lifestyles and healthy behaviours earlier in the life course, so that by the time one reaches old age one is reaching it with as positive a health status as can be," says Mary Altpeter, research associate at the Center for Health Promotion and Disease Prevention at the University of North Carolina.

Other initiatives

The US healthcare authorities have recognised the need to collaborate with other sectors. "Funding is very, very constrained," according to Dr Altpeter. "So we are looking at partnerships with the healthcare sector, health insurers and the private sector, business and industry, to provide programming for their clientele."

The good news for policymakers is that large private-sector employers are promoting wellness among employees through smoking cessation, diet and exercise programmes; some also hold annual flu-vaccine drives. Companies, which often pay for employees' health insurance plans, have a strong business case to invest in workforce health.

But company-sponsored wellness has other benefits. "This helps employee satisfaction levels and shows their commitment to individuals," says David Knott, who leads McKinsey's Center for Health System Reform and is a director in the firm's healthcare practice. Also, "there is some evidence from employers that it helps with productivity."

Yet once individuals have retired, they lose access to

these programmes. Thus, while US corporations have a role to play in promoting healthy ageing, their efforts do not mean that policymakers can afford to relax.

Barriers to preventive care

Funding constraints

An ageing population coincides with shrinking US healthcare budgets. Intense political pressure to cut government spending will probably lead to changes in the country's Medicare programme in the coming years.

Meanwhile, as ageing baby boomers are likely to be the main consumers of health services (healthcare for an older American costs between three and five times more than for younger patients), demographic shifts could push healthcare spending up by a projected 25% by 2030, according to CDC estimates.

Cultural and behavioural barriers

Not all healthy ageing challenges are financial. US adult immunisation coverage remains well below Healthy People 2020 targets. In 2008 just 60% of adults aged 65 years and over reported ever having received vaccination against pneumococcal disease—the target is 90%.⁴⁹

Part of the problem is that systems are not set up to encourage adults to use immunisation services. "We have not created for adults what we have for immunisations in children," says William Schaffner, a professor and chair of the Department of Preventive Medicine at Vanderbilt University. "Virtually every child in the US up to the age of 19 has access to vaccines under public or private insurance coverage. Once you cross the threshold of the 19th birthday, you're often on your own." ■

⁴⁹ Healthy People 2020. Immunisation and infectious diseases page.

Whilst every effort has been taken to verify the accuracy of this information, neither The Economist Intelligence Unit Ltd. nor the sponsor of this report can accept any responsibility or liability for reliance by any person on this white paper or any of the information, opinions or conclusions set out in the white paper.

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