ACTIVE AGEING:

A Policy Framework in Response to the Longevity Revolution

INTERNATIONAL LONGEVITY CENTRE BRAZIL

The International Longevity Centre-Brazil (ILC-Brazil) is an independent think-tank based in Rio de Janeiro that was inaugurated in 2012. Its mission is to **promulgate ideas and policy guidance to address population ageing that are based on international research and practice with a view to advance Active Ageing**. The Centre places particular emphasis on knowledge development and exchange, evidence-based strategies, social mobilization, and international networking with an additional focus on Brazil and the State of Rio de Janeiro.

ILC-Brazil is a partner in the Global Alliance of International Longevity Centres (ILC-GA), an international consortium with consultative status to the United Nations that has representation in seventeen countries. Current member organizations are located in Argentina, Australia, Brazil, Canada, China, the Czech Republic, the Dominican Republic, France, Germany, India, Israel, Japan, the Netherlands, Singapore, South Africa, the United Kingdom and the United States of America. The Centres work both independently and collaboratively. The global secretariat is located in New York and the present Co-Presidents of the Alliance are Baroness Sally Greengross (ILC-UK) and Dr Alexandre Kalache (ILC-Brazil).

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ACKNOWLEDGEMENTS

FOREWORD

The World Health Organization's (WHO) focus on Active Ageing was established soon after I took over responsibility for that organization's global programme on Ageing and Health in 1994. The intention was to identify the features and to refine the language of a fresh ideological approach to ageing. It was intended to reference a continued participation in social, economic, spiritual, cultural and civic affairs, not simply physical activity or longer working life. However, the impetus for the original WHO *Active Ageing: A Policy Framework* was only provided a few years later, by the 2002 United Nations' World Assembly on Ageing.

The Policy Framework was the culmination of a lengthy developmental process which started in 1999 – when WHO celebrated the International Day of Older Persons, in the International Year of Older Persons – by orchestrating a global mobilization that successively encircled the world through the time zones and enlisted the participation of thousands of cities and millions of people in what was one of the largest ever single health promotion manifestations: the *Global Embrace on Active Ageing*. Encouraged by the worldwide constituency that was galvanized by the event, WHO initiated a wide-ranging consultative process to challenge existing paradigms and to form policy around the Active Ageing ideology. Workshops and seminars involving academic, governmental and civil society bodies were conducted in all regions which in turn led to a defining conference at the WHO Kobe Centre in January 2002.

Some 15 years have passed since the preliminary work on Active Ageing was undertaken. A lot has been learned and much new evidence has been presented over this period. Given that the Active Ageing concept has proven to be so influential in guiding policies and research agendas throughout the world, I was determined that one of the first priorities at the newly-formed International Longevity Centre Brazil (ILC-Brazil), was to comprehensively revisit the document.

It was our great privilege and gain that ILC-Brazil was able to recruit Dr Louise Plouffe from the onset. Her relocation to Brazil was in itself a testament to the Active Ageing philosophy. She learned new skills (among them mastering a new language) and reinvented herself in an entirely fresh context where she could continue her valuable contributions. Her principal task in this new role was to work on the Active Ageing revision. I had no doubt that she would accomplish it superbly well. We had after all, worked side by side at WHO to launch the most cogent application of the Active Ageing approach, the *Age-Friendly Cities Guide* (2007), the foundation stone of the continuously expanding Age-Friendly Cities and Communities movement. She was building on a solid academic background and twenty years coordinating ageing policies for the Federal Government of Canada. Louise began with a comprehensive review of the literature. To the

Revision, we added new concepts and ideas developed through my years as Thinker-in-Residence to the Government of South Australia.

Additionally recruited was Ina Voelcker, who had also been a key member of our WHO Geneva team. With a Masters degree from the Institute of Gerontology of the University of London and a working background with HelpAge International, she brought further competencies and enthusiasm to the revision process. To complete the Active Ageing team in Rio de Janeiro, was Silvia Costa, an exceptional Communications Officer with many years experience in public health and Marcia Tavares, a PhD student in Production Engineering with a research specialization in lifelong learning and ageing workforce management. Special mention must also be given to Peggy Edwards, a very experienced public health writer who drafted the original 2002 Active Ageing Policy Framework and, now, the Executive Summary of the 2015 Active Ageing Revision.

The drafting of the Revision document was facilitated by substantial input from dozens of partners – from governmental officers to civil society and academic colleagues. Views were solicited from all members of the ILC Global Alliance (ILC-GA). We followed the same approach that was adopted in the writing of the original Framework – ensuring a peer review in order to further enrich the document.

Active Ageing, both as a concept and a policy tool, has evolved and will continue to evolve, in the context of shifting political and social landscapes. The intention is not that this Active Ageing Revision is a finished, static product but that it should reflect the dynamism of worldwide population ageing by becoming an ever-evolving resource by means of an on-going interactive process. The vision is to accredit academic, governmental and civil society agencies, so that – in a Wiki-works like format – new evidence can be continually uploaded. The expectation is that the document will acquire stronger regional relevance and greater institutional specificity, through a dynamic process of constant updating. Even prior to the official launch of the Revision Document, interested parties have presented themselves. Later in the year we will be launching a Portuguese version of the Framework which will give particular prominence to the Brazilian context and literature. Subsequently, we will develop a Latin American version. To this end, we have recruited a widely experienced international public health specialist from Argentina, Dr Diego Bernardini. Appropriate recognition will be given to partners who bring focus to their particular regions and we warmly welcome all submissions.

Alexandre Kalache
President, International Longevity Centre Brazil
Co-President, Global Alliance of International Longevity Centres

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INTRODUCTION

The publication of *Active Ageing: A Policy Framework (1)* in 2002 by the World Health Organization (WHO) stands out as an international policy landmark. Intended to complement the second World Assembly on Ageing, the WHO report set out a comprehensive and innovative road map for health policy that has inspired and guided policy development at state, national and regional government levels.

Since its release, the *Active Ageing Framework* has informed ageing policy development in a number of countries and states, including Australia, New Zealand, Sweden, Great Britain and the USA *(2)*; Canada *(3)*; Singapore *(4)*; Spain *(5)*; Portugal *(6)*; Costa Rica *(7)*; Chile *(8)*; Brazil *(9)*; Québec *(10)* and Andalucía *(5)*. At the intergovernmental level, the European Commission declared 2012 to be the European Year of Active Ageing and Solidarity Between Generations *(11)*. The United Nations Economic Commission for Europe jointly with the European Commission has developed an Active Ageing Index, consisting of 22 indicators to monitor the level to which the potential for Active Ageing is being realized in Europe *(12)*. Active Ageing is the concept underlying the *WHO Age-Friendly Primary Health Care Centre Toolkit (13)* and the WHO *Age-Friendly Cities Guide (14)*. It also underpins the WHO Global Network of Age-Friendly Cities and Communities that is aimed at making cities, communities, states and nations more accessible and more inclusive for older persons and all ages along the life course *(14)*. In addition, the principles of Active Ageing have framed recommendations to enhance preparedness and response for emergencies and humanitarian crises that embrace older adults' needs and contributions *(15)*.

The culmination of two years of workshops and extensive discussions with outside experts, governments and non-governmental organizations, *Active Ageing: A Policy Framework* signalled a substantial change in paradigm[I]. Breaking away from a narrow focus on disease prevention and health care, WHO championed the goal of Active Ageing, defined as "the process of optimizing opportunities for health, participation and security in order to enhance the quality of life as people age" *(1)*. Working within the constraints of language, "active" was felt to convey greater inclusiveness than alternative descriptors such as "healthy", "successful", "productive" or "positive". The intention was to clearly flag participation in social, economic, cultural, spiritual and civic affairs – not only physical and economic activity. Thus, the concept established not only objectives for health but also for participation and security, because all three are inextricably linked. The policy framework was designed to apply to both individuals and population groups. Its intention was to enable people to realize their potential for physical, social and mental well-being throughout the entirety of the life course and to participate in society according to their needs, desires and capacities – at the same time, providing them with adequate protection, security and care when required. The report framed ageing within a life-course perspective to create a basis for a policy continuum to optimize quality of life from birth to death and to

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[I] Workshops were conducted in Argentina, Brazil, Botswana, Chile, Hong Kong, Jamaica, Jordan, Lebanon, Malaysia, the Netherlands, South Africa, Spain and Thailand. Particularly useful were a series of joint workshops with the UK Faculty of Community Health. Experts were appointed to provide evidence and models of good practice from all regions and drafts were circulated to academics and non-governmental organizations from both developed and developing countries. The support provided by the Canadian Government was particularly vital.

encourage the engagement of all age groups. A further advance was to ground Active Ageing within the health promotion model *(16)* as a basis for coordinated action across multiple policy sectors. Finally, WHO anchored Active Ageing within a rights-based approach informed by the *United Nations Principles for Older Persons (17)* rather than a needs-based approach.

The fundamentals that the *Active Ageing Framework* addressed are as relevant today as they were in 2002:

How do we help people remain independent and active as they age? How can we strengthen health promotion and prevention policies, especially those directed to older people? As people are living longer, how can the quality of life in old age be improved? Will large numbers of older people bankrupt our health care and social systems? How do we best balance the role of family and the state when it comes to caring for people who need assistance as they grow older? How do we acknowledge and support the major role that people play as they age in caring for others?[II] (1)

The *Active Ageing Framework*, however, is now more than 13 years old, and there is a need to contemporize it so that it can continue to act as a beacon for decision-makers. Since the publication of the framework, some issues, such as the rights of older persons, the prolongation of working lives, lifelong learning, the quality of life of frail, dependent older persons, and of those at the end of life, have gained more prominence. Resilience has emerged as a developmental construct that can shed light on the process of Active Ageing and there is new data and research to be explored. Ageing needs to be more closely examined in the context of other major trends, notably urbanization, globalization, migration, technological innovation, as well as environmental and climate change. Furthermore, growing inequities, both between and within regions, need to be much more fully addressed within the context of population ageing. In tandem with these developments has been the rise of a strong international movement that recognizes and reinforces the specific human rights of older persons.

With its broad scope and focus on the determinants of Active Ageing, this publication ultimately seeks to reinforce both the past and present initiatives of the WHO and to complement and to add value to the 2015 *World Report on Ageing and Health.*

[II] The highlighted quotes are excerpts of sources that fundament this work, such as the 2013 Thinkers in Residence Report, entitled *The Longevity Revolution (21).*

SECTION I:
THE LONGEVITY REVOLUTION

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The Demographic Revolution

The world is ageing rapidly. The lasting legacy of the 20th century is the gift of longer life. As a result of the rapid reduction of mortality in all countries, including those with low and middle income, compounded by high birth rates in the two decades after World War II (the baby boom), there are already 810 million people aged 60 and older. Every second, two people in the world celebrate their 65th birthday *(18)*. These extra years of life are an unprecedented privilege. What is happening is nothing short of a revolution – a longevity revolution.

"A revolution is the overthrow of social order in favour of a new system.… The longevity revolution forces us to abandon existing notions of old age and retirement. These social constructs are simply quite unsustainable in the face of an additional 30 years of life." (21)

Currently, population growth is more the result of fewer people dying each year than of more people being born. As of the end of 2011, the number of people in the world had grown to over seven billion people. By 2100, it is projected to increase to 10.9 billion *(19)*. More than 50% of these additional four billion people will be aged 60 years and older *(19)*.

The year 2050 will be a demographic watershed. By that year:

- Twenty-one per cent of the world's population will be aged 60 and over, compared to just 8% in 1950 and 12% in 2013 *(19)*.

- More than 2 billion people aged 60 and over will be alive *(19)*.

- The number of people aged 60 and over will surpass the number of children under 15 years of age. Already, there are more people over 60 than children below the age of five *(19)*.

- In 64 countries, 30% of the population will be aged 60 and older. Most developed countries will be on this list, but so too will be most of Latin America and large parts of Asia, including China. Currently, Japan is the only country with such a high proportion of older persons *(18)*.

Contrary to the fear that global population ageing means that the world will be overwhelmed by a "tsunami" of older persons and their needs, the reality is that different age groups are becoming more equally represented in all areas of human activity *(20)*. Even in 2060, when the large generation of the baby boomers' children will be aged 60 and over, the proportion of people aged 60 and over will still be smaller than that of the under 30-year-olds and that of the 30- to 59-year-olds. Societies, in fact, will experience a "powerful new demographic and social dynamic" *(21)*, which offers huge potential in all aspects of life.

Total fertility rates are decreasing rapidly. As of 2010, 75 countries, including 30 low-income countries such as Sri Lanka, already had fertility rates below the replacement level *(19)*. The birth of fewer children will increasingly challenge familial and societal

patterns of support and care for older persons.

These fewer children born will live longer than their parents or grandparents. Globally, life expectancy at birth reached 69 years by 2005–2010 – 22 years more than in 1950–1955 (Fig. 2) *(19)*. The realistic expectation is that it will pass the age 70 mark in the next few years and that by mid-century, it will reach 77 years. The number of years added to life has been particularly dramatic in certain countries. During the last three decades in Brazil, for instance, babies born each year gained four months and 17 days of life expectancy, amounting to a bonus of 12 years of life within one generation *(22)*.

Figure 1. **Proportions of population aged 60 and over: world and by region, 1950-2050**

(Source: UNDESA 2013 *(19)*)
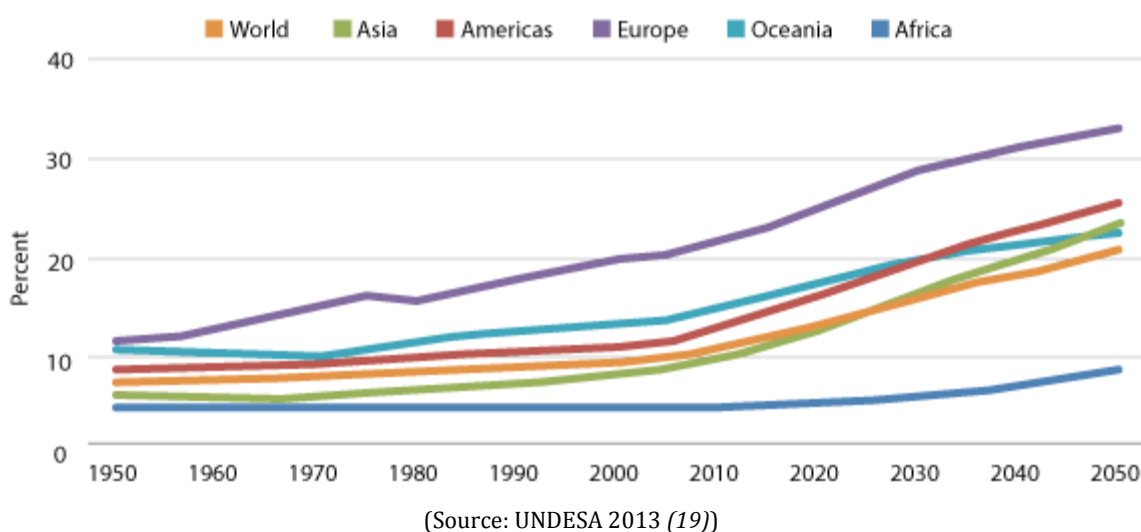
While life expectancy at birth is increasing, people already in their 60s, 70s or even 80s also benefit from growing longevity. For example, a German 60-year-old today has about four more years of life expectancy than a 60-year-old in 1980 *(23)*. In Brazil, life expectancy for an 80-year-old increased from 6.1 years in 1980 to 8.6 years in 2010 *(24)*.

The older population groups, and those aged 80 years and above in particular, are growing proportionally faster than any other age group (Fig. 2). This process is occurring more rapidly in low- and middle-income countries than in the high-income countries with their already more mature demographic transition. People aged 80 and over represented 14% of the global older population in 2013 but will constitute 19% by 2050 *(19)*. Although still a small minority of the population, the number of centenarians is expected to grow tenfold, from around 300,000 worldwide in 2011 to 3.2 million by 2050 *(18)*.

Figure 2: **Life expectancy at birth 1950-55 to 2010-15**
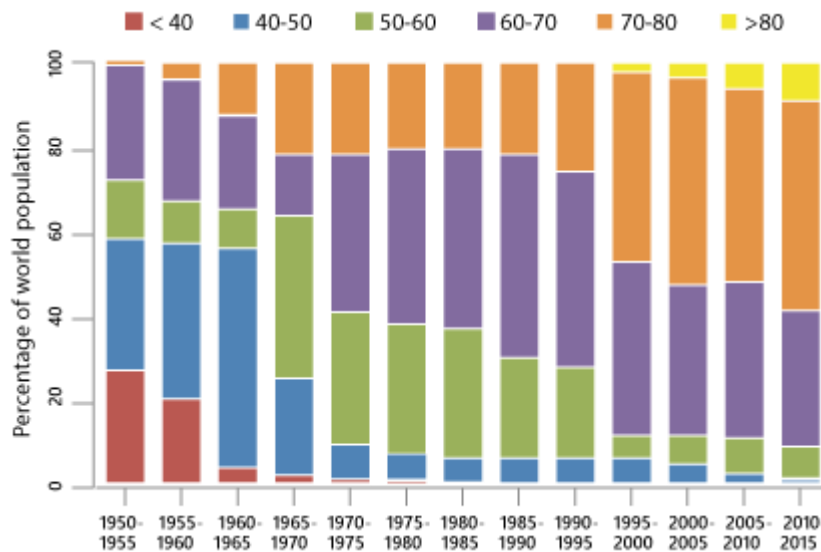
(Source: United Nations 2013 *(204)*)

Living longer in good health and with disability. Globally, healthy life expectancy has increased at the same time as life expectancy, but at a slower rate. Of each one-year gain in life expectancy, 10 months of this extra year will be lived in good health *(26)*. In 2010, global healthy life expectancy at birth was 59 years for men and 63 years for women (Table 1). This represents an increase of four years on average since 1990; 4.2 years for men and 4.5. years for women *(26)*. Whatever their age, people can expect more life in good health; a woman aged 60 in 2010 could expect 17 years in good health; that is, 1.7 years more than a woman of the same age in 1990 *(26)* (Table 1). However, because the increase in healthy life expectancy is smaller than the increase in life expectancy overall, many people will also be experiencing a longer period of time with disability than 20 years ago.

Table 1. **Global healthy life expectancy by age, in 1990, and 2010**

	Male healthy life expectancy		Female healthy life expectancy	
	1990	**2010**	**1990**	**2010**
0 years	54.8	59.0	58.7	63.2
1 years	58.1	60.7	61.4	64.6
5 years	55.5	57.7	58.8	61.6
10 years	51.1	53.2	54.4	57.0
15 years	46.7	48.7	50.0	52.5
20 years	42.5	44.4	45.8	48.2
25 years	38.4	40.2	41.6	44.1
30 years	34.3	36.2	37.6	40.0
35 years	30.3	32.3	33.6	35.9
40 years	26.5	28.4	29.6	32.0
45 years	22.7	24.6	25.8	28.0
50 years	19.2	21.0	22.1	24.2
55 years	15.9	17.6	18.6	20.5
60 years	13.0	14.4	15.3	17.0
65 years	10.3	11.6	12.3	13.8
70 years	8.0	9.0	9.6	10.9
75 years	6.0	6.9	7.3	8.3
80 years	4.4	5.1	5.3	6.1

(Source: Salomon et al. 2012 *(26)*)

These changes necessitate a radical rethinking of the life course, and challenge long-held assumptions about the definitions of retirement and care in older age.

Regional differences. While numerically there are already a greater number of older people in the less developed regions of the world, the proportion of older persons is higher in the more developed regions. Japan, Germany and Italy have the highest proportions of older people today *(19)*, but it is important to note that the greatest proportional growth of older people over the next few decades will occur in less developed countries *(19)*. Of the two billion older people in the world in 2050, almost 80% will be living in these countries *(19)*.

Life expectancy differs sharply between higher- and lower-income countries. Life expectancy at birth ranges from around 56 years in some low-income countries to around 83 years in Japan *(19)*. At older ages, the regional differences are also still considerable: a 60-year-old Japanese person can anticipate a further 26 more years of life, while a 60-year-old in Sierra Leone can expect to live only another 11 years *(19)*.

Although there are wide variations among them, life expectancy in the countries of the former Soviet Union (CIS) has not increased as much as in the countries of the European Union (EU). Life expectancy at birth in the former in 2008–2009 was 69 years, compared to the EU average of 76 years *(27)*. After the collapse of the Soviet Union, the life expectancy at birth in many of the CIS countries actually declined *(27)*. In the Russian Federation, this decline persisted for 15 years until 2005 *(27)*.

Within countries, there are also very stark inequalities of life expectancy at birth. In England, for example, people living in the richest neighbourhoods will on average live seven years longer than the people in the poorest neighbourhoods *(28)*.

Regional differences are also apparent with respect to healthy life expectancy *(29)*. In high-income countries, there is evidence that the length of life in disability has been decreasing. In low-income countries, not only has length of life with disability not decreased, but it may well be expanding due to increasing risks for chronic disease.

The feminization of older age. Older women outnumber older men, although this pattern is complex and modifiable. Globally, women live 4.5 years longer than men *(18)*. In 2013, for every 100 women aged 60 and over there were 85 men. At age 80, women outnumbered men by 100 to 61 *(19)*. Men's life expectancy is catching up with women's in more developed regions, and there is a likelihood of a more equal ratio of men to women in older adulthood in coming decades. In less developed regions, where women's social and economic conditions are often less favourable, women outnumber men to a lesser degree than in more developed regions, although there are wide variations. In some countries of Western Asia (e.g., Pakistan, Qatar and the United Arab Emirates), there are more older men than women *(30)*. The United Nations predicts that the current sex ratios in less developed regions will remain stable overall *(31)*.

Ageing is a development issue. The prospect of a longer life is an achievement of civilization that holds great potential for overall human development. With their collective experience and skills, the growing population of older women and men are a precious resource for families, communities, the economy and society as a whole. Indeed, their active participation in society is increasingly essential to offset the decline in the proportion of young people. A failure to include older people fully in human development strategies exacerbates their potential for preventable negative health outcomes, poverty, neglect and abuse. For families and society as a whole, the

concomitant risks include a burden of dependency, unsustainable costs for health and social security systems, and lost productive capacity. No country can claim to be entirely prepared for the longevity revolution. The challenge is greatest however, for less developed countries where the majority of the world's older people are already located, where their numbers are increasing the most rapidly, and where the social determinants of ill health are even more pronounced.

Converging Global Trends

Population ageing coincides with other converging and interdependent global trends that are shaping our collective future. These trends impact individuals of all ages in every aspect of their lives – creating many opportunities and a long list of risks that cannot be considered in isolation *(32)*. Consideration must be given to the linkages between population ageing and these other converging patterns in order to successfully promote Active Ageing for people of all ages. How do these trends influence the determinants of Active Ageing? How can societies respond to all these trends inclusively, without creating inequalities between generations, social groups, nations?

Urbanization. Around the world more people are now increasingly living in cities (Fig. 3). In more developed countries, the proportion of city dwellers will rise from the current 78% to 86% by 2050 *(33)*. With the exception of Latin America, which is already the most urbanized region in the world (80%), urban growth is occurring at an unprecedented pace in less developed countries, especially in Asia *(34)*. Overall, these countries will experience an increase from about 52% of the population living in cities in 2010 to 67% in 2050 *(33)*.

Figure 3. **Percentage of the population in urban areas; 2011, 2030, 2050**

2011

80 and over
60 - 79
40 - 59
20 - 39
Less than 20

2030

2050
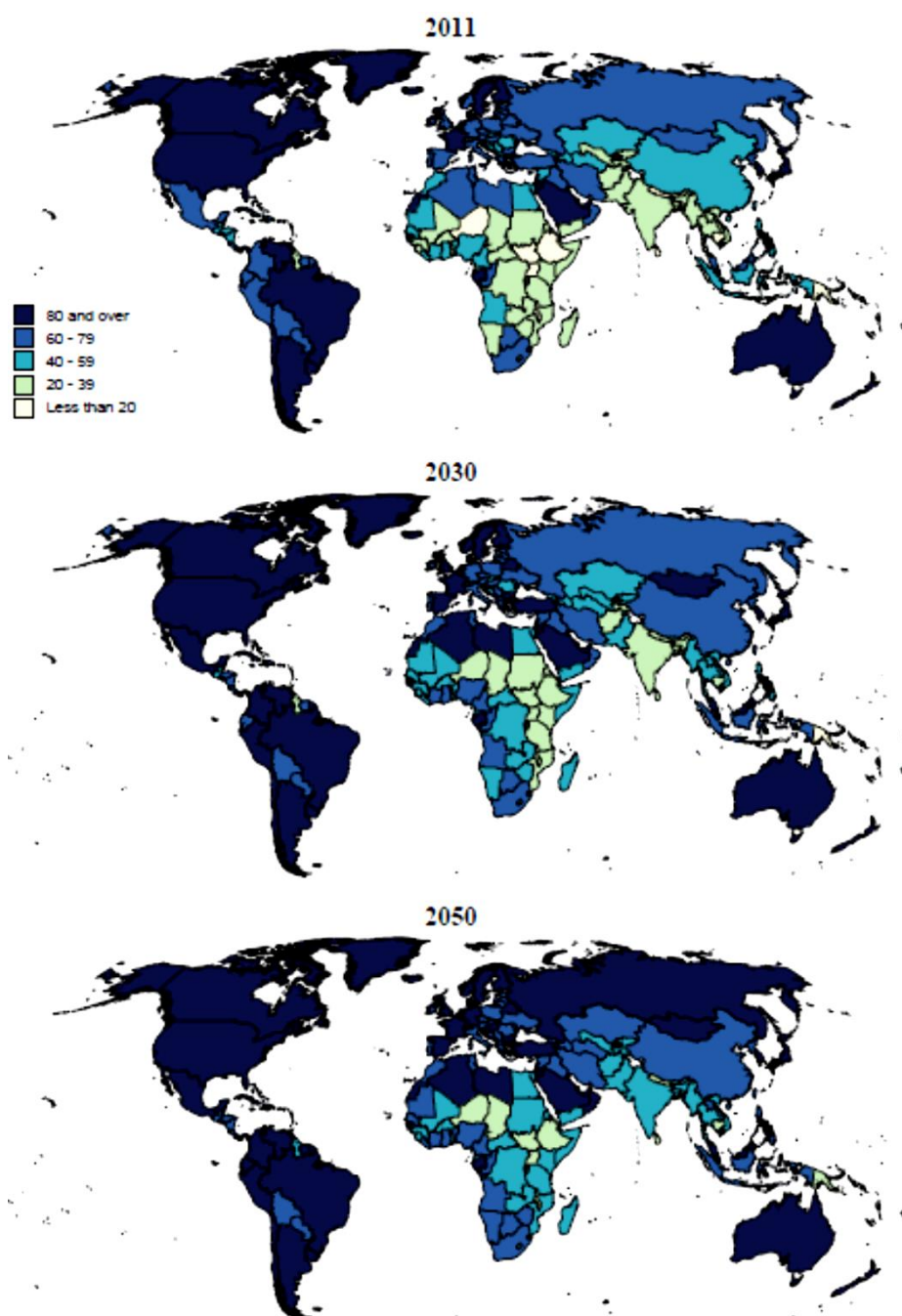
(Source: UNDESA 2012 *(33)*)

Older persons constitute a significant and growing proportion of the global urban population. In high-income countries, already one in five city dwellers was aged 60 or older in 2005 *(30)*. The proportion of urban dwellers aged 60 and older in less developed countries is also rising, from 7.7% in 2005 *(30)* to 21% in 2050 *(35)*.

Cities drive the economic, cultural and social advancement of nations. For individuals of all ages, they provide more centralized opportunities for education and employment,

and improved access to a greater range of health and social service provisions. Concentrated within cities, however, are also a range of hazards to security, including crime and pedestrian and driver safety. The greater convenience of urban living is a factor contributing to unhealthy lifestyles, including insufficient physical exercise and poor dietary habits *(36)*. Cities significantly contribute to global climate change *(37)*, leading to increases in levels of air pollution and extreme heat, which pose health risks *(38)*.

Infrastructures have not been built fast enough to keep pace with the number of people arriving in cities. Globally, one of every three urban dwellers lives in slums or informal settlements, characterized by inadequate sanitation and lack of safe water and food, poor access to services, and overcrowded, substandard housing *(37)*. The urban poor of all ages face higher risks for infectious and chronic diseases, unintentional injury, criminal victimization and social exclusion *(37)*. Migrants in urban areas are particularly prone to experience poverty and poor housing *(39)*.

An important feature of many cities – one that began in its modern sense with the higher-income countries in the 1950s – has been the rapid growth of lower-density suburban residential communities. Such suburbs are home to a higher proportion of baby boomers and preceding adult generations than to younger persons *(40)*. Suburbs have tended to offer greater personal living space and centralized commercial hubs. Private car use has dominated much of their design, and the tendency has been for suburbia to have fewer public transportation services and less provision for pedestrian travel than the urban core. The distance from neighbours and lack of urban confusion that was once the attraction of suburban life can become

limiting and isolating in older age. Growing cities in less developed countries are now experiencing "suburban sprawl" – the rapid expansion of low-density communities on the periphery, with many of these features *(34)*.

Concurrent to the growth of cities, rural communities are becoming depopulated. The departure by younger persons to the cities results in ever-increasing proportions of older persons "ageing in place" in those rural communities. In 2005 in more developed regions, persons aged 60 or over constituted 23% of the rural population compared to 19% of the urban population *(30)*. Projections at a global level are not available, but regional data show significant increases of older persons in rural areas. Projections for England, for example, indicate that the most rural districts can expect the population of residents aged 50 and over to increase by 47% between 2003 and 2038. The national increase within this time frame is anticipated to be 35% with the largest increases in the population aged 65 and over *(41)*. Rural concentration of older persons is a significant trend in less developed regions as well *(42)*. In China, persons aged 65 and over comprised 9.3% of the rural population versus 6.9% in urban areas in 2008 *(43)*. By 2030, the distribution will shift to 21.8% and 14.7%, respectively *(43)*.

Where people live has a profound influence on their personal mobility, participation, social support and well-being. The age distribution of the population has a major impact on community planning, urban design, resources, productivity and services. Harmonizing "ageing" and "place" creates opportunities, but ignoring demography in urban planning erects barriers and accentuates risks.

Globalization. Globalization refers to an increasingly integrated global economy and a

highly connected world with growing cross-national flows of goods, information, ideas, capital and services, as well as increasing flows of migrants *(32)*. It is a result of urbanization, and of advances in transportation, communication and organizational technology *(44)*. Today, information spreads much faster. People living diverse experiences from all over the world are connected via the Internet and are travelling in greater numbers. Social networks – including families – cross borders and continents. Goods and services, including food and culture, are mass-produced, mass-marketed and mass-disseminated, resulting in a global homogenization of consumer products.

These social and economic transformations have many implications in an ageing world. Changes in images and social roles associated with older age and effective innovations to address common challenges are apt to spread quickly. The visible presence of vital and fully engaged older persons in many countries can counter stereotypes. Older persons' traditional knowledge, skills and life experiences, however, can also be devalued by the constant demand for new information and technological savvy. In addition, personal and population health and security are subject to global-level economic, health and social risks.

The global spread of processed foods and tobacco products have contributed to the worldwide chronic disease epidemic, and working conditions and benefits are eroded as multinational industries drive down production costs *(45)*. Threats that were previously local are increasingly global, such as the spread of communicable diseases, and food or water shortage crises *(46)*.

"A new dynamics emerges as to what needs to be resolved at national and global levels, what is public versus private or proprietary and how health is valued in our globalizing world." (404)

Migration. Although individuals and groups have always migrated in search of security or better opportunities, both international and national migration have become particularly prominent features of the new global reality. In 2013, there were 232 million international migrants, up from 175 million in 2000 and 154 million in 1990 *(47)*. People who migrate within their home country are more than three times higher: their numbers were estimated to be 763 million in 2005 *(48)*, representing slightly more than one in 10 people in the world. Occurring in all regions of the world, recent migration trends intersect with population ageing in multifarious ways. For example, many migrant women from the Philippines commit to work in caring for older persons in developed countries, often leaving their children in the care of their own ageing parents. The large numbers of post–World War II migrants are now ageing in their adoptive countries *(49)*. In New York City today, for example, 45% of all persons aged 65 and above are immigrants *(50)*. By 2030, this number will have increased by 35% so that the majority of those 65 and above will be "foreign born" *(50)*. At the same time, more recent older migrants are facing the challenges of adjusting to their adopted society.

The common perception is that migrants are mostly young adults. Many international migrants are young adults, but in 2010, 17% of them were aged 60 and over *(51)*. This means that the age structure of the migrant population may be as old, or even older, than that of the host country. Studies in various European countries predict an increase in both the number and the proportions of older migrants *(52)*.

Migration is having a profound effect on family structures, local economies and service infrastructures. Clearly, the departure of adult children can leave older family members with less support in their later years. Parents leaving their children behind may strengthen the social role of the caregiving grandparents within the family and communities, yet weaken the filial bond between the absent parent and children, which is important for the later support of the parents. Older family members may themselves migrate to join adult children, uprooting from familiar culture and community and compromising their independence and security. The economic productivity of communities with a high out-migration of young adults decreases, making local retail and other services vulnerable.

In some high-income countries, the proportion of foreign-born older persons is particularly noteworthy. In Australia in 2006, for example, 20% of the 65-year-olds were born overseas in predominantly non-English-speaking countries *(53)*. In Israel, at the end of 2011, the vast majority of people aged 65 and older (82%) were immigrants from other countries, and a significant percentage (25%) of them were Holocaust survivors *(54)*.

Migration can be a disruptive event *(55)* that can have both short- and long-term implications for ageing. Various subpopulations feel the impact of migration, including:

- a huge number of older migrants who age in a foreign land (e.g., retired labour migrants from Spain, Italy, Greece and Turkey who migrated to Germany in the 1950s and 1960s);

- those who migrate in older age in search of a better quality of life (e.g., retired United States citizens moving to Mexico or Panama, or northern Europeans moving to Mediterranean countries);

- older people who return to their country of origin (e.g., Greece, Italy, Spain and Portugal), only to find that it has radically changed since they left and that they have become strangers in their homeland;

- older people who follow adult children who have migrated to another country (e.g. older Chinese who move to reunite with family in Australia or Canada), or who join family in cities within the same country;

- older people who need to escape conflict or natural disasters.

Mounting evidence underscores that migration triggers a complex set of challenges for both younger and older generations within families *(56)* and for societies that are becoming culturally, socially and economically more heterogeneous *(57)*. Among current efforts to understand and respond to cross-cultural diversity and to the risks experienced by ageing migrants, it is worth noting the regular biennial conference on Ageing in a Foreign Land in South Australia, and the Ageing in a Foreign Land policy research protocol *(58)* developed at the New York Academy of Medicine.

The technology revolution. Technological innovations have always altered the way people lived and worked throughout human history, but contemporary changes are exponentially faster and more influential than ever (59,60). The remarkable evolution and spread of information and communication technologies have facilitated the spread of innovations in many other areas. From 2005 to 2011, the number of worldwide mobile phone subscriptions per 100 people increased from 34 to 86, and the percentage of individuals using the Internet more than doubled, from 16% to 33% *(60)*. Within less than a decade, Facebook has grown to over one billion active users, and within just seven years Twitter registered more than 500 million users *(46)*. Social contacts are created and maintained despite geographical distances or reduced mobility. Personal networks now extend to thousands of people in a wide range of settings. It is now possible for vast numbers of people to socialize and to work remotely from almost any location.

Major technological advances can trigger dramatic cultural transformations. According to Perez *(61)*, the spread of telecommunications systems and products is transforming not only the world of work and social communication, but also the organizational and management principles of business and other social institutions. Human capital remains the most valuable asset and accordingly, there is an ever-growing emphasis on lifelong learning in all occupational settings. Empowerment, adaptability and collaboration characterize the highly skilled individuals who can perform multiple tasks and best participate in institutional decision-making in a variety of teams. A further consequence of the technological change is political: the rapid mobilization of public opinion through social media has become a very powerful political force.

Interaction with the immediate environment, personal mobility, as well as health and independence rely on technological developments. Ever more devices and systems are being created to compensate for impairments in sensory, perceptual and motor performance as well as in cognitive functioning, thus enabling more individuals with functional limitations to remain independent. Medical innovations keep expanding the potential for prevention, screening, diagnosis and treatment of disease and injuries. Devices exist to support self-care and home care. Population ageing is a powerful driver of technological innovation and, in turn, technology is changing what it means to be an older person. Opportunities for continued health, independence and participation are expanding in all areas of life. Access to these benefits of technology, however, is extremely unequal. Awareness, availability and affordability are major obstacles to the universal benefit of technological innovation.

Environmental and climate change. Human activity has become more global, more interconnected and commercially more intense, and the natural environment is measurably changing as a result *(62)*. The consequences of environmental and climate change are becoming increasingly evident. Despite denials from some quarters, temperatures and sea levels are rising, weather patterns are altering and extreme weather conditions are becoming more frequent *(46)*. The impacts of climate change on health and well-being are numerous and go far beyond the direct stresses such as heat waves or other weather-related factors *(62)*. Freshwater shortages are becoming more common, and the resulting price fluctuations of basic commodities, such as wheat flour, have global repercussions. Infectious disease patterns are modifying, and some animal-borne diseases are spreading (e.g., H1N1

virus; West Nile virus). Some communicable diseases, such as Dengue, are re-emerging *(63)*. Displacement and conflict over limited resources is increasing *(64)*. These repercussions are being felt unevenly between countries and within countries. Poor, excluded, under-educated or geographically vulnerable people are the most affected, despite being the least responsible. Older people have a particular susceptibility to environmental instabilities. According to the Stockholm Environment Institute, "people in old age may be physically, financially and emotionally less resilient" *(65)* to the risks caused by climate change. Emergencies are now occurring in places of ever-increasing older populations.

The presence of greater numbers of older people is likely to reveal different consumption patterns that, in turn, inevitably reflect on the environment. The choices made by the 20%–30% of the population (which will be the older people in many countries) will matter. Healthy older persons, for example, may drive their cars more often and for a greater number of years, or they may cause family members to use their cars more frequently to transport them as they become dependent *(65)*. Conversely, higher demand for greater age-friendly proximity between housing and services could, in fact, reduce car dependency *(14)*. The presence of more older citizens experiencing the ill effects of air pollution could increase the political pressures to enforce clean-air policies *(66)*. Older persons could be instrumental to positive change and be a big part of the potential solution to environmental degradation. Many people have different priorities in older age, and many older people are well versed in activism. They may act as strong social and political advocates for a greener world. Older farmers, for example, may have ecological knowledge and experience to contribute to local problem-

solving and more sustainable farming practices *(67)*. It is clear that the human relationship with the natural world is precarious. What is yet to be revealed is how the needs, demands and the desire for legacy of older persons will influence the definition of that relationship.

Armed conflict. Since the end of World War II, conflicts between states involving mainly armed forces as combatants and victims have been replaced by regional, often within-state conflicts, in which civilians are both combatants and victims *(68)*. Among these victims in the civilian population, older persons are particularly vulnerable. Older people are often less able to escape harm's way due to reduced mobility or the speed with which evacuation is required, and they become isolated and targets of violence *(69)*. Many living in repeat conflict zones such as the Gaza strip are simply terrorized and develop long-term mental health conditions *(70)*. As in other conditions of humanitarian emergency, older persons may be left cut off, destitute and unable to access relief, social services, care, essential assistive devices or a means of livelihood *(69)*. Studies from the 2006 war in Lebanon show that older persons often chose to remain behind to protect their homes *(71)* leaving them isolated from health and social care. They are largely neglected in needs assessment and in implementation of recovery and reconstruction *(72)*. The greatest immediate need in a conflict situation is for psycho-social rehabilitation to address loss of homes and community as a first step towards gaining a sense of stability, followed by support for rebuilding lost homes and memories *(70)*. There needs to be full inclusion of older people in all forms of assistance, reconstruction and peace-building efforts, and all involved agencies need to reassess their action plans accordingly.

Epidemiological transitions. The past decades have witnessed a major transformation in the profile of diseases that are the principal causes of disability and mortality. Thanks to improvements in sanitation, hygiene, nutrition and medical therapy, risks for infectious diseases have decreased considerably *(73)*. Today, chronic, non-communicable diseases are the major cause of death and disability, and the rates are rising. Worldwide, the leading chronic diseases are cardiovascular diseases (including strokes), cancer, chronic lung disease and diabetes (Table 2) *(74)*.

Table 2. **Global leading causes of death; 1990 and 2013**

1990	2013
Ischemic heart disease	Ischemic heart disease
Stroke	Stroke
Pneumonia	Chronic obstructive pulmonary disease
Diarrhoeal disease	Pneumonia
Chronic obstructive pulmonary disease	Alzheimer disease and other dementias
Tuberculosis	Lung cancer
Neonatal pre-term complications	Road injuries
Road injuries	HIV/AIDS
Lung cancer	Diabetes
Malaria	Tuberculosis

(Source: Kassebaum et al. 2014 *(75)*)

This epidemiological transition is the direct consequence of urbanization, economic development and globalization. These macro trends have increased the main known risks for chronic disease, including physical inactivity, consumption of unhealthy foods, and exposure to air pollution, tobacco and excessive alcohol. Population ageing itself is also a factor because people are living long enough for chronic diseases to develop. Health behaviour risks are resulting in the emergence of chronic diseases in younger adults as well, increasing their risk for severe disability in later life, if not early death. Less developed countries are experiencing a dramatic increase in deaths from all chronic diseases, while death rates are remaining steady in more developed countries *(76)*. According to WHO *(77)*, chronic disease deaths will increase by 15% globally between 2010 and 2020, but the greatest increases, at 20%, will occur in Africa, the Eastern Mediterranean and South-East Asia. In less developed countries, 29% of chronic disease deaths occur among persons under the age of 60, compared to 13% in more developed countries *(77)*. The vast majority of older people have chronic conditions, and many have multiple conditions. In the United States, 92% of persons aged 65 and over have at least one chronic condition and 24% report having three conditions *(78)*. At the same time, many of these older persons experienced a high prevalence of infectious diseases in previous stages of their life.

Infectious diseases have not disappeared, however, and many less developed countries are experiencing a double burden of infectious and chronic diseases *(79)*. In countries such as Guatemala, El Salvador, Kenya and the Democratic Republic of the Congo, for example, chronic disease figures are high and occur in addition to the already highly prevalent infectious diseases, many of which have become more resistant to antibiotics *(80)*. The risk of dying from a specific infectious illness is higher for older people because weaker immune systems render them more susceptible. Moreover, they are less responsive to the protective effects of vaccination. The principal infectious diseases among older persons in less developed country settings include malaria, acute respiratory infections, diarrhoeal diseases, tuberculosis and HIV/AIDS *(81)*.

Poverty and inequality. According to analyses of the Human Development Index, most countries have experienced significant increases in human development as a combined measure of income, education and health over the last decades *(84)*. Levels of absolute poverty have decreased. Globally, 14.5% of the population of all ages were poor in 2011 *(85)* – taking the World Bank's USD 1.25 per day poverty line as a measure. Two decades earlier, this percentage was more than twice as high *(86)*. Inequalities in health have decreased as measured by increased life expectancy at birth, and inequalities in education have not changed *(84)*.

There is a stark and growing relative poverty, however, as measured by income inequality. The Gini Index measures the equality of wealth distribution in a country on a scale of 0 to 100, with 0 indicating perfect equality and higher values showing the extent to which wealth is concentrated among fewer people. Tables 3 and 4 show the 10 most equal and the 10 most unequal countries in terms of income and consumption expenditure.

Table 3. **Ten countries with the most equal wealth distribution**

Country	Gini Index	Reference year
Ukraine	24.8	2010
Slovenia	24.9	2011
Iceland	26.3	2010
Czech Republic	26.4	2011
Belarus	26.5	2011
Slovak Republic	26.6	2011
Norway	26.8	2010
Denmark	26.9	2010
Romania	27.3	2012
Finland	27.8	2010

(Source: World Bank 2015 *(87)*)

Table 4. **Ten countries with the most unequal wealth distribution**

Country	Gini Index	Reference year (2010-2013)
Swaziland	51.5	2010
Panama	51.9	2012
Guatemala	52.4	2011
Brazil	52.7	2012
Colombia	53.5	2012
Lesotho	54.2	2010
Honduras	57.4	2011
Zambia	57.5	2010
Namibia	61.3	2010
South Africa	65	2011

(Source: World Bank 2015 *(87)*)

According to an analysis by Oxfam, seven out of 10 people globally live in countries where economic disparities have increased during the last three decades *(88)*. This includes Organisation for Economic Co-operation and Development (OECD) countries where income inequalities have been on a steady increase since the 1980s *(89)*. In these latter countries, the richest 10% of the population earned 9.5 times the income of the poor in 2014, compared to seven times in the 1980s *(89)*. In developing countries, income disparities increased by 11% within two decades (1990–2010) *(84)*. Globally, the richest quintile of the population possess more than 70% of global income, while the poorest 20% have to make a living with only 2% *(90)*.

The bottom half of the world's population – 3.5 billion people – owns the same as the richest 85 people of the world, who would comfortably fit into one double-decker bus. (405)

It is important to continue to invest in health to reduce persistent inequalities between nations, between men and women, and between social groups, but there is considerable room to reduce inequality in both education and income. There have been notable attempts to reduce income disparities in some regions. Some countries in Latin America – still the most unequal in terms of income – have seen some measure of progress with a universal approach to public policy that incorporates public transfers to the poor and a focus on worker protection.

With growing financial insecurity on top of increasing environmental pressures, examining and addressing inequalities become ever more important. Deepening income inequalities have been listed first among the Top 10 trends facing the world in 2015 by the World Economic Forum *(91)*. The OECD further shows that income inequality hampers economic growth, and recommends increasing income redistribution to reduce inequality and promote prosperity *(89)*.

As reported by the United Nations (UN), income inequalities between generations in terms of relative poverty rates reveal a mixed picture (Fig. 4) *(25)*. Despite considerable variations, most poverty rates are higher among older people than in the general population in most world regions *(25)*. In sub–Saharan Africa, older people are as poor as or slightly poorer than other generations. In some countries in Latin America (Argentina, Uruguay and Brazil), the introduction of universal, non-contributory old-age pensions has reduced the poverty of older persons to levels significantly below the rate of the general population. OECD countries present a range of scenarios, but in about half of them, more older people than younger ones are poor – especially persons aged 75 and older. In some countries, older persons are better off than young adults and families with children, whose rates of poverty have risen.[III] In others, fast-rising wages of younger workers have left older persons comparatively much worse off. Achieving social justice within the context of the longevity revolution requires policies that adapt to changing economic conditions to support all generations equitably. Ensuring the economic security of older persons remains a global policy priority – not only for the well-being of older persons themselves, although that is a primary objective – but also because income received by older persons benefits other generations in the family *(92)*.

[III] The 2008 financial crisis has had a greater negative impact on employment and economic well-being of young and middle-age adult workers than older adults in more developed countries *(151)*.

Figure 4. **Poverty rates for the general population and for older persons, selected countries**
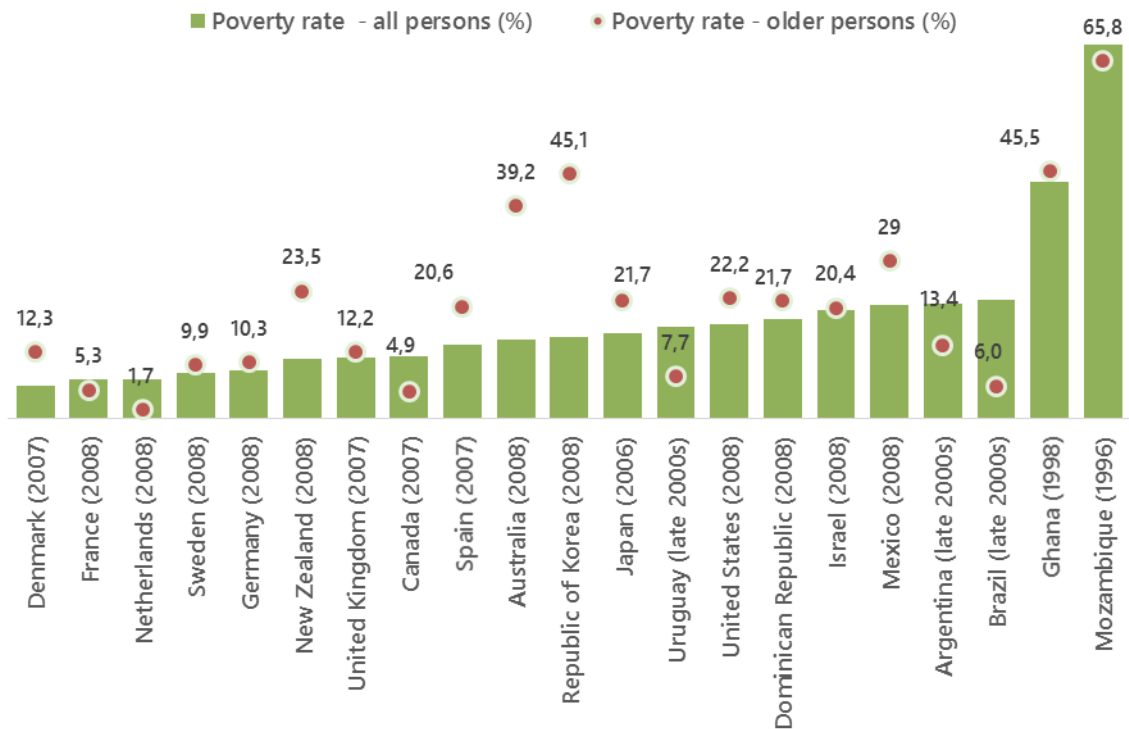
(Source: UNDESA 2013 (25 table 5.3))

Evolution of human rights. The understanding and application of fundamental human rights evolve as societies change. In this regard, there have been dramatic developments over the past century and more are still to come. The 20th and 21st centuries were marked by a progression of recognitions of the human rights of specific population subgroups that were formalized in UN conventions and declarations. Grounded in the UN Universal Declaration on Human Rights (1948), additional treaties have been adopted by the UN Member States to offer greater legal protection to groups deemed to have particular vulnerabilities. Included are conventions on the rights of women (1979), children (1989), migrant workers (1990), indigenous peoples (2007) and persons with disabilities (2008). In addition to adding legal frames, these international treaties have had a profound effect over time in changing discriminatory attitudes, behaviours and public policies.

The longevity revolution has cast the spotlight on the growing older adult population as the next group requiring legal specificity to protect and promote rights in a comprehensive manner. Various international human rights instruments express obligations regarding the protection of the human rights of older persons,[IV] but they are piecemeal. The Vienna International Plan of Action on Ageing (1982), the UN Principles for Older Persons (1991) and the Madrid International Plan of Action on Ageing (2002) are international documents that comprehensively and specifically address the rights of older persons. These agreements, however, are "soft law" and are accordingly

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[IV] These include the International Convenant on Economic, Social and Cultural Rights, the International Convenant on Civil and Political Rights, the Convention on the Elimination of All Forms of Discrimination against Women, and the Convention on the Rights of Persons with Disabilities.

not legally binding on signatory governments. The 1991 UN Principles of Older Persons encourage governments to incorporate the right to independence, participation, care, self-fulfilment and dignity in national programmes *(17)*. The Madrid Plan articulates a comprehensive and lucid policy framework grounded in the full citizenship of older persons within a society that promotes intergenerational solidarity – a society for all ages. The only binding "hard law" international human rights instrument that explicitly prohibits age as a ground of discrimination is the International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families. It was adopted by the UN General Assembly in 1990, but entered into force only in 2003 when a sufficient number of countries had ratified the convention.

"People everywhere must age with dignity and security, enjoying life through the full realization of all human rights and fundamental freedoms." *(18)*

The increasingly visible presence of older persons, a better understanding of the potential of human longevity and a growing realization that ageism is pervasive *(93)* have spurred non-governmental organizations led by the Global Alliance for the Rights of Older Persons and some key governments to champion the creation of a UN convention for the human rights of older persons. Opponents, mostly more developed nations, contend that the problem is one of implementation rather than legislation *(94)*. In response, the UN established an Open-Ended Working Group on Ageing in 2010 to consider the existing framework of older persons' rights, and to identify possible gaps and consider the feasibility of further instruments and measures *(95)*. The UN Human Rights Council has paid increasing attention to the issue of discrimination on the basis of old age and adopted a resolution in 2013 that created a new position of Independent Expert on the Enjoyment of All Human Rights by Older Persons. The first Independent Expert, appointed in 2014, is currently working to increase understanding of the human rights challenges that people face in old age and how these rights can be better promoted and protected *(96)*. The Organization of American States has adopted the Inter-American Convention on Protecting the Human Rights of Older Persons and the African Commission on Human and People's Rights and the Steering Committee for Human Rights of the Council of Europe are also actively developing instruments at the regional level.

While the issue of the specific rights of older persons is advanced, the repercussions of every major global trend on human rights across the life course must also be considered. For example, as information technology becomes indispensable for virtually every aspect of human communication, is access to it a universal right for persons of all ages? In a globalized economy with highly mobile populations, are nationally protected rights and entitlements to be prioritized over universal human rights? When is the common good, in terms of preserving conditions vital to human life, a principle that supersedes individual freedom?

SECTION II:

RE-THINKING THE LIFE COURSE

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A More Complex Life Course

How individuals allocate their time and what roles they adopt over the course of their lives is largely determined by the society in which they live. Longevity, in conjunction with other major trends, is reshaping the life course in complex and multifarious ways. Simultaneously, the lives of people in low- and high-income countries are diverging more and more.

In the pre-industrial societies that still characterize many low-income countries today, it is common for children to attend school only until puberty, and then to quickly assume adult responsibilities. The majority of these children work in the informal labour force, without employment benefits or pensions. Women may work outside the home as well, but retain the vast bulk of the responsibility for the care of children and other family members, most importantly, dependent older relatives. Both men and women continue work roles as long as they are physically and mentally capable, contributing to the family livelihood in whatever ways they can. Old age is defined more by incapacity and dependency.

Throughout the 20th century to the present day, old age in industrialized societies has been the product of a formalized retirement. The origin of this social construct is Bismarck's old-age pension system, introduced in 1889. It provided a small pension to workers over 70 years of age – at a time when average life expectancy for men was still below 40 *(97)*. The formal retirement that was then introduced by various governments around the world caused profound changes in how old age was perceived *(98)*. As the determining factor for leaving the work force became chronological age as opposed to incapacity, age itself became to be associated with incapacity, irrespective of the individual's health status *(98)*. For men in particular, this led to a "chronologically standardized normative life course" *(99)*. The pattern became one characterized by a short period of learning until the end of adolescence, an extended period of work (usually with the same employer), and a commonly very brief period of retirement, given the low average life expectancy (Fig. 5). For women not employed in the labour force, "retirement" was a less formal event, if it happened at all: their role as family caregiver diminished when grown children left home, but they continued to be responsible for household chores.

Figure 5. **Life course in the Bismarck era**
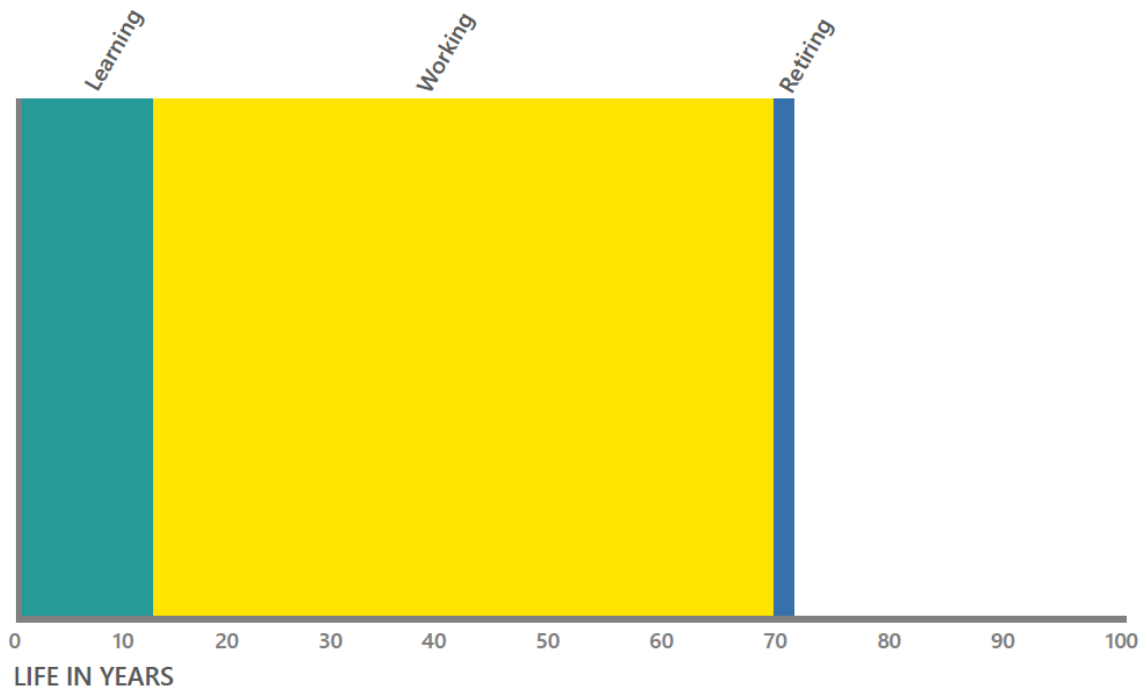
(Source: Adapted from Kalache 2013 *(21)*)

The life course became divided into three distinct phases – preparation, activity, and retirement *(99)*. This three-stage life course is still very common in most developed societies, although the time spent in retirement has become increasingly longer. As women's participation in formal paid employment has increased, this model has become more typical for women as well; although their retirement from paid work very seldom means retirement from household management. The reality that women have consistently borne most of the responsibility for family and household management has additionally meant that they have tended to have more discontinuous career histories, with more frequent or longer leave periods for child and family care. Several countries have a lower statutory retirement age for female workers *(100)* so that they could retire at the same time as their husbands, who are often older. With shorter paid working lives but longer life expectancy,

women have been more likely to experience old age in poverty.

While age norms across the life course still persist, they are now less widely shared and they impose fewer limitations. The combination of a longer life and other societal changes is reshaping the three-stage life course. Lives are now punctuated by longer and more intermittent periods of learning for jobs requiring a constant updating of skills, and longer periods of retirement (Fig. 6). The continuous career in full-time employment with one employer, especially for men, is becoming increasingly elusive. In some countries, there is evidence of the "end of 'lifelong' employment" in large companies *(99)*. Gender roles have become less rigid and some male partners are spending more time raising children and sharing household chores. Paternal leave is now offered by some employers alongside maternal leave in various countries. Although the actual age of entry into retirement has changed very little

(99), mandatory retirement age has increased in some countries *(101)* and has been abolished entirely in such countries as the United Kingdom, Canada, Australia and the United States *(102)*. The transition into retirement is becoming more and more "blurred". Retirement itself is being redefined in the context of its growing associations with periods of continued work in the form of self-employment, part-time jobs, or cycles of work and leisure *(103)*. Retirement is no longer regarded as a time of incapacity. Particularly in developed countries, it is now increasingly perceived as a privileged time of personal renewal, leisure and life satisfaction.

Figure 6. **Men's and women's life courses today**
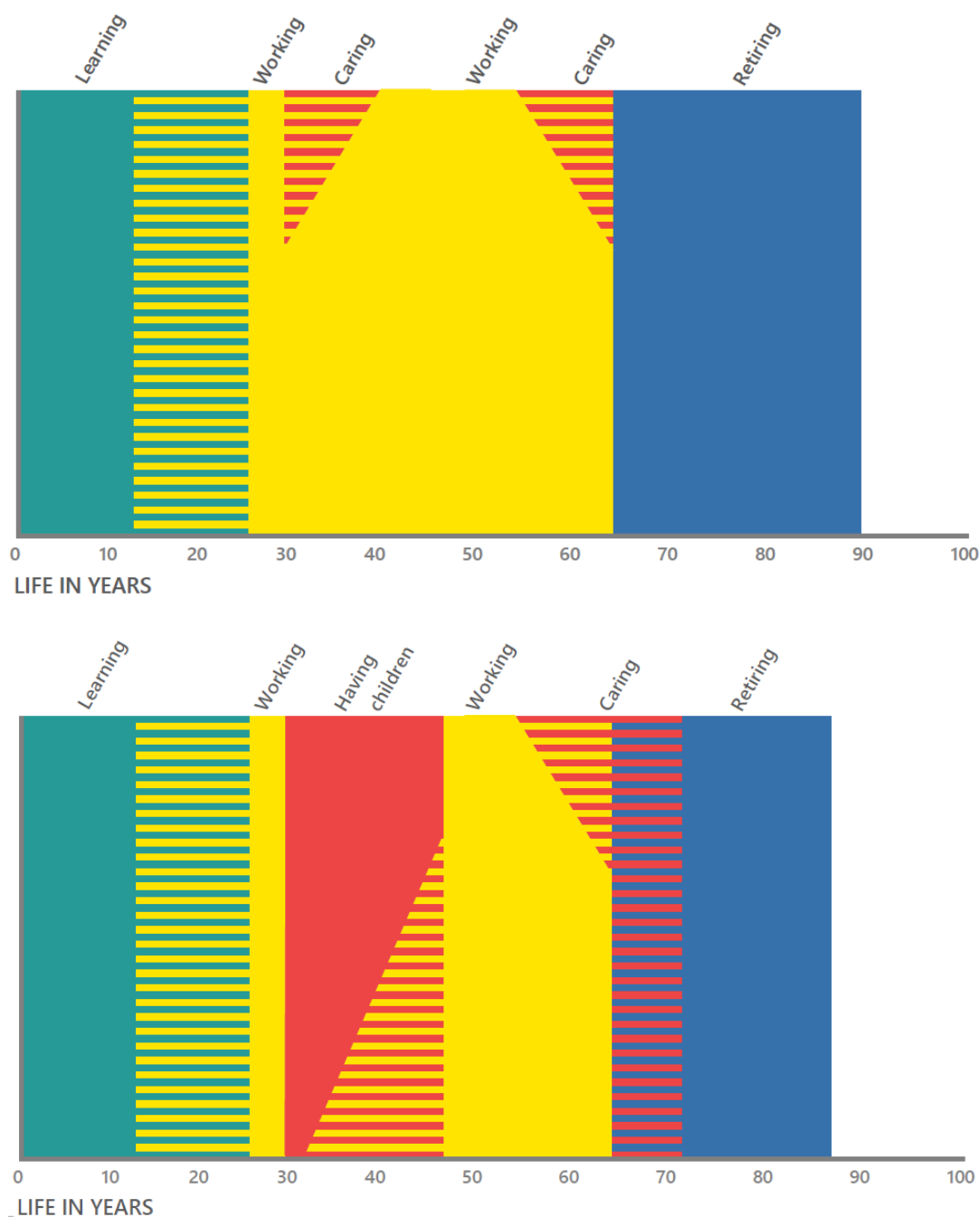
(Source: Adapted from Kalache 2013 *(21)*)

Perhaps unsurprisingly, it is retirees who have gained the biggest increases in leisure time over the last century *(104)*. Leisure time has increased for other age groups, too, but by only a few hours per week, and the gains have been unequal. Men have achieved more free time than women *(105)*, as have workers with lower levels of education in comparison with university-educated workers *(104)*. In more developed nations, and perhaps among professional elites in less developed countries, workplace policies have become somewhat more accommodating for highly skilled employees wanting more flexibility in the distribution of their limited leisure hours. Examples include compressed work weeks and self-paid sabbatical leave periods.

A Longer, More Individualized and Flexible Life Course

As the 21st century advances and the longer life courses of individuals are buffeted by a greater complexity of intermingling and sometimes recurring variables, the boundaries of the three-stage life-course model are inevitably going to become even more ill defined (Fig. 7). Learning will continue to predominate in the first decades of life, but it will probably not stop. Ongoing in-job training, and short courses and diplomas to keep pace with the ever-more rapid changes in knowledge and technology will need to accompany people throughout their entire lives. Work-based learning may start earlier in life. The sharing of family and home management duties within relationships will continue to be negotiated *(99)*. Some research in more developed regions predict that a more equal labour division between women and men in the home will evolve *(106)*. The trend towards extended working lives is likely to continue, but more people will retire in a more gradual

and individualized manner *(104)*. Instead of its concentration in the post-retirement phase, leisure time may become much more evenly distributed over a much more flexible life course that is more in line with individual needs and preferences. In all probability, lives will become greatly more varied and dynamic. Individuals will learn, care, work and take time for recreational activities throughout their lives with much less attention to chronological age. Institutions must adapt to the cultural shifts inherent within the Longevity Revolution, but individuals, too, must prepare for these additional and more versatile years of life. The longevity revolution has retroactive impacts throughout the life course – beyond the mere fact of facing a longer old age.

Figure 7. **Men's and women's life courses in the future**
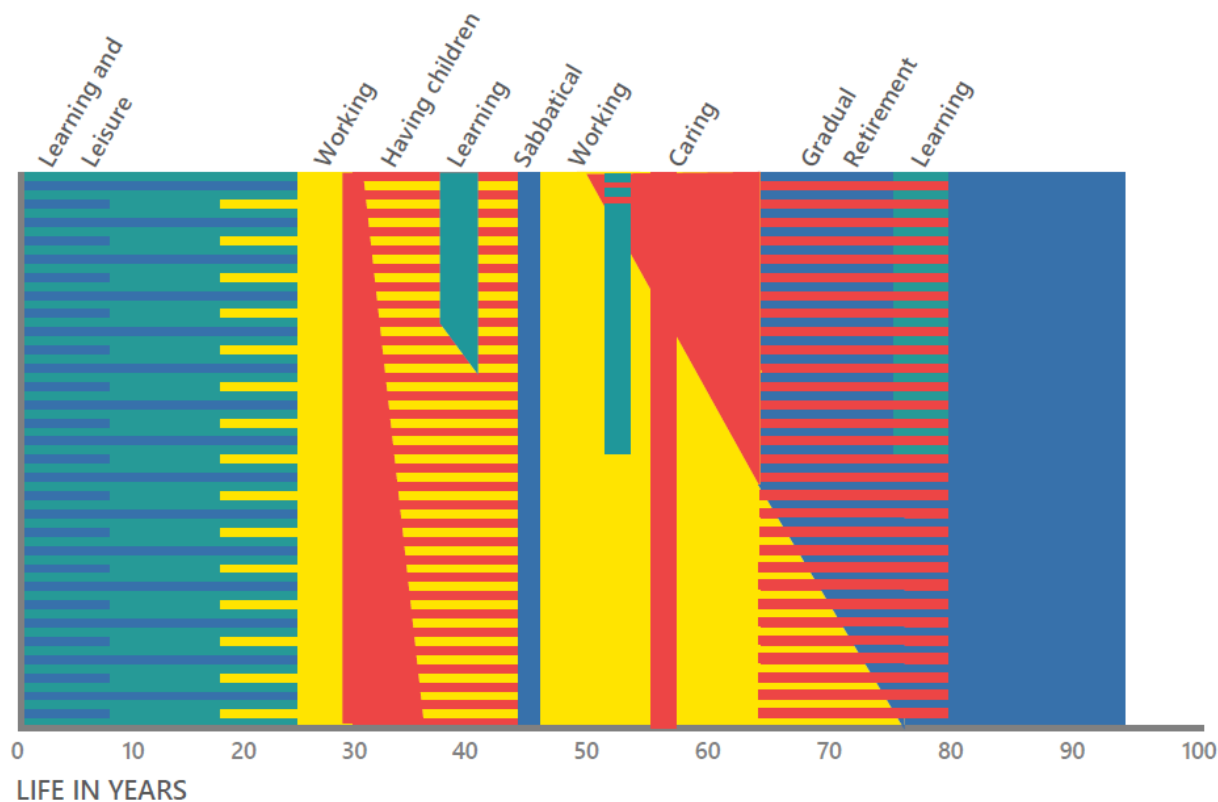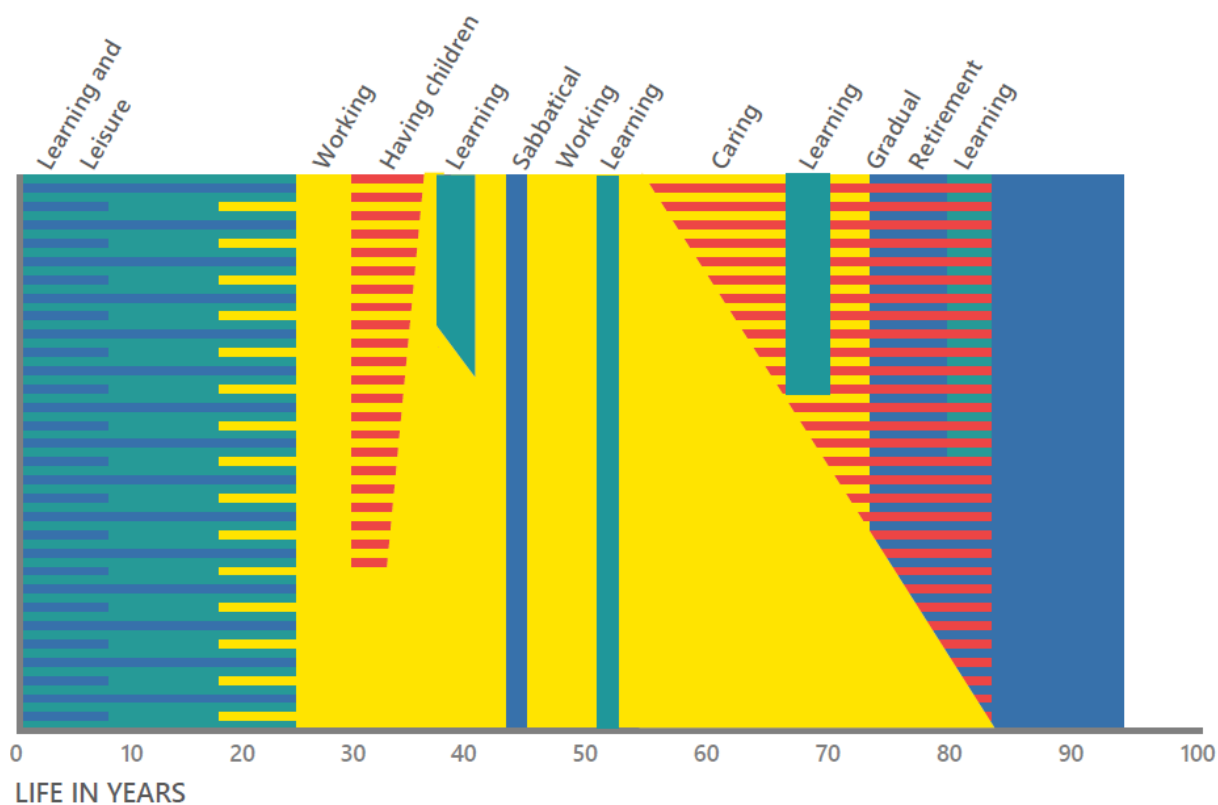
(Source: Adapted from Kalache 2013 *(21)*)

"Life is becoming more like a marathon than a sprint. We need to pace ourselves for the long haul." (21)

Much of our individual behaviour directly relates to our expectations about our remaining years of life. Decisions related to our investments in human capital, savings and consumption *(107)*, our behaviour with regards to health, and retirement planning *(108)* are influenced by the perception of our remaining time to live, as might even be our choices regarding social relations *(109)*. Underestimation of the length of our later years of life may lead to insufficient planning *(108)*.

Increased life expectancy, in parallel with other demographic and societal trends, is changing family structures and intergenerational relationships. More generations, but fewer representatives of each, are simultaneously present and engaging in society. As the boundaries of the stages of the life course become more porous and variable, contrasting age groups will be less separated than in the past. Older and younger adults will attend the same university classes and job training. Employees of different ages will occupy junior as well as senior positions. With more flexibility in the division of free time and paid work, more adults of all ages will be mutually engaged in the leisure and unpaid voluntary activities that are so vital to social capital. Regular and meaningful personal interactions with persons of different ages will begin to break down ageist stereotypes that are fed by restricted contact *(110)*. With a more fluid transition between paid work and retirement and longer good health, social welfare policy will shift away from a focus on arbitrary age-linked benefits towards programmes that respond to critical health and social needs over the life course. Intergenerational wealth transfers will benefit grandchildren and great-grandchildren as well as the fewer direct heirs, who are more likely to be already well established by the time their parents decease *(106)*. With longer, healthier lives and changing life-course models in many countries, roles and images of older people are being redefined. At the same time, it must always be remembered that this evolving "new age of old age" does not yet apply to the lives of most people in less developed regions, whose entire lives remain much more restricted to work and care.

Gerontolescents Are Transforming Society – Again

During the economic boom times in high-income countries following World War II, young people acquired the new luxury of remaining longer in education prior to their entry into the labour force. As this practice became more common, the term "adolescence", first used towards the end of the 19th century *(111)*, was applied to describe this new four- to five-year transitional phase between childhood and adulthood. As the longevity revolution gains momentum, a contemporary transitional phase, delineated more by functional markers than by chronological age, is also being forged. It is seen by many observers to represent a unique and unprecedented stage of human development. It has been alternatively dubbed "late middle age" by some, in reference to its continuity with the health and activities of the mid-adult years, and the "encore" years to denote second-chance opportunities and new directions for meaningful engagements. It has also been labelled "gerontolescence" *(21)* in a reminder

that the large baby boom generation who are presently defining it are also the same cohort that created and defined the social construct of "adolescence". This generation embodies distinct features. They are better educated than any other preceding generation, and there is an activist and rebellious spirit at their core. It is a generation that has fought against racism, homophobia and political authoritarianism, and fought for women's rights, citizen empowerment and sexual freedom. It is a generation that is comfortable with demanding to be heard *(21)*, and it is reinventing the way older age is lived and viewed. Ageing is increasingly seen as an individual process with multiple opportunities for personal development and for continued youthfulness; for example, through self-care, and aesthetic treatment products and services *(112)*. Gerontolescents are leading the "unretirement" trend that is changing the way we think about work and retirement *(113)*. One example of this transformative approach to ageing is the Pass it On Network *(114)*, which acts as a forum for global exchange to facilitate proactive older persons to contribute in creative ways to themselves, each other and their communities.

"Never before have we seen a group of people approaching the age of 65 who are so well-informed, so wealthy, in such good health and with such a strong history of activism. With a legacy like this, it is unimaginable that this generation will experience old age like previous ones." (21)

Changing Family Structures Create New Opportunities and Challenges

With longer lives and fewer children, it is now more common for families to be multigenerational. Significant numbers of children are likely to have greater opportunities for contact and support from older family members, which, in turn, may help to reduce stereotypes. The presence of fewer children, however, combined with other transformations within family structures, is threatening to reduce the support that older persons can expect to receive from younger generations *(115)*. Either as a matter of lifestyle choice or because of the divorce or death of a partner, more couples are childless and more individuals are living alone. Large numbers of people will have more than one conjugal partner over their lifetimes, and more children will grow up with single parents, or with step-parents and step-siblings. The children from separated or reconstituted families may be less willing to provide care if the family bonds are more diluted or divided. Greater geographic mobility, and the higher labour force participation of women, also reduce the availability of adult children who are willing to provide care to older family members. The phenomenon of "family insufficiency" can be observed across all regions.

"Is the modern family capable of, or willing to continue the responsibilities of caring?" (21)

Pushing the Boundaries of Longevity: Quality of Life until the End of Life

People aged 80 years and over are also living longer. They are the most diverse group of individuals of any age, both physically and mentally *(116)*, reflecting cumulative differentiation as a result of life events, environments and personal choices. In general, about one third of this age group continue to enjoy high levels of physical and mental functioning, one third have a significant degree of impairment but can function with support in the community, and the remaining third experience severe disability and dependency *(116)*.

Individuals who maintain good functioning in advanced years are exemplars of the continued potential for health and well-being. These people have much to teach us about the conditions, behaviours and attitudes that sustain vitality in later life (*117,118*). More people in high-income countries are living longer in better health, with a shorter period of disability and decline towards the end of life *(29)*, although this gain is not shared equally by persons living in poverty and social exclusion in those same countries.

Some ageing-related functional losses inevitably occur. In addition, multiple chronic illnesses become more common. Some people become less mobile and more dependent on others for support, precisely at the time when their family and friendship networks become more limited *(116)*.

Men can usually count on their spouses to provide care until the end of life. Women live longer with disabilities and are more likely to live alone during their last years with care from any available adult child, or other family/friend. In many high-income countries, formal public long-term care is available, but may not be enough to ensure quality of life. In many less developed countries, older persons and their families have little, if any, recourse to publicly supported long-term care. In all regions, too few individuals and families acknowledge and plan for eventual dependency.

The growing presence of the very old confronts current paradigms about the meaning of life as well as about living environments, responsibility for care and quality of life. Resilient older persons who cope with impairments and who endure them with dignity are testaments to the strength of the human spirit in the face of adversity *(119)*.

Those who, despite infirmities, continue to find meaning and pleasure in their lives reveal the capacity for human transcendence and are a major source of inspiration. Others, who may be entirely dependent and wordless, remain distinct personalities who have lived a unique and meaningful life. In a society caught up in humans "doing", very old persons are humans "being". They call upon all of us to recognize and to promote the expression of their identity, their individuality, and above all, their unalienable human rights. This stage of life, too, must be unequivocally embraced within the vision of Active Ageing.

Increasingly, the idea of "a good death" has come to mean that quality of life has been maintained until the person's last breath. Dying free from pain and emotional suffering and in the knowledge that one is valued by significant others, is also embraced in the vision of Active Ageing.

Australian Frank Kelly was a father of six children, physiotherapist, major community contributor, ballroom dancer and air force veteran. Throughout his life, he always believed he was a lucky man, even during his difficult final journey with dementia. Starting in his late 70s, Frank attended many funerals of friends and acquaintances and openly reflected on life's finality with his family.

"I am in my dying time and you need to understand that."

Dying is becoming more concentrated in older age: between 2005–2010, more than half (55%) of deaths occurred after age 60, with the highest proportions (85%) in more developed regions *(120)*. The eventuality of death is more expected in older age. Coming to terms with one's own and others' mortality is an existential task for which older persons are our prime teachers.
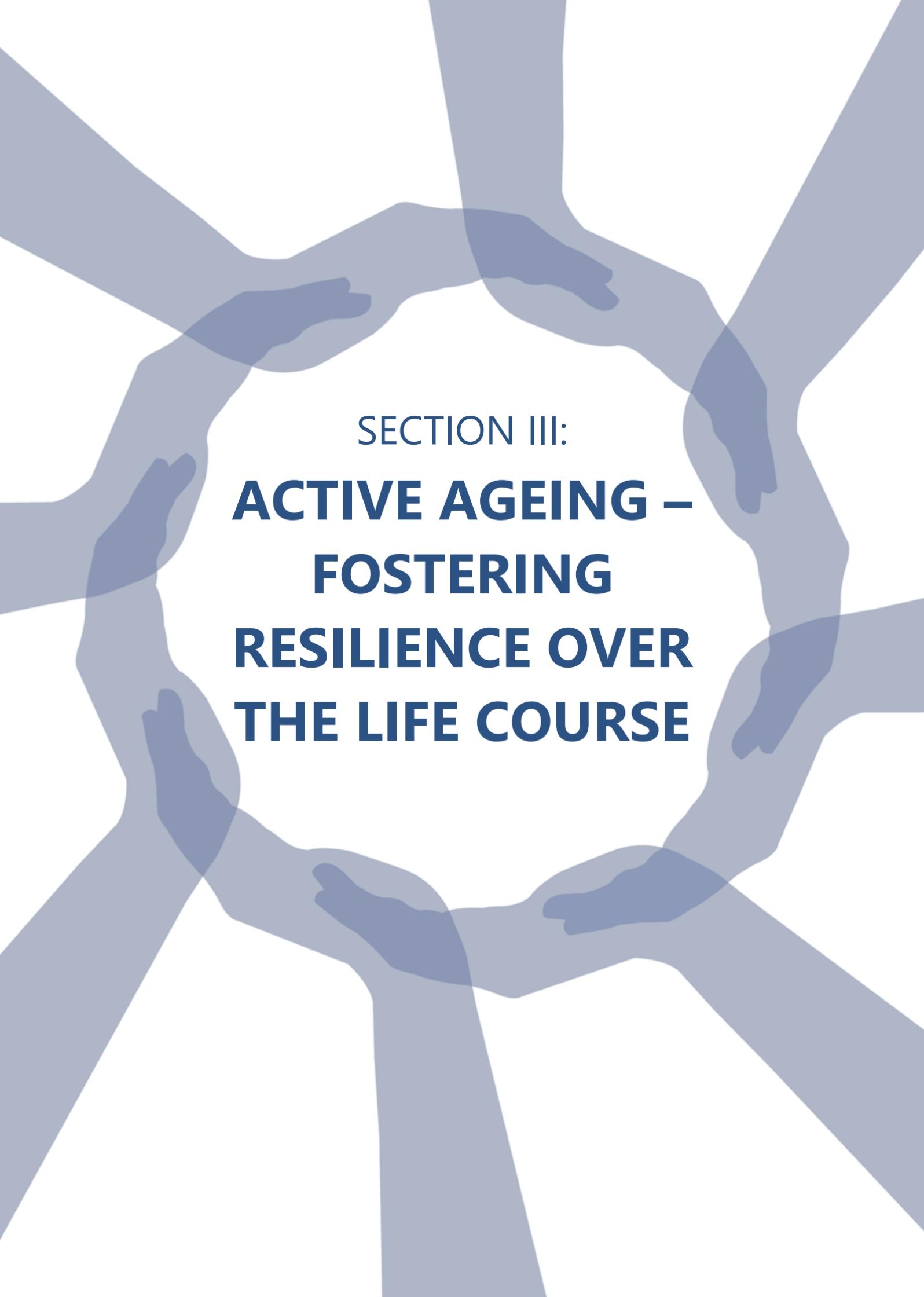
SECTION III:

ACTIVE AGEING – FOSTERING RESILIENCE OVER THE LIFE COURSE

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"What do you want for yourself as you age? How would you like to experience growing older? Where would you like to live? What would you like to be doing? Almost universally, the answers to these questions involve people stating that they would like to age in good health, in the comfort of a familiar home, spending time with friends, family and celebrating life." (21)

Active Ageing is the process of optimizing opportunities for health, lifelong learning, participation and security in order to enhance the quality of life as people age.

Definition and Principles

The WHO concept of Active Ageing captures this positive and holistic vision of ageing and harnesses it as both an individual aspiration and a policy goal. It is applied equally to individuals as well as to societies. The initial formulation identified health, participation and security as the fundamental components of Active Ageing. The concept was further refined *(21)* with the addition of lifelong learning as the fourth component, as promulgated at the International Conference on Active Ageing in Seville in 2010 and subsequently reflected in policy directions for the Spanish province of Andalucía *(121)*.

Individuals who are ageing actively seize occasions throughout their lives to acquire and to maintain health, meaningful occupation, social relationships, new skills, knowledge and material necessities. At the personal level, these are resources, or types of "capital", that when accumulated throughout the life course, become the foundations for physical, mental and social well-being at every point of age. The earlier that this accumulation of vital capitals of health, income generation, social networks and knowledge begins, the better *(122)*. All are interdependent and mutually reinforcing. Health is universally recognized as the most essential requirement for quality of life. The capacity to participate in all spheres of activity – work, play, love, friendship, culture – depends to a large degree on having physical and mental health. In turn, participation contributes to positive health. Learning is a renewable resource that enhances the capacity to remain healthy, and to acquire and update knowledge and skills in order to stay relevant and better assure personal security. The healthier and more knowledgeable one is at whatever age, the higher the chances of full participation in society. Health and knowledge are therefore key factors for empowerment and full participation in society. Having all basic material and health service needs met, and feeling safe from external threats, are prerequisites for well-being at any age, but it

is especially pertinent in certain instances (e.g., during periods of health crisis, unemployment or in very old age). Security, the fourth component of Active Ageing, provides the feeling of being protected in a broad sense – from neglect, from extreme poverty, from abandonment, and from lack of care when that is needed. Active Ageing is an ongoing process, a life investment that spans an entire life. The earlier one starts to optimize the opportunities for health, lifelong learning, participation and security, the better the chance of enjoying an old age with quality of life.

Active Ageing can be framed within the current theoretical perspective of resilience – defined as having access to the reserves needed to adapt to, endure, or grow from, the challenges encountered in life *(123)*. Health, engagement, networks, material security, and knowledge and skills constitute the reserves for successful adaptation and personal growth, which point to well-being and quality of life. Building the reserves for resilience, Active Ageing depends on several factors. These factors are partly individual, but they also reflect the environmental and societal context in which a person lives and ages. An authentically resilient society promotes the development of a true individual resilience, of Active Ageing, over the life course.

From the public policy perspective, the components of health, lifelong learning, participation and security are policy "pillars", or key areas for strategic action. Active Ageing offers a broad and integrative framework for all social institutions to support and enable people to take the opportunities over the course of their lives to achieve well-being in older adulthood. Institutions partnered with Active Ageing include all levels of government and all government policy sectors, as well as civil society and the private sector.

An Active Ageing policy framework presupposes a set of principles to guide policy action. The principles described below represent an integration of those articulated by WHO *(1)* and others (124–127) for whom Active Ageing is a fruitful construct to inform multi-sectoral policy action.

1) Activity is **not restricted to physical activity or to labour force participation.** Being "active" also covers meaningful engagement in family, social, cultural and spiritual life, as well as volunteering and civic pursuits.

2) Active Ageing **applies to persons of all ages**, including older adults who are frail, disabled and in need of care, as well as older persons who are healthy and high-functioning.

3) The **goals of Active Ageing** are preventive, restorative and palliative, addressing needs across the range of individual capacity and resources. Assuring quality of life for persons who cannot regain health and function is as important as extending health and function.

4) Active Ageing promotes **personal autonomy and independence** as well as **interdependence** – the mutual giving and receiving between individuals.

5) Active Ageing **promotes inter-generational solidarity**, meaning fairness in the distribution of resources across age groups. It also encourages concern for the long-term well-being of each generation and opportunities for encounter and support between generations.

6) Active Ageing combines **top-down policy** action to enable and support health, participation, lifelong learning and

security, with opportunities for **bottom-up participation** – protagonism, empowering citizens to make their own choices as well as to shape policy directions.

7) Active Ageing is **rights-based** rather than needs-based, acknowledging the entitlement of people to equality of opportunity and treatment in all aspects of life as they develop, mature and grow older. It respects diversity and fulfils all human rights conventions, principles and agreements promulgated by the United Nations, with particular focus on the rights of persons who experience inequality and exclusion throughout life. It especially recognizes the human rights of older people and the United Nations Principles for Older Persons of independence, participation, dignity, care and self fulfilment.

"Access to citizenship becomes limited if frailty, illness, disability or isolation reduce a person's capacity to effectively exercise his or her decision-making rights." (21)

A comprehensive rights-based approach to policy will produce services and structures that will empower older persons. It will result in "more inclusive, equitable and sustainable development" *(128)*.

8) Active Ageing simultaneously promotes an individual responsibility to take up the opportunities made possible by the rights that are recognized. It is nevertheless mindful of the important requirement not to blame individuals who have been systematically excluded from society and who have missed opportunities throughout life for healthier choices, lifelong learning, participation and so forth.

"A modern, effective strategy on active ageing will be based on a partnership between the citizen and society. In this partnership, the role of the State is to enable, facilitate and motivate the citizen, and where necessary, to provide high quality social protection for as long as possible." (125)

Pillar 1. Health

Active Ageing embraces the goal of enhancing the health of populations and reducing health inequalities to enable the achievement of the fullest health potential across the life course. This vision of health is firmly rooted in the conception and strategies for health articulated over decades by WHO and universally regarded as normative. Health is "a state of complete physical, mental and social wellbeing and not merely the absence of disease" *(129)*. It is a resource for everyday life. It is "an important dimension of quality of life that must be achieved not solely by health services, but also by assuring security and learning", through "peace, shelter, education, food, income, a stable eco-system, sustainable resources, social justice and equity" *(16)*. In urging action to promote health, the Bangkok Charter on Health Promotion urges, inter alia, advocacy based on human rights and solidarity, investment in the determinants of health, regulatory practices to assure a high

level of protection from harm and the development of health literacy as an essential capacity *(130)*.

Health is an investment that pays dividends for a lifetime. The earlier in life that good health is cultivated, the longer and the stronger are the rewards, evidenced in the absence of disease and higher functioning. There is compelling evidence that factors in childhood and adolescence have the greatest cumulative impact on health outcomes later in life *(131)*. Older people who maintain the best functional health in their older years are also people who have optimal health habits in mid-life *(132)*. Additionally, there is plenty of evidence of the accompanying benefits for the adoption of healthier lifestyles, even at very advanced ages *(133)* – confirming the adage that "it is never too late".

The importance of mental and social health for Active Ageing is too often overlooked. Positive mental health is a consistent characteristic of high-functioning people at all ages. It is displayed by some distinct traits, including self-esteem, a positive outlook on life, satisfying personal relationships and the ability to cope well with stress (134,135). Physical and mental health influence each other, both positively and negatively. While preventing illness and impairment is the first line of action, treatment, support and care are necessary accompaniments to rehabilitation and preservation of quality of life. Physiological and functional changes, together with the impacts of external factors over time, eventually lead to greater or lesser impairment. Appropriate and timely care that minimizes further loss, benefits individuals and families in addition to society as a whole *(136)*.

A Life-Course Approach. The case for Active Ageing over the life course with a focus on functional health was graphically presented by Kalache and Kickbusch *(137)*, and by WHO *(1)*, with refinements by Kalache *(21)* to better incorporate the role of promotion and rehabilitation for Active Ageing in older adulthood (Fig. 8).

Figure 8. **The life-course approach in relation to Active Ageing**
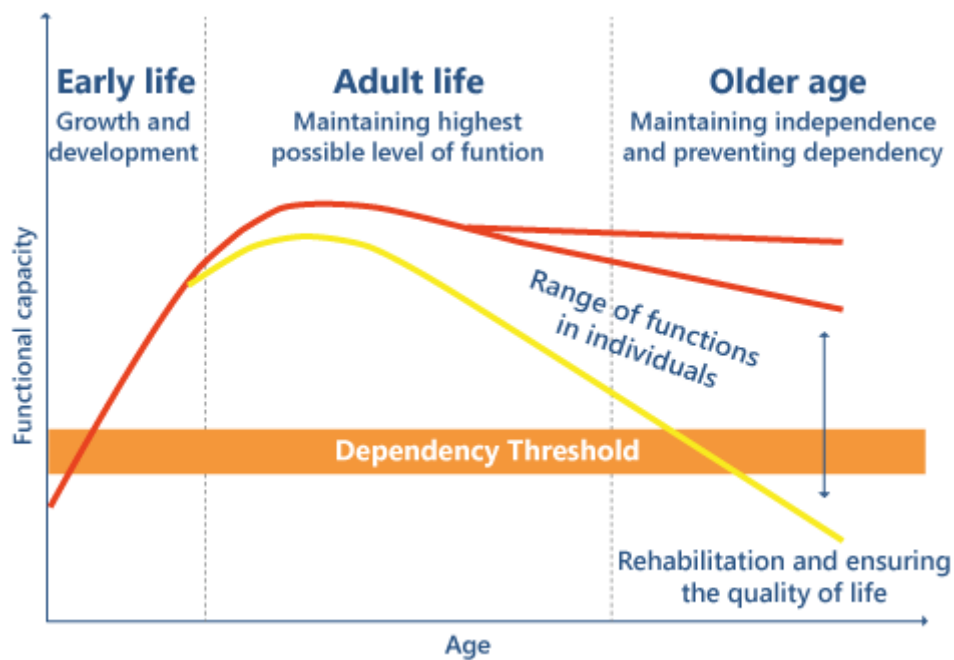
(Source: Adapted from Kalache and Kickbusch 1997 *(138)* and WHO 2002 *(1)*)

Functional capacity across the life course. Figure 8 depicts the trajectory of physical functional capacity throughout the life course from birth. Functional capacity increases to its peak in young adulthood. It is at this point that an individual's muscular strength and lung and heart capacity are at their overall optimum level. Beyond this point, functional capacity will inevitably decline. The rate of decline is clearly influenced by age but, to a much larger extent, it is impacted by lifestyle and external variables, including access to health services – all of which are modifiable. If the predominance of these personal and external conditions are favourable, the rate of decline will be very gradual and the person will continue to be able to perform the requisite activities of life well into older age. This strong and sustained functional capacity ideal leads to a "compression of morbidity" *(139)* in which the eventual decline and disability is squeezed into a very short period of time immediately prior to death. A long and independent life in good health is the ideal conclusion of the Active Ageing model (see

Fig. 11 for possible end-of-life trajectories). Recent analysis of population morbidity trends in the United States and other high-income countries *(140)* suggests that compression of morbidity is indeed occurring. Other studies, however, indicate that this gain in health expectancy in high-income countries is threatened by such developments as increasing sedentary lives and over-nutrition, leading to high obesity rates. However, it should be noted that the compression of morbidity is not at all the experience of the vast majority of people living in least developed countries *(81)*.

Individuals who grow up poor, malnourished or in deprived and violent neighbourhoods with few opportunities for education will not reach optimal functional capacity. Their functional capacity will decline rapidly during a life characterized by low-paying jobs or unemployment, stressful living circumstances and poor health options. They will be inclined to develop chronic illnesses in mid-life and become disabled before reaching

older adulthood. In the absence of rehabilitation and care, they will become progressively sicker, more disabled and at exaggerated risk, until they die, prematurely – following the yellow line in the graph.

The dependency threshold. The dependency threshold is the level of barrier in the environment that transforms a functional impairment (such as diminished vision, or a knee stiff with osteoarthritis) into a dependency or disability. A high threshold increases dependency. Poor urban design, inadequate public transportation, hard-to-access information, architectural barriers, lack of social support or economic barriers are all features that contribute to this elevated threshold. Lowering the threshold by reducing barriers (e.g., by improving lighting and signage, fostering social inclusion and guaranteeing economic security) frees people with impairments to continue to function. Interventions that assist individuals to maintain good function, prevent and control disease and reverse or delay decline, as well as implementing age-friendly planning and design, are all important to lower the dependency threshold. That is the reason why in the functional capacity graph, the threshold is not a line but a bar, signifying that it can fall within a range; in other words, two different persons with the same physical condition may lead an independent life in a supportive environment or become inevitably disabled in an adverse one.

Pillar 2: Lifelong Learning

Globalization and the expansion of the fast-changing knowledge economy means that information is the most valuable commodity *(141)*, and access to information is a vital key to Active Ageing. Lifelong learning is important not only to employability but also to the reinforcement of well-being. It is a pillar that supports all other pillars of Active Ageing. It equips us to stay healthy, and remain relevant and engaged in society. It therefore empowers and gives greater assurance to personal security. At the societal level, people in all walks of life and at all ages who are informed and in possession of current skills contribute to economic competitiveness, employment, sustainable social protection and citizen participation. In facilitating general prosperity, lifelong learning significantly contributes to solidarity between generations. The OECD considers continuous learning to be one of the most important components of human capital in an ageing world *(142)*.

Learning in a formal context, where knowledge is acquired in a structured way with an aim to obtain a recognized grade or diploma, is traditionally concentrated earlier in life. Increasingly, however, it is in demand across adulthood for reasons of professional specialization, career change or simply for personal enrichment. Much development of additional skills takes place in a non-formal setting, through such planned activities as workshops, short courses and seminars. Finally, informal, or experiential, learning takes place at all ages in daily life – at home, in the workplace and in leisure activities.

Learning needs are multiple and constant over the life course. Alongside formal schooling and literacy skills, health literacy is necessary for self-care, financial literacy is necessary to manage income and expenses, and technological literacy is required in order to be fully connected. Failure to keep up with technological advances can mean that a person is no longer able to work within their learned profession (e.g., present-day car engineers need to know more about complex electronics than mechanics; twenty years ago, all they needed to know was mechanics).

Vulnerability, in all its aspects, increases among persons with low educational attainment – a group that too often includes racial and cultural minorities, immigrants, disabled and older persons, and, in many countries, women as well.

Organized adult education beyond formal schooling tends to focus on the acquisition of work-related knowledge and skills for persons in the active labour force. The need for a more inclusive and strategic approach tailored to specific target groups to promote Active Ageing has been recognized by the European Commission *(143)*, including early school leavers, drop-outs and immigrants. An even more comprehensive life-course model for adult learning proposes a range of programming to meet coping needs, contributive needs and cultivating needs (i.e., self-improvement) *(144)*.

Pillar 3: Participation

Participation is much more than involvement in paid work. It means engagement in any social, civic, recreational, cultural, intellectual or spiritual pursuit that brings a sense of meaning, fulfilment and belonging. Participation supports positive health: it provides engagement, or "flow" experiences that are intrinsically satisfying, imparting a sense of purpose and the opportunity for positive social relationships *(134)*. Having a sense of purpose contributes to a lower risk of dying for persons of all ages *(145)*. Social and intellectual engagement is linked to good self-reported and objective health among young to very old adults *(146)* and to good cognitive functioning in later life *(147)*. Working beyond the age of retirement is a protective factor against dementia *(148)*. Collectively, engaged people in the community create social capital that is

consistently associated with the health and well-being of individuals *(149)*, and high labour participation contributes to prosperity and public revenues.

Over the life course, work constitutes a major component of participation. Meaningful employment is a source of economic security, self-esteem and social integration, as well as social stability and health *(150)*. Chronically high unemployment and underemployment, particularly among young adults in many countries *(151)*, is a significant risk to their capacity for Active Ageing, with negative impacts on their health *(152)* and social inclusion *(151)*.

Volunteer participation in non-profit organizations, charities and community groups is also very important for personal quality of life and to society as a whole. Recognized by the UN as a powerful force for empowerment, citizenship and human development *(153)*, the economic value of volunteer contributions for 36 more and less developed countries taken together is estimated at US$ 400 billion annually *(153)*. Persons of all ages volunteer, and being a volunteer in youth strongly predicts volunteering throughout adult life *(154)*. While proportionally fewer older persons are volunteers, often for reasons of health, older volunteers donate far more hours of their time than any other age group *(155)*.

The active participation of all citizens at all levels of the decision-making processes in society keeps democracies robust, makes policies more responsive and empowers individuals. Persons who have more resources – those who are better educated, have higher incomes and more extensive social networks, and are mature adults – participate more in political and social life *(156)*. Individuals who engage in civic activities in youth tend to maintain that

engagement throughout their lives *(154)*. Encouraging stronger civic participation from the young, through such bodies as youth voluntary associations, will become increasingly important to ensure that their voice is heard in a healthy dialogue between generations on social issues (157). Having access to the Internet is also associated with civic engagement *(158)*. Promoting digital inclusion through Internet access and proficiency training may be a means to facilitate participation by persons who have been excluded from civic life.

Pillar 4: Security

Security is the most fundamental of human needs. In the absence of it, we cannot fully develop our potential and age actively. Insecurity has a corrosive effect on our physical health, emotional well-being and social fabric. Threats to security at a societal level include conflict, effects of climate change, natural disasters, disease epidemics, organized crime, human trafficking, criminal victimization, interpersonal violence, abuse and discrimination, as well as sudden and/or prolonged economic and financial downturns *(159)*. At the individual level, risks to security include illness, deaths in the family, periods of unemployment or incapacity and moving far away from one's homeland. Intense and chronic forms of stress engendered by security uncertainty can lead to mental health disorders, with higher risks among women, adolescents, older persons and persons with disabilities *(160)*. Food insecurity is associated with developmental problems among children and chronic illness among adults *(161)*. Persons whose security is most at risk are those with the least power in society – children and youth, women, older persons, immigrants and persons with disabilities. The UN Human Security Trust

Fund calls for "freedom from fear, freedom from want and freedom to live in dignity" *(159)*.

The majority of older people in the world have no income security. They have little choice but to continue working, often in low-paid jobs or subsistence activities. Vast numbers of women have never experienced the privilege of paid employment at any point in their lives, and are relegated in older age to "lives in the shadows". Furthermore, health care, long-term care and social services are inadequate or non-existent in the majority of countries, although the situation is improving in several middle-income countries *(162)*. Recognizing that social protection programmes promote human development, political stability and inclusive prosperity, these countries are establishing or expanding their social protection systems for the benefit of citizens of all ages *(163)*. At the same time, debates are occurring in more developed countries regarding lowering income security provisions and regarding the balance of public investments between health and income security *(100)*.

Cultural safety *(164)* is a form of human security that is receiving increasing attention. Marginalized populations whose heritage is threatened, destroyed, denied by conflict or oppression, or lost through globalization and migration are vulnerable to the weakening of social bonds and negative health impacts (165,166). Supporting cultural identity and negotiating harmonious majority/minority relations in increasingly multicultural settings is important for personal as well as communal security.

Effective policies that address these four pillars of Active Ageing will greatly improve the capacity of individuals to assemble the resources during their life courses for their personal resilience and well-being. Biological make-up, personal behaviours and psychological dispositions greatly influence the development of resilience, but these, in turn, are strongly shaped by external determinants – most of which are highly affected by policy decisions.
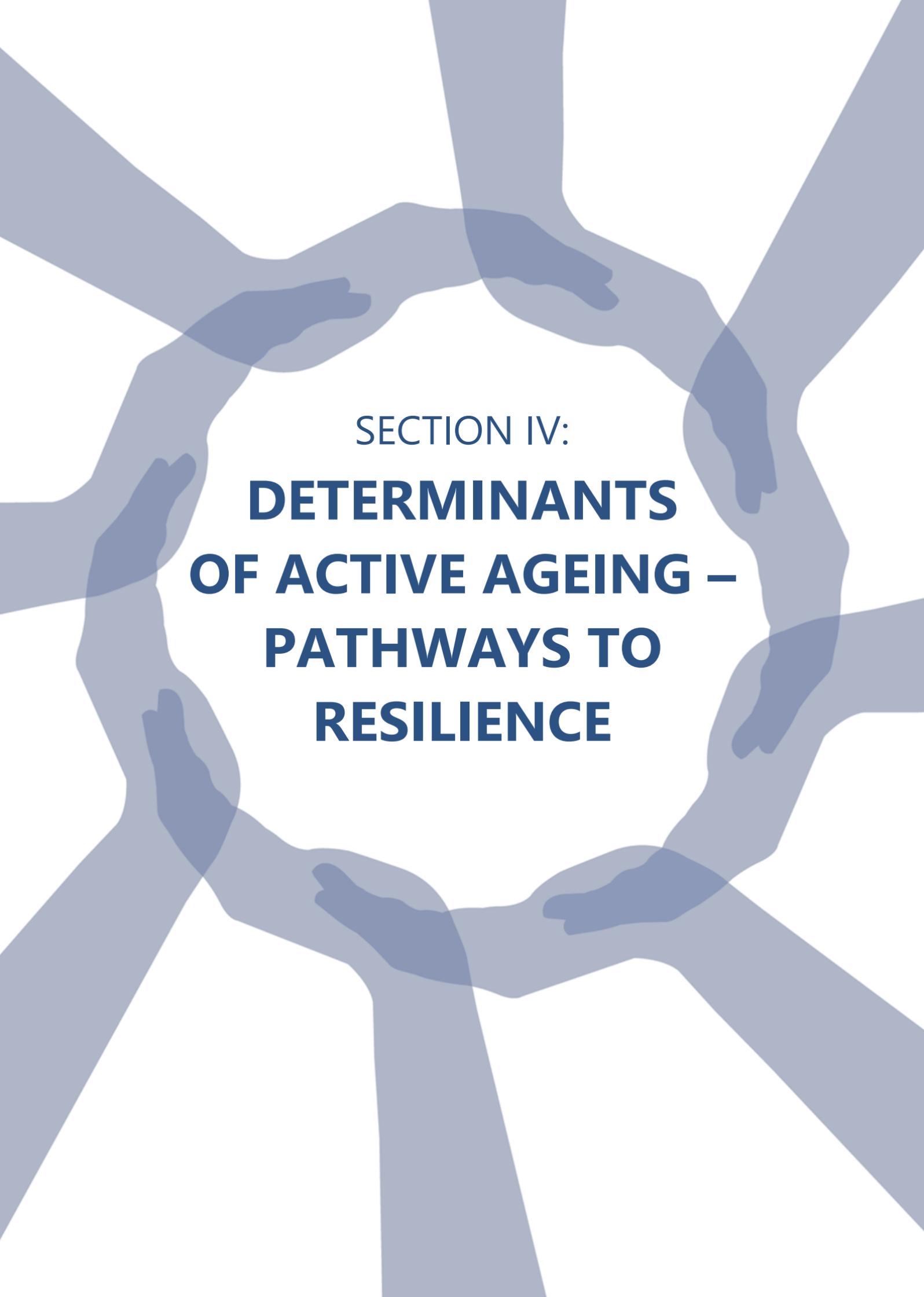
SECTION IV:
DETERMINANTS OF ACTIVE AGEING – PATHWAYS TO RESILIENCE

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In 2002, in order to clarify the multiple, interactive factors that shape whether a person ages actively over the life course, WHO promulgated a set of interrelated Determinants of Active Ageing (Fig. 9). Culture and gender can be seen as overarching and cross-cutting determinants that shape the person and his or her environment over the life course. Personal determinants and behaviours are specific to the person. The physical environment – the social, health, economic and social service determinants – constitute the contextual factors.

Figure 9. **Determinants of Active Ageing**

(Source: WHO 2002 *(1)*)

All of the determinants interact to form a dynamic web of protective conditions that can both foster the development of reserves for resilient responses and create risks that hinder the development of those reserves, or erode them entirely. In short, Active Ageing is the dynamic, lifelong interplay of risk and protection within the person and within the environment. At the same time, each determinant individually influences Active Ageing, too.

Although there is an increasing body of research based on longitudinal data on many of the determinants, there is still a limited understanding of how they interact across the life course. Although more evidence from middle-income countries is emerging, notably from the Survey of Ageing and Adult Health conducted by WHO *(161)*, the majority

of research on the determinants of Active Ageing is produced in North America and Europe.

Culture

Culture refers to the shared meanings of a society that evolve historically and that are expressed in traditions, artistic expression, language, rituals and expectations about individual and group behaviour. Culture shapes every aspect of life: what and when people eat, how they perceive their bodies and the practices they use to maintain health and treat illness. It frames the roles of men and women together with ideas about the position and value of persons of different ages, social classes and other cultural or racial entities. Relationships within the family, living arrangements and expectations for care at all stages of the life course are culturally bound. Culture also provides people with a sense of identity, continuity and belonging that can sustain them in times of difficulty.

Colonial cultural oppression has had devastating effects on the social integrity and individual well-being of indigenous peoples *(165)*. Health and service policies by and for aboriginal people increasingly focus on ensuring "cultural safety" (i.e., approaches that affirm the culture and empower the individuals who identify with it) *(164)*. Globalization is posing threats to cultural heritage in many regions of the world, leading to calls to include cultural heritage within the global sustainable development agenda (166). Extensive migration is creating a growing diversity of cultures within the same society that sometimes stimulates tolerance and cultural sensitivity and sometimes leads to group frictions and social exclusions. Applying the notion of cultural safety more broadly in the context of the globalized, post-

colonial and multicultural world may result in the consideration of culture as an essential lens for policy development and implementation.

Health behaviours vary widely among cultures. It is well known that diets that are mostly plant-based, such as the traditional eating patterns of Mediterranean (167) and many Asian cultures (168), are more health-promoting over the life course than the diets high in saturated fats more typical of North America and parts of Europe. Yoga (169), tai-chi (170) and meditation (171) are preferred self-care practices in parts of Asia that are effective for managing stress and/or enhancing physical function. Help-seeking behaviours and accepted remedies during illness differ as well. Many immigrants, particularly those in older age, revert to traditional health-care practices and remedies, sometimes in combination with host-country treatments (172), and they may have additional unmet health needs owing to difficulties accessing the health services in their adopted location *(173)*.

Culture shapes the coping and response mechanisms that are adopted throughout life. Particular problems are approached differently by certain groups. Some cultures are seen as more individualistic. They are thought to place greater emphasis on personal action for problem-solving, and challenge collectivist responses, such as spirituality, social support and reappraisal *(174)*.

Discrimination experienced by minority cultural and racial groups within a society can clearly result in exclusion and an assault upon self-esteem. Culture, however, can also confer a protective buffer in the face of injustice if it provides a strong sense of ethnic identity and empowerment in relation to other groups *(175)*. The incorporation of cultural safety

into policy may significantly contribute to a strengthened resilience.

In all societies, there is a tradition of family care. In some cultures, the expectation is for the family to take full responsibility for the care of its older members. Extended family living arrangements have been the norm in many countries. There is evidence that these arrangements are changing, although family support still remains strong *(176)*. Urbanization, modernization, changing family structures and participation of women in the paid work force are eroding multigenerational household arrangements *(115)*. In other societies, both older persons and their adult children place a high value on their independence, and maintain "closeness at a distance". Each norm has implications for self-care, for financial planning throughout life, for the personal aspirations of girls and women beyond care roles, for preferred housing types and living arrangements, and for the role of society in the support of its older citizenry. The norm of filial responsibility also influences the personal experience of care-giving. A study of Chinese and Caucasian family caregivers found that the caregivers of Chinese origin had better self-reported health and well-being because they considered care-giving to be a "normal" and valuable life role *(177)*.

The culture of family care is increasingly challenged. There is a growing number of dependent older persons and a dwindling pool of adult family members available to provide care. Time-pressured and tired caregivers – mostly women – may rebel against the "duty" of care for a range of in-laws and unmarried or childless aunts and uncles, in addition to their own parents. Changing family structures and migration also mean that more ageing people will have no available family at all. Differently configured family relationships are emerging

with entirely new expectations (e.g., couples who maintain a relationship while living apart, or care bonds with family members other than children) *(178)*. In some countries, the tendency is to expect the help of professional caregivers, and in others, the preference is for care by a family member *(179)*. As demand for care increases *(179)*, governments everywhere will continue to count on a large involvement by individuals and unpaid family caregivers. There will need to be more accommodations to publicly support it. An international consensus, however, is emerging around the need for a vision of care as a truly shared social responsibility, and this was articulated in the Rio Declaration on Developing a Culture of Care in Response to the Longevity Revolution *(180)*.

Ageism. All cultures convey beliefs about ageing and older persons, both positive and negative. These stereotypes influence responsive attitudes and behaviours in relation to one's own ageing and to older persons, both as a group and as individuals. The cultural categorization of people on the basis of their chronological age hinders Active Ageing in many ways. At an individual level, research has demonstrated that negative perceptions of ageing have a harmful effect on self-esteem and sense of control (181,182) and discourage actions to control chronic disease *(183)*. Other research shows that the internalization of negative stereotypes of old age can be detrimental to older people's performance *(184)*. One longitudinal study found that perceptions of ageing influence functional health in later life *(185)*. Another study reported that persons with a negative perception of ageing lived 7.5 years less than those who regarded ageing more positively *(186)*. Personal discomfort with ageing can lead to denial and attempts to hide one's age with beauty and so-called "anti-ageing" products, cosmetic surgeries and a

proliferation of nostrums. Rates of cosmetic surgery have increased in tandem with population ageing *(187)*, and the United States and Brazil led the world in numbers of aesthetic surgeries in 2013 *(188)*.

Discrimination because of age or other social characteristics is increasingly recognized as a risk factor for health *(189)* because it limits access to the other determinants, such as economic resources or services. Discriminatory actions range from the failure to include, to the denial of services, neglect and violence. Like other social biases, such as racism or sexism, ageism overlooks both differences and similarities between groups – in this case, between older and younger persons *(190)*. Design provides one such example. The disregard of a meaningful age perspective in the design process leads to design exclusion. Older people consulted on urban design in 33 cities worldwide for the *WHO Age-Friendly Cities Guide* (2007) consistently reported that pedestrian crossing signals were too brief and that there were too few benches for walkers to rest *(14)*. Another example is the failure to adequately address age differences in the area of policy. The WHO report *Older Persons in Emergencies: An Active Ageing Perspective* (2008) *(191)* identified natural and conflict-related emergencies in which policy responses did not take into account specific vulnerabilities more common among older persons, such as mobility limitations and greater susceptibility to temperature variations. Age-based discrimination can be seen in all settings. It manifests in the workplace in the reluctance to hire and train older workers and in mandatory age-based retirement policies. In health care, it can be evidenced in false beliefs that diseases are less treatable at older ages, resulting in limited access to diagnostic services and interventions *(79)*.

Gender. Assumptions about men and women from birth onwards determine the opportunities and risks for Active Ageing in all areas of life. Notwithstanding important advances made in many countries in recent decades, there remain significant discrepancies between women and men. The accumulation of these disparities has a powerful impact on the health and well-being of older adults in multifaceted ways, and is enormously consequential to the wider society.

Women and ageing. The dominant discourse in virtually all cultures is one of male superiority. It inevitably has a far-reaching effect on women, and this is further compounded by other social conditions, such as poverty, disability and old age. As documented by the World Economic Forum *(192)*, women are disadvantaged to varying degrees in all countries and in all areas of life – economic participation and opportunities, educational attainment, health and survival, and political empowerment. Particularly in more developed regions, substantial progress has been made, but gender inequities persist worldwide *(193)* and even in some of the high-income countries, there are recent reported instances of increases in gaps: in Australia, for example, women are earning 81.8 cents for every dollar a man earns, down from 85.1 cents ten years ago *(194)*.

The WHO report on *Women, Ageing and Health* (2006) presents several specific gender inequities *(195)*:

- Girls and women may have less access to nutritious food, to health-promoting physical activity and to adequate sleep.

- Girls and women have less access to education and to opportunities for participation and personal development outside the home.

- In education and the labour market, gender stereotypes restrict women's career choices, level of aspiration, salary and retirement income.

- Women may not be entitled to inherit household wealth, or to receive a fair settlement upon divorce.

- Expectations regarding women's traditional care-giving role in the family often limits their possibilities of personal and professional development outside the home, as well as their current and future financial security.

Care-giving, especially long-term care-giving of disabled persons, is mostly undertaken by women, and it exacts a major toll on health *(196)*. Girls and women are much more likely than boys and men to experience domestic violence and sexual abuse *(197)*. Women face discrimination in access to health; for instance, women do not have the same access as men to many specialist services and interventions (195,198).

Advancing age and sex-related biological differences, compounded by the cumulative impact of social inequities over a lifetime, lead to greater morbidity and disability. For example, a recent cross-sectional analysis of international data reported that early maternal age at first birth is linked to higher chronic disease prevalence and poor physical performance in older age *(199)*. Globally, although 40% of all men and women over 60 live with a disability *(200)*, more women experience mobility problems, incontinence, fall-related injuries, dementia and depression *(195)*.

With husbands older than themselves and a dependence on their income, women are much more likely to be left un-partnered and impoverished in late life. It is common for older women to live alone with low income, often with chronic diseases and disabilities, and thus to be socially isolated and vulnerable. Women of advanced years are the population group most in need of community care *(201)*. A protective factor for women against isolation, however, is their closer ties to family members, and generally, a more extensive network of friends in comparison to men *(202)*.

Men and ageing. Despite benefiting from more of the social and economic advantages that support Active Ageing than women, men's socialization to be "masculine" (i.e., tough and self-sufficient) engenders a number of risks to physical, social and mental well-being *(203)*. Greater risk-taking over the life course is one explanation offered for the universally lower life expectancy of men compared to women, notwithstanding their higher status *(203)*. According to the UN, women outlive men by 4.5 years globally *(204)*. Men are more likely to consume excessive alcohol *(205)*, smoke *(206)*, consume illicit drugs *(207)* and be involved in road traffic accidents *(208)*. Men are the most frequent victims of violence outside the home. In Brazil in 2013, 22 out of 1000 young males aged 15–24 died before their 25th birthday, compared to 12 out of 1000 young females of the same age *(209)*. In nearly every region of the world, men over 60 years of age have the highest suicide rates, with rates rising progressively per decade *(210)*. Some studies show that men are less willing to seek help for health problems *(203)*. In a random survey of Australian adults, men were considerably less likely than women to seek health information or to take personal responsibility for their health *(211)*. Efforts to target health information and services to men are increasing in more developed countries *(212)* and those which prove to be effective may be more universally implemented.

The transition from work to retirement may be more difficult for men as their identity may be more defined by occupation, and their social relationships outside the family may be principally work-related *(213)*. Older men are generally more resistant to participation in organizations for older persons, but they are more likely to engage when the offer is tailored to their particular interests or professional experience *(214)*. Men are less likely to cultivate social relationships with family members and friends, tending to rely on their spouse to perform that role *(215)*. Older widowers are more likely than widows to remarry, possibly because they have less companionship with peers than do widows, as well as being wealthier *(202)*. Social isolation among older men reflects a reluctance to engage with others, and the risks for isolation are higher for divorced and never-married men *(214)*.

"The transformative nature of global population ageing requires all societies to create new conceptual frameworks. It is necessary to totally reappraise who we are, how we relate to our much extended lives and to each other as women and men – as human beings. We must continue to deepen and expand our understanding about gender through interdisciplinary and inter-sectoral collaboration. Our ingenuity for innovation amidst human diversity will help to actualize this quest in distinctive ways. When gender equality is truly embraced, the skills, experiences and resources of women and men of all ages will be recognized as intrinsic assets for a fully cohesive, fulfilling, productive and sustainable society." (216)

Behavioural Determinants

Individual behaviours play a very direct and significant role in Active Ageing. Healthy behaviours promote a longer life and optimum functional capacity and well-being, whereas unhealthy behaviours increase the risk for mortality, disease and disability. The world's leading chronic diseases – cardiovascular disease, high blood pressure, cancers and type II diabetes – are causally linked to four common behavioural factors: tobacco use, lack of physical activity, unhealthy eating and alcohol consumption *(217)*. Health-related behaviours are basic to the development of resilience because they contribute to energy, stamina, strength, resistance to disease and injury, and positive moods. Nevertheless, the surveillance of health behaviours in older age is lacking *(218)*, despite the fact that health promotion interventions can also be beneficial and cost effective in older age (140,219).

Although these behaviours are individualistic and ultimately rest upon a personal decision, they are strongly influenced by legal, fiscal, social and economic determinants. Placing the exclusive onus on individuals in disadvantaged circumstances to adopt "healthier lifestyles" is blaming the victim.

Jurisdictions with better track records of health behaviours are those which have implemented population-level policies which, in the words of the *Ottawa Charter on Health Promotion*, "make the healthy choices the easy choices" *(16)*.

Population-level interventions can be complemented by well-designed health-promotion measures targeted at the individual level. A systematic study of reviews *(220)* reported that the most effective health promotion interventions in the short term targeted at the individual level were those that occurred in school or work-based settings and that included advice by a physician and individual counselling. The same review concluded that more research is needed to determine the interventions that have long-term effectiveness, and that have the best outcomes in groups with health inequalities. Evidence from longitudinal studies on the effectiveness of interventions at older ages, which also considers the interrelation of the health determinants across the life course, is required *(221)*.

Tobacco. As the leading preventable cause of death in the world, tobacco use accounts for five million deaths worldwide each year among people aged 30 and older; that is, one person every six seconds *(222)*. It is a risk factor for several types of cancer, including lung, bladder and oral cancer, as well as for heart disease, stroke, chronic obstructive lung disease, osteoporosis, cataracts, rheumatoid arthritis, tooth loss, type II diabetes, and a weakened immune system in general *(223)*, as well as dementia *(224)*. Smoking is also linked to cognitive decline from middle to older adult years *(225)*. The harmful effects are greatest for the smoker, but others who are subjected to second-hand/passive smoke suffer negative consequences as well *(226)*.

According to WHO *(227)*, male smokers outnumber female smokers by four to one on average, although there are wide variations among countries. Smoking rates have declined significantly in some more developed countries, but remain stubbornly high in many less developed countries, especially among men. In Egypt, 39% of men and 0.4% of women are smokers. In China, 57% of men and 2.6% of women smoke, and in Russia, smokers account for 60% of adult males and 15% of adult females.

Brazil's Tobacco Control Success Story

Through progressive and strong tobacco control policies, Brazil reduced adult smoking from 34.8% in 1989 to 18.5% in 2008 and 14.7% in 2013 *(406)*. Interventions include:

- complete ban on smoking in indoor public places;

- restrictions in cigarette advertising;

- gradual increases in taxation of tobacco products;

- graphic warning labels and information on where to get help to stop smoking on cigarette packages;

- widespread public information on cessation and on treatments available for cessation;

- ban on the use of additives and flavourings in all tobacco products.

Cultural norms have protected women in many less developed countries from smoking. Improvements in gender equality and targeted marketing by the tobacco industry, however, may cause female smoking rates to

increase, as was the case in more developed countries in the latter part of the 20th century.

In most regions, smoking is associated with lower education and with lower income, especially among men *(228)*. Less educated and poorer persons may be less aware of the health hazards of smoking, may use it as means of managing stress, or smoke because it is perceived as one of the few pleasures in an otherwise difficult life. Their social environment is less likely to support efforts to quit. The tragic irony is that tobacco not only damages health, but it also financially impoverishes the already impoverished.

Healthy eating. There is wide scientific consensus that a healthy diet at all ages consists of a variety of nutrient-dense whole grains, fruits and vegetables, low-fat dairy, proteins low in saturated fats, and limited amounts of red meats, salt and sugars *(229)*. Post-menopausal women require more calcium and vitamin D to mitigate bone loss *(230)*. Although much is known about healthy eating, overweightness and obesity have reached epidemic proportions worldwide. It represents a major concern in developed countries, and the prevalence is rising rapidly in less developed regions, particularly in urban settings. From 1980 to 2013, the global prevalence of overweightness and obesity (body mass index of 25 and higher) rose from 28.8% to 36.9% for men and from 29.8% to 38.0% for women *(231)*. The fact that healthier and more nutritious food is often more expensive acts as a deterrent to changing eating habits – a white diet (rich in sugar, refined grains, starch, salt, fat and alcohol) is much less expensive than the healthier selection that "brings colour to your table".

Obesity in particular is a risk factor for type II diabetes, hypertension, heart disease, some cancers and osteoarthritis *(232)*. Obesity-related chronic conditions have doubled since 1990 *(232)*, and it is possible that the gains made in healthy life expectancy will be lost as a result of obesity *(81)*. Indeed, some studies already project a loss of years in life expectancy due to obesity *(233)*. Urban lifestyles are more sedentary, and processed foods that are high in fat, salt and calories but low in nutrients are widely available as result of globalized markets. Obesity combined with malnutrition is more prevalent among persons of lower socio-economic status because processed foods are cheap, filling and highly marketed. With higher rates of obesity than men, women in less developed countries face greater risks, whereas both men and women face equally high risks in more developed countries. Throughout sub–Saharan Africa *(234)* and some Asian countries, such as India *(79)*, undernutrition is the greater mortality risk.

Underweight malnutrition is a relatively common concern among older adults, especially those living alone in the community, as well as those in hospitals and long-term care institutions (in more developed countries) *(235)*. The causes are multiple, and include ageing-related losses in taste, smell and satiety, cognitive impairment, physical disabilities, poor dentition that causes eating difficulty, side effects of some medications, chronic illness and depression *(235)*. Community-dwelling older persons may eat poorly owing to social isolation and poverty *(235)*. Inadequate nutrient intake contributes to frailty, falls, weakened immune systems, poor wound healing and depression *(236)*. About 23% of the world's population follow Islam *(237)*, which directs all faithful, with some exceptions, to fast all daylight hours during the month of Ramadan. Fasting can be detrimental to the health of older Muslims with significant health problems (in particular, those with diabetes or who are

frail) without competent safety guidance from health providers *(238)*.

Physical activity. The lifelong and pervasive benefits of regular physical activity at all ages on physical, cognitive and mental health are well established. Exercise is one of the most important actions to promote Active Ageing. It is never too late to reap the benefits from physical activity. It reduces risks for heart disease and stroke, diabetes, cancer, depression, falls and cognitive decline; it preserves mobility, muscle strength, endurance, bone strength, balance and coordination *(239)*. A large longitudinal study of Norwegian men reported that 30 minutes of any physical activity six days per week is associated with a 40% reduction in mortality at 70-plus years of age. It additionally showed that increasing physical activity is as beneficial as smoking cessation in reducing the risk of mortality *(240)*.

The level of physical activity is nevertheless declining at all ages worldwide as a result of increasingly sedentary lifestyles *(231)*. Physical activity levels are lower among women than men *(195)* and in older age for both sexes *(241)*. As noted in the *WHO Age-Friendly Cities Guide*, some features of the urban environment discourage outdoor walking *(14)*, such as high-density traffic, poor air quality, violence, and the absence of sidewalks, parks or recreational facilities. Policies that encourage the use of private cars instead of active transportation also detract from healthful physical activity.

Sleep. Achieving adequate sleep is an overlooked contributor to Active Ageing. Regularly sleeping two hours less than the recommended eight hours per night increases the risk of obesity, diabetes and cardiovascular disease, and reduces the resistance to infection, as well as impairing learning, memory and problem-solving.

Sleeping five hours or less may increase mortality risks by up to 15% *(242)*. Research in more developed countries show that average sleep duration has decreased among adults, from eight hours to seven, and that reported sleeping problems have increased. Unemployed people or persons with lower socio-economic status report more sleep problems than others *(243)*. Shift and night workers have higher risks for long-term health problems, including cardiovascular disease *(244)*. Older persons commonly experience difficulty in achieving adequate sleep, a result of normal ageing-related changes as well as from conditions that cause secondary sleep disturbances, such as osteoarthritis and enlarged prostate. A recent study of people aged 50 years and older in six countries found a positive association between cognitive performance and sleep duration of six to nine hours, and self-reported good-quality sleep *(245)*. Adults who are already experiencing chronic sleep deprivation may have lower resilience and greater negative health susceptibility as they further age.

Safe sex. Gerontolescent baby boomers are probably more sexually active than their parents. They are in better health, more often single or divorced, sexually more liberal than previous generations, and they have access to drugs to enhance the sexual experience, such as sildenafil citrate. According to an AARP survey *(246)*, the majority of middle-aged and older US participants said that sex is important to their quality of life, and about one third reported having sex at least once a week. The same survey also revealed that only a minority of the sexually active singles used condoms. Unprotected sexual activity and the longer survival of persons with HIV infection are driving up the rates of sexually transmitted diseases (STDs) among older adults. The United States Centers for Disease Control and Prevention reports that rates of

chlamydia in the 55-plus age groups rose by 41% from 2005 to 2009 *(247)*, and that the rates of syphilis rose by 67% *(248)* (although older adults still have much lower rates of these diseases than younger persons).

More people aged 50 and older are living with AIDS. In the United States, an AIDS fact sheet reported that 29% of all persons with AIDS in 2011 were 50 years and older, compared to 17% in 2001. Moreover, 50% of older persons with AIDS had been infected for one year or less *(249)*. In sub–Saharan Africa, the introduction of antiretroviral drugs has improved the life expectancy of many persons infected with HIV. It is estimated that three million, or 14%, of the HIV-positive population aged 15 years and older are 50 years and above *(250)*. Despite this, older people are largely neglected in the AIDS response. There is little AIDS prevention messaging directed to older adults, and physicians may mistake HIV infection with problems more associated with ageing (249,251).

Older women are especially at risk of contracting STDs. Their thinner vaginal walls are vulnerable to tearing; they are more susceptible to infection. In addition, after menopause, they are less likely to consult a gynaecologist for cervical cancer screening. A major barrier to a comprehensive screening and treatment of STDs for both men and women is the ageist assumption that older persons are not sexually active *(252)*.

Alcohol. Alcohol consumption is growing in tandem with economic development and is causing negative effects on health at all ages. Drinking is associated with more than 200 health conditions, according to WHO *(253)*, although cardiovascular disease and diabetes are the most frequent causes of alcohol-related deaths. The largest consumers of

alcohol are in the Americas and Europe, especially Russia and Eastern Europe, but changing lifestyles in emerging economies, such as China and India, are driving up alcohol use *(253)*.

Far more men are excessive drinkers than women at all ages. Children, adolescents and older adults are more vulnerable to the effects of alcohol, and the younger an individual starts to drink, the greater the chance of later dependency. The number of people who drink alcohol and the amount that is consumed decreases with age, as people become more sensitive to its effects, or take medications for which alcohol is contraindicated. Older persons with alcohol-dependency problems may be long-time heavy drinkers, or they may have acquired the dependency in later life to cope with life stresses *(254)*. In addition to the chronic disease effects, alcohol is implicated in falls, road traffic accidents and violence, including domestic violence *(255)*. The consequence of excessive alcohol use is a factor in the lack of improvement in life expectancy in Eastern European countries since 1980. The rising rates in economically emerging countries that are ageing rapidly are a significant cause for concern *(81)*.

Self-care and health literacy. Behaviours that individuals practise in daily life to maintain their health and to prevent illness are termed self-care. In addition to the behaviours previously described, they include personal and dental hygiene, consultation of health professionals, vaccination, preventive screening, adherence to medication as prescribed, and other voluntary actions to manage chronic conditions. Self-care is highly associated with health literacy, defined as the ability to obtain, process and understand basic health information and services to make appropriate health decisions *(256)*. The Internet is increasingly used as a strategy to obtain

health information *(257)*. Low health literacy, however, is very prevalent in all world regions, particularly among people who have lower income and education, poor language skills and who are older. Even in more developed countries, such as Canada, the United States, Australia and New Zealand, less than 50% of adults have adequate health literacy skills *(258)*. In short, these findings suggest that most people's health is compromised by inadequate knowledge to care for themselves. Other factors that contribute to self-care include self-efficacy *(259)* (beliefs in one's ability to succeed in a specific task) and the presence of social support *(260)*.

Personal Determinants

Biology and genetics. Considerable research shows that genetic factors account for no more than 25% of difference in the age at death of individuals, and that some of the resistance or susceptibility to many diseases is also heritable *(261)*. Differences in intelligence are partly heritable *(262)* as is familial Alzheimer disease, though only less than 1% of all cases of the disease are of this form *(263)*. Certain attitudinal dispositions that are associated with psychological well-being are evident from earliest infancy, such as sociability, optimism and warmth *(264)*, and recent studies indicate a genetic basis for happiness *(265)*. Environmental and social factors, however, strongly influence whether and how most innate dispositions are expressed during development and ageing.

Cognitive capacity. Consensus exists regarding the patterns of cognitive change over the life course *(266)*. Some cognitive abilities peak in young adulthood and decline with advancing age, such as mental speed, solving new problems, spatial reasoning and multitasking. However, abilities that rely on the accumulation of knowledge and expertise increase with age, such as vocabulary, general knowledge, and specific knowledge and skills learned through the various roles, occupations and interests over the years. There is wide variability in intellectual ability at all ages, and some older persons have equal or better aptitudes than younger persons. Until a very advanced age, older adults perform as well as their younger counterparts on tasks requiring wisdom – that is, "good judgment in important but uncertain matters of life" *(267)* – and they may outperform young peers in areas in which they both have expertise *(268)*.

Although decline in cognitive functioning and the onset of dementia are associated with older age, they develop from social, environmental and individual factors that are largely modifiable. Research indicates that older persons who have more education, social participation, stimulating activities, healthy lifestyles and positive mental health have greater "cognitive reserve", despite the presence of brain disease *(269)*.

Psychological factors. A review of a large body of research on psychological well-being conclusively shows that several emotional dispositions and psychological characteristics are associated with resilience throughout adulthood, as manifested by continued good health, robust recovery from illness and mental well-being *(264)*. Among these important characteristics are positive emotions such as hope and optimism, self-esteem, self-efficacy and spirituality. Further personality traits associated with continued well-being in later life include extraversion, conscientiousness (reliability, fastidiousness) and low neuroticism (emotional stability). Faced with difficulties or losses, resilient people can reduce or transform negative feelings through mature coping strategies,

such as humour, helping others, stopping distressing thoughts or channelling the negative emotional energy towards constructive ends.

Extensive research has demonstrated how six key psychological dimensions contribute to a longer, healthier life and robust well-being among older adults *(270)*. These dimensions are: autonomy, environmental mastery (ability to manage one's immediate world), personal growth, positive relations with others, purpose in life, and self-acceptance. Firm possession of these dimensions can confer protections from the effects of negative social and economic variables on health (such as low education and low income). Another evidence-based model of psychological well-being presents five building blocks for happiness at all ages: positive emotions, engagement, relationships, meaning, and achievement (PERMA) (*207*; also *131*). Research with older residents of long-term care facilities has shown that the capacity for positive psychological adaptation is possible, even among people with severe limitations who choose how to use their restricted reserves of energy in ways that are most personally gratifying *(268)*.

Sexual orientation and identity. The profile of lesbian, gay, bisexual, transgender and inter-gender (LGBTI) elders is increasing with the ageing of baby boomers who represent the first generation of LGBT people to have lived openly gay or transgender lives in large numbers in developed countries *(271)*.

Sexual orientation and identity are fundamental characteristics of human diversity that are lived within a vast range of cultural and historical contexts over the life course. They impact upon self-esteem, social status, and both physical and mental well-being throughout life. Research shows that older LGBT adults remain largely invisible, under-served by formal systems, and have diverse experiences with respect to family structures and informal social supports *(272)*, even in more tolerant societies. This leads to a wide range of outcomes. Placing all LGBT persons into a single category is "as uninformed and dangerous as treating them as invisible" *(273)*, but it can be said that older LGBT adults are a "resilient yet at-risk population experiencing significant health disparities" *(274)*. Older LGBT adults have a higher prevalence of many common health problems than heterosexuals, even when accounting for differences in age distribution, income and education *(274)*. For example, studies indicate that LGBT people are at greater risk of disability (including HIV/AIDS, asthma and diabetes) and mental distress, and additionally experience higher rates of smoking, alcohol/drug use, depression and suicide *(275)*.

Current younger cohorts of LGBTI in more developed countries are likely to experience a much more positive social environment than both their older compatriots and their counterparts in other regions of the world. The majority of studies conducted in the former have concluded that most LGB adults possess positive psychosocial functioning *(272)*. Even in these more permissive societies, however, studies reveal an 82% incidence of victimization of older LGB adults at least once in their lives and 64% reporting at least three times *(274)*. The global reality is that very large numbers of LGBTI persons are routinely subjected to violence, abuse, bullying and stigmatization, with inevitable health consequences.

"We now recognize that LGBT older adults also represent a community with unique needs that must be addressed." (410)

Physical Environment

The physical environment presents both risk and protective factors for resilience at all stages of the life course. Particularly in relation to older age, environments need to adjust and to compensate for declines in functional capacity in order to democratize participation and well-being. Physical environments should promote individual physical activity and reduce risks of injury, while encouraging involvement and social networks and supporting independence. At the community level, an embracing physical environment fosters public interactions, which build social cohesion.

Public outdoor spaces. Outdoor spaces such as parks provide opportunities not only for exercise and recreational activities but also for socialization. Spatial features are associated with greater use, including their size, attractiveness and suitability for active use *(276)*, as well as their safety, amenities, maintenance and proximity *(277)*. The very presence of green spaces can contribute to improved physical and mental health, not only by encouraging walking and improving air quality, but also by reducing stress and improving mood, and facilitating social encounters *(278)*.

Urban design. The allocations of space for residential, commercial and other uses have a significant impact on outdoor mobility. Generally, people walk more in mixed-use neighbourhoods where residential and retail areas are closely merged *(279)*. The mobility

of older adults in the outdoor-built environment also clearly depends on the topography (flat or hilly) and design features, including curb ramps, street crossings, lighting, weather, sidewalks and benches *(280)*.

Transportation. Personal mobility depends largely on the availability, accessibility, acceptability and affordability of transportation. Having transportation options becomes increasingly relevant when functional capacities decrease.

In the higher-income countries and among the more affluent in developing countries, private cars are the most common means of transportation, and most older people drive *(281)*. Having the freedom to drive affects feelings of autonomy, control, inclusion and status of older people *(282)*. Sensory, perceptual and decision-making changes, as well as disabilities and medications affect driving skills, however, and modifications in driving habits may become necessary for safety (e.g., avoiding driving at rush hour or at night). Giving up driving altogether limits engagement outside the home and can negatively impact on quality of life *(282)* if alternative modes of transportation are not available or acceptable.

Accessible public transportation can have positive health impacts on older adult users. Free local transportation, for example, has been shown to reduce the risk of obesity in older people *(283)* and lead to more social, voluntary and economic participation and well-being *(284)*. There is a need for further research on the use of public transportation by older adults, as well as on the mobility and well-being of functionally impaired persons at all ages who neither drive nor use public transportation.

Buildings, including housing. The design and location of buildings and their quality

(e.g., presence of mould, dampness, traffic noise, etc.) are factors that influence health at all ages *(285)*. A person with low income is much more likely to live in a dwelling with exposure to health risks, such as geographically hazardous zones (e.g., slopes and shores), pollution (e.g., from traffic or industries), inclement weather, toxic materials and poor accessibility to services *(37)*. Access to safe water and sanitation is rightly a global preoccupation. Indoor pollution is a concern, too, and its largest likely source is cooking with solid fuels (such as wood, dung or coal) undertaken by poor women in low-income countries *(286)*. This particular type of pollution is seen as a major avoidable risk factor for respiratory diseases *(287)*.

Most people prefer to "age in place" (288,289); that is, in the community where they live and also in their habitual dwelling. Architectural barriers in the home environment are a major cause of decreased functional capacity, including cognitive functioning *(290)* and risk of falls. Home modifications can very positively impact ageing-in-place with improved usability of the home (291,292), increased independence in daily activities (291,293,294) and a measurable reduction in the number of falls (293,295). Yet, housing adaptations or alternative accommodation can trigger a sense of loss of control for the older person if they are not accepted *(296)*. One example is the retirement village or retirement home which, despite offering many amenities, can isolate people far from their homes and familiar communities and from the opportunity to interact easily with other generations.

Natural environment. Environmental and climate changes pose both long-term and immediate challenges to the resilience of individuals and the capacity of communities to manage extreme events successfully. Over the long term, air pollution creates or exacerbates respiratory problems and cancers. WHO has estimated that annually, seven million premature deaths result from air pollution *(297)*. Increased ultraviolet light exposure increases risks for cataracts and skin cancers. The emergence or spread of previously unknown bacteria, viruses and insects pose new disease hazards. Population groups most vulnerable to these long-term effects of climate change include children, older persons, people in poor health or with disabilities, and persons with low incomes *(298)*. Air pollution in China, for example, has shown to have disastrous consequences for older people's healthy life expectancy and longevity *(299)*.

Although severe environmental events (e.g., drought, flooding, heat waves or cold snaps, severe storms) and non-climate-related natural disasters (e.g., earthquakes, tsunamis) have impacts on the well-being of entire communities, they have a stronger impact on the mortality rates of "vulnerable groups": children, older people and persons with disabilities *(300)*. During the 2011 tsunami in Japan, 31% of the affected population was aged 60 and over, but they accounted for 64% of those who died *(18)*. Similarly, 70% of the deaths due to Hurricane Katrina in New Orleans in 2005 occurred among older people, although they represented only 15% of the population *(301)*. Unusually extreme heat for 10 days in Europe during the summer of 2003 resulted in nearly 35,000 excess deaths, predominantly among persons aged 70 and older, and the greatest number of these deaths – almost 15,000 – occurred in France *(191)*. These occurrences will become more frequent, and they will affect greater numbers of older people. Due to reduced functional capacity, higher rates of illness and an often smaller social support network, older people

are more vulnerable to the event itself and suffer more from its consequences, such as limited access to medication or food *(302)*.

At times of scarce resources and services, older people may be forgotten in the emergency responses. Older persons are a very diverse group, however, and many can and do contribute their skills and experience to relief and rebuilding efforts. As recorded in the case studies from several countries collected by WHO *(302)*, older persons support their families, use their position of respect to keep the community intact, and offer both material and practical assistance. Often more vulnerable in emergency situations, they also have many, and sometimes, unique, contributions to make in the recovery and rebuilding of communities.

Social Determinants

The social environment and personal networks of family, friends, colleagues and acquaintances exert powerful effects, either enhancing or undermining resilience throughout life.

Education. More-educated people live longer and healthier lives than their less-educated counterparts *(303)*. Higher education leads to higher levels of income, more income security and better working and living conditions which, in turn, lead to better health. Higher education influences health literacy, which leads to healthier lifestyles. Education also strengthens cognitive resilience: in older adulthood, more highly educated people have a lower risk of dementia than their peers with lower education *(304)*.

Further emphasizing the importance of lifelong learning, the benefits do not appear to be limited to formal education early in life. Learning as an adult has a positive impact on

social self-esteem and confidence *(305)*, social participation, physical activity levels and smoking rates, as well as skills and chances of finding a job or getting a promotion *(306)*. A Swedish study shows that, particularly for less-educated people and for women, earning a degree as an adult significantly increases labour market participation and wages *(307)*.

Learning in older adulthood also contributes to well-being. For instance, participating in arts, music or evening classes is found to improve the well-being of people aged 50 and over *(308)*. Other studies have revealed higher self-reported cognitive performance, health, levels of activity and affect *(309)*, as well as improved measures of cognitive performance among older adults enrolled in courses, compared to non-participants (309,310). Despite the great value of later life learning for well-being in later life, participation rates of older adults decrease with age *(311)*, and those who may benefit most, participate less *(306)*.

Social support. There is solid evidence to show the association between social support and physical and mental health (312,313). Social networks can provide emotional support, reinforce healthy behaviours, improve access to services, jobs, information and material resources (such as childcare, transportation, food, housing), as well help immigrants to integrate into society (312–314). The association continues into older age. Those with strong social networks have fewer health risk factors, lower rates of heart disease and lower rates of mortality *(315)*, as well as better mental health outcomes. In older age, supportive social networks can become smaller and more family focused, owing to changes such as spousal bereavement, alterations in personal health or family caregiving responsibilities *(316)*.

Social exclusion. Social exclusion has been defined in an encompassing way as a:

> *process of non-acknowledgement and deprivation of rights and resources of certain segments of the population … leading to social isolation in seven dimensions: symbolic exclusion (negative images or invisibility); identity exclusion (a person's identity is reduced to belonging to one group); socio-political exclusion (barriers to civic/political participation); institutional exclusion (reduced access to services); economic exclusion (lack of financial resources); exclusion of significant social ties (absences/loss of social network); and territorial exclusion (reduced geographic living area, unsafe neighbourhood). (317)*

Underprivileged and minority groups in any society are at risk of social exclusion *(318)*. Without resources, information or support to facilitate their participation in society, and sometimes facing outright rejection, these individuals are more likely to experience a range of health problems, addictions, breakdown of relationships and social isolation *(313)*. Research on older persons from ethnic minorities living in deprived neighbourhoods found that a high proportion face multiple types of exclusion, and experience loneliness and low quality of life *(319)*. Social exclusion of older persons can result from demographic and socio-economic changes in the neighbourhoods in which they live. Feeling like strangers in their home cities was an experience reported by older persons in Tokyo and London consulted for the *WHO Age-Friendly Cities Guide (14)*. Gentrification of lower-income neighbourhoods in Montreal resulted in a sense of exclusion by older residents with respect to their sense of identity, social networks and political influence on local planning, although the addition of a new community centre in one

neighbourhood enhanced their social inclusion *(320)*.

Social isolation and loneliness. Social isolation refers to an objective lack of social connectedness, while loneliness is an individual and subjective evaluation of the adequacy of one's social network *(321)*. Both social isolation and loneliness are commonly associated with higher morbidity and mortality risks, as well as unhealthy behaviours *(321)*. Among older adults, the experience of social isolation and loneliness is linked to lower cognitive function *(321)*. Older people with eroding social networks and restricted mobility, persons with mental illness, and refugees are at a particular risk of social isolation and loneliness *(322)*. Women are at higher risk than men *(323)*. A cross-national study in 25 European countries showed that the prevalence of loneliness increases with age, but also that living in some of these countries is an even greater risk for loneliness than being older *(322)*.

Violence and abuse. Violence and abuse that is experienced earlier in life continues to influence health and well-being throughout that life. A systematic review revealed a causal relationship between non-sexual abuse (i.e., emotional or physical abuse, neglect) in children and later mental health problems, and risky health behaviours, such as drug abuse and dangerous sexual behaviour *(324)*. The impact of abuse on well-being in adult life depends on many factors, such as the severity of the abuse, the age when the abusive act happened, relationship to the perpetuator, number of perpetuators as well as frequency and duration *(325)*. The widespread practice of physical restraint commonly applied to older people with dementia in long-term care institutions and geriatric facilities *(368)* can easily degenerate into a form of elder abuse.

In the *Toronto Declaration on the Global Prevention of Elder Abuse*, developed by WHO in partnership with the International Network for the Prevention of Elder Abuse (INPEA), an encompassing definition of elder abuse is provided to guide prevention, identification and intervention:

> *Elder abuse is a single or repeated act, or lack of appropriate action, occurring within any relationship where there is an expectation of trust, which causes harm or distress to an older person. It can be of various forms: physical, psychological, emotional, sexual, financial, or simply neglect, intentional or unintentional. (326)*

Elder abuse exists within a cultural context. In many societies, acts of violence against older persons are embedded within local customs, which must be identified and combated. The WHO report *Missing Voices (327)*, prepared in partnership with the INPEA, provides examples that include abandonment and property theft of older widows and accusations of witchcraft against isolated older women, particularly in Africa. While elder abuse can happen to any older person, those who are more vulnerable are socially isolated, lonely or cognitively impaired, and have a family member with serious personality problems *(328)*. Abuse has multiple consequences on physical and mental health and material security *(329)*. Despite the extensiveness of elder abuse, WHO reports that of 133 countries surveyed, 41% do not have any plan of action at all to counter it *(330)*. Based on the established definition of abuse, the neglect by decision-makers – who are in a position of public trust – in itself constitutes a form of abuse.

Volunteerism. Volunteerism describes the reciprocity between individuals and the actions of social and civic participation that contribute to the well-being of others, the organization and society as a whole. Volunteering is increasingly seen as a social behaviour in which both the intended beneficiary and the volunteer benefit. Through volunteer actions, citizens become engaged in community life, and often additionally, in civic life, through their interaction with institutions of government *(153)*. Volunteering via organizations is more common in developed and in CIS countries, but directly helping others is more frequent in developing regions (27,153). Volunteering has shown to influence a person's well-being at all ages. It can be an opportunity to gain experience in the labour market for young people. It can have significant protective effects against social isolation, loneliness and social exclusion throughout adult life. Volunteering has been associated with low rates of depression, high well-being and quality of life outcomes *(331)*, and lower mortality *(332)*. The benefits may even be greater for older adults: a study of the effects on long-term volunteering revealed that older adults experienced greater life satisfaction and better perceived health than did younger adults *(333)*.

Muriel Beach is an 87-year-old long-time resident of Chelsea, New York City. Despite significant mobility and health limitations, she rigorously continues a lifelong pattern of engagement and activity. She enthusiastically applies her experience to voluntary initiatives on the local, municipal, state, federal and international stages.

"At the end of a day I have the satisfaction of knowing that age has not prevented me from continuing to be a productive person; that my talents are not decaying or being wasted. The greatest reward for this active life are the deep personal friendships with people working to protect and improve living conditions for all".

Economic Determinants

Financial capital impacts health, security and the on-going opportunities for active participation and learning. Economic risks and protective factors that come into play include household and community economic status, employment and working conditions, access to contributory and non-contributory pensions and social transfers.

Socio-economic status. The effects of income status start in earliest childhood and can last a lifetime, although changes in economic status can also alter the course, either for better or worse. Income determines a person's options in relation to housing, food, education, health care and so forth. The social gradient, which links economic status and well-being outcomes for individuals and communities, is well documented worldwide. Wealthier individuals, as well as communities, generally have better well-being outcomes *(334)*. Throughout life, persons with low incomes are more likely to smoke, drink alcohol excessively, eat fewer fruits and vegetables, exercise less *(335)* and experience more psychological distress *(336)*. The negative effects of low income persist into older adulthood and are reflected in a higher prevalence of chronic illness, functional limitations, psychological distress and higher death rates *(337)*. Data from the English Longitudinal Study of Ageing showed that compared to wealthier people of the same age, older people of lower socio-economic status are more likely to smoke and to be physically inactive and obese; they have more chronic illness, more depressive symptoms, greater loneliness and poorer quality of sleep *(338)*.

Employment and working conditions. A good job provides not only adequate income but also access to learning opportunities, social networks and psychological benefits,

such as engagement, meaning, self-esteem and accomplishment *(339)*. Thus, chronic high unemployment and underemployment pose significant risks to long-term economic security as well as to personal well-being and health. The lack of a broad economic recovery since the crisis of 2008 is likely to produce long-term repercussions for the current generation of young adults who have not yet been able to establish themselves professionally or financially (151,340). What will the experience of ageing be like for those who have already reached the age of 30 without a history of employment, and who still depend on their parents or grandparents for everyday expenses?

Unemployed people manifest poorer sleep, more mental and physical health problems, and higher rates of mortality. Unemployed older workers have greater difficulties reintegrating into the labour force *(341)* at a time in their lives when ensuring financial security for retirement and for care needs in older age is paramount. On the other hand, people who continue working beyond pensionable age maintain better physical, mental and cognitive functioning than retired-age peers *(342)*.

Working conditions contribute to well-being no less than the income generated by work. A systematic review found that work flexibility has a positive impact on health in situations where workers exercise choice and control, such as self-scheduling work shifts, or choosing partial or gradual retirement. When "flexibility" means that the employer decides when and for how long a person will work, however, there may be negative effects on the well-being of worker health *(339)*. One longitudinal study in Germany has identified a correlation between employment insecurity and low health satisfaction *(343)*. Another German study determined that work-related psycho-social stress is linked to poorer

subjective health and symptoms of depression *(344)*. Psycho-social work stress was found to occur among older and younger workers to the same extent, but levels were higher among workers with a lower educational background and income *(344)*.

Employment is a core issue that must be addressed in order to reduce growing inequalities. For work to fully play its part in terms of Active Ageing, it must be decent work. The International Labour Organization's (ILO's) definition is that employment should provide a fair income, workplace security; social protection for families; opportunities for better personal development and social integration; equal treatment of men and women, older workers, and persons with a disability; and the freedom for workers to express their views, to organize and to take part in work-related decisions that affect them *(345)*.

The rates of older worker participation in the labour force are projected to increase. There is a growing realization that the continued working life of older workers is essential to overall productivity and the sustainability of social programmes. Policies in some countries are moving towards increases in pensionable ages, more flexible partial retirement options, and creative ways to promote life-learning and age-friendly employment practices. The potential gains are enormous. A Deloitte study in Australia found that a 5% additional participation by older workers would add AUD 48 billion extra to the gross domestic product (or 2.4% of national income) – equivalent to Australia's largest macroeconomic reforms *(346)*.

Significant barriers remain in the workplace, however, stemming from ageist myths about older workers' productive capacity, motivation and ability to learn. At the same time, some older persons – including many

women – are obliged to keep working in low-quality jobs because they have insufficient post-retirement income. The reasons include fragmented labour force participation, the expansion of defined contribution pension plans (which offer no guaranteed post-retirement income) and the decrease in the value of retirement investments as a result of economic downturns or family emergencies. In many low-income countries, continued working is a necessity in the face of a lack of social security provision. In 2010, formal labour force participation of people aged 65 and over was about 31% in low- and middle-income regions compared to only 8% in high-income countries *(25)*. The right to stop work and retire with the support of a decent retirement income is just as important for preserving personal capacity as the right to continue meaningful working lives. The assumption that economic development in lower-income countries will free public resources to support a dignified, necessary retirement for older persons may explain the projected decrease in labour participation among those aged 65 and above for these countries.

Pensions and social transfers. Pensions can be private or public cash transfers, and they can be contributory or non-contributory. According to the ILO, slightly under half (48%) of people in the world who are of statutory pensionable age receive a pension *(281)*. In developing countries, about 80% of all older people do not have a regular income *(347)*. The monetary value of a pension is an important determinant of well-being in older age. Data from 13 OECD countries shows that health is generally better in those countries with more generous pension benefits and that this association is stronger for women *(348)*. The ILO, however, reports that high-income countries have changed policies to reduce coverage and benefits from contributory

plans, thus reducing their capacity to protect future pensioners against poverty *(281)*.

In many low- and middle-income countries, both contributory and non-contributory pensions have expanded *(281)*, although contributory pensions may be restricted to the small proportion of persons employed in the public service. A study of the impact of non-contributory social pensions in Brazil and South Africa showed that they have had a significant impact on household well-being *(349)*. Alongside the direct impact on the well-being, empowerment and nutrition of the recipients, these pensions are also found to have a positive effect on the local economy *(18)*. There is also evidence that social pensions lead to improved nutrition and schooling among younger members of the household *(350)* and contribute to a reduction in child labour force participation *(351)*.

Similarly to pensions, unemployment benefits have a positive impact on well-being. The generosity of unemployment benefits in 34 OECD countries was found to be positively related to life satisfaction *(352)*. Unemployment benefits are also linked to lower suicide rates among men, as shown in an analysis of data from 25 OECD countries *(353)*. In addition to cash transfers, in-kind state transfers (such as energy, food or housing subsidies) or residential care services contribute to individual and household resilience. For instance, food subsidies for poor people in Mozambique, of which older people are primary recipients, are seen to also improve the nutrition of children in the same household *(354)*.

Health and Social Services

Accessible, equitable and closely coordinated health and social services are fundamental to promote health, to prevent, treat, or manage health problems as they occur over the life course, and to preserve quality of life until the very end. They are only achievable and sustainable when equal priority is placed on supporting all the other determinants of Active Ageing. The life-course model of Active Ageing is explicit in the view that the packages of services provided in ageing societies must address multiple goals in relation to the functional capacity over a person's lifetime, and to a range of diseases and levels of disability.

Meeting the Health Needs of an Ever-Older Population

There is strong evidence that the presence of chronic diseases drives the use of health services rather than age per se *(355)*. Chronic conditions and disabilities, however, do become more prevalent with advancing age and health care use, and spending does rise in tandem with it *(356)*. In some countries, including Canada *(357)* and the United States *(356)*, per capita costs of health care spending for older persons have increased over the years, as more interventions and new technologies have become available for problems common in older age (e.g., cataract surgery, joint replacement, coronary bypass). Health care and support systems face two overriding challenges in the context of the longevity revolution: first, preventing chronic disease and disability; and second, delivering high-quality and cost-effective care that is appropriate for individuals.

According to the estimates of the WHO Global Burden of Disease for 2010 *(79)*, 23.1% of total disease burden can be attributed to problems experienced by people aged 60 and over (who constituted 11.7% of the world's population in 2013 *(19)*). In less developed regions, the disease burden per person among older people is higher than in more developed regions. Universally, the leading disability-contributing diseases are cardiovascular disease, cancers and chronic respiratory disease, musculoskeletal disorders, and neurological and mental diseases *(79)*. Some common conditions in older age are especially disabling and require early detection and management.

The chronic diseases that are common among older people can be classified into two groups. The first includes diseases that appear by about the sixth decade and are generally avoidable through healthy behaviours and/or lifestyle interventions and effective preventive health services. These are typically cardiovascular disease, diabetes, chronic obstructive pulmonary disease and many cancers. The second category of diseases is more closely linked to the ageing processes, and their prevention is not sufficiently understood. These include dementia, depression and musculoskeletal disorders. While research may eventually lead to effective prevention or treatment, it is early management that is now key to the control of disablement and/or maintaining quality of life.

Dementia. In all regions, the number of people living with dementia will continue to rise sharply, unless fast progress towards its prevention is achieved. Already, dementia has become one of the top ten causes of mortality worldwide *(358)*. In 2013, 44.4 million people were living with dementia, and the numbers are likely to double over the next 20 years, to 75.6 million, and double again, to 135.5 million in 2050 *(359)*. Of all persons with dementia, 58% live in less developed countries and this proportion is expected to rise to 71% by 2050, as more people live

longer. Most persons in the world with dementia continue to live in the community, becoming incapacitated by degree until death. The psychological and behavioural disturbances associated with this progressive condition place a particularly heavy strain on family caregivers, who, in turn, are at greater risk of declines in their own physical and emotional health. Age-friendly communities that are also dementia-friendly are gaining growing experience in the support of persons living with dementia and their caregivers, thereby contributing to the maintenance of a quality of life for both. Features of dementia-friendly communities may include local businesses staffed by employees who are aware of dementia and who can effectively communicate with disabled clients, and employers and voluntary organizations that provide meaningful and inclusive opportunities for engagement, socialization and leisure for persons with dementia *(360)*.

Sensory impairment. Vision and hearing loss are common and mostly treatable causes of dependency and reduced quality of life in older age. It is estimated that 65% of visually impaired persons and 82% of blind people are aged 50 and older *(79)*. Far- and near-sightedness constitute the main cause of visual impairment, and cataracts are the leading cause of blindness, especially in less developed countries where access to cost-effective treatment (i.e., corrective lenses and cataract surgery) is inadequate, particularly for rural populations and women *(79)*. Hearing loss is also a very prevalent and overlooked condition, affecting an estimated one in three adults aged 65 and older *(361)*, a ratio that increases substantially at ages beyond 70 years. As a result of occupational exposures, men are more at risk than women, especially in less developed regions *(362)*. The widespread use of personal music players, especially by young people, is considered to be a significant threat to

hearing by the European Commission Scientific Committee on Emerging and Newly Identified Health Risks because of the very high volume at which these devices can be played *(363)*. Hearing loss is associated with loss of driving ability, social isolation, cognitive impairment, functional decline and falls *(364)*. Hearing aids can effectively restore hearing, but they are used by only a minority of those who need them, even in countries where cost is not a barrier to access *(364)*.

"Unless health systems change the selective underuse of interventions that are known to be effective in older adults, the burden on health care systems is set to reach unmanageable proportions." (409)

Mobility and falls. An estimated 9.6% of men and 18% of women aged 60 and older experience pain and mobility limitations related to osteoarthritis *(365)*, which tends to worsen with advancing age. Globally, about one in three older persons experiences a fall each year. The frequency of falls and the probability of injury increases with age and level of frailty *(366)*. The result of a complex interaction of biological, behavioural, environmental and socio-economic risk factors, fall-related injuries are very routine causes of disability, dependency and death. Osteoporotic bone weakening, at its most common among women after menopause, is a major cause of fractures *(367)*. Obese older persons also experience a higher risk of falls, consequent injury and disability *(368)*. It has been observed that some individuals restrict their mobility out of fear of falling, only to become more susceptible to them from loss of

functional capacity. Rigorous, multi-sector approaches that comprehensively address the risk factors are the most effective responses *(366)*.

Depression. Depression is the leading cause of disability worldwide, according to WHO *(369)*. It is the most common mental health problem experienced in older adulthood, affecting about 15% of community-dwelling older persons, 20% of those in hospitals and up to 40% of older persons living in long-term care institutions (370,371). Major depression is common in the latest stages of life (persons aged 75 and older) *(372)*. Other, often associated conditions, such as stroke, Parkinson's disease and dementia, can be greatly further complicated by depression. Risk factors include biological and disease-related changes in the brain, physical health problems, social isolation and loneliness. Untreated depression can lead to physical illness, accelerated functional decline and premature death. Important barriers to the timely detection of depression include communication difficulties (e.g., persons with dementia or hearing impairments), mistaking depression for dementia, lack of knowledge about the presentation of depression in later life, and the ageist belief that depression is a normal part of ageing. Depression is the most common reason for suicide in older persons, and many persons who commit suicide consult a care provider shortly before taking their own life *(373)*. The inference is that more cases of suicide could be prevented by adequate detection by community-based health professionals and access to timely and appropriate intervention. Current studies, however, indicate that psychotherapy for depression, which is effective in reducing depression and depressive symptoms, is not effective in treatment of suicidality *(374)*.

Skin health. One of the most consequential, common and yet underappreciated changes related to ageing is the natural deterioration of the skin. This deterioration comes as a direct result of damage caused by physiological mechanisms, genetic predisposition and external factors (in particular, solar radiation) *(375)*. The implications are far-reaching for all societies, as it is experienced by everyone. In addition to normal changes, common skin diseases and conditions increase in prevalence with age, including skin cancer *(376)*, negative skin side effects caused by cancer treatments, including chemotherapy and targeted therapies (377,378), as well as dry skin and pruritus, which are the most common symptoms of declining skin health *(379)*. However, when skin health goes unaddressed – or inadequately addressed – there is greater risk for wounds, infections and the prescription of medications, with serious implications on overall health, quality of life and morbidity *(380)*. For instance, xerosis and the appearance of ageing skin can lead to poor self-image and social rejection. Inadequate skin care can also precipitate increased falls *(381)*, physician visits, hospitalization *(380)* and health system costs *(382)* – all of which can be mitigated.

Multi-morbidity and frailty. The prevalence of multiple chronic conditions increases with advancing age, affecting about two thirds of persons aged 65 and older and 82% of people aged 85 and older *(79)*. Survey findings from middle-income countries also show that 12% of people under age 50 in these countries present more than one chronic condition *(383)*. Multi-morbidity is a significant cause of disability, dependency and poor quality of life. Disease conditions are often interconnected and treatment is more complex. Any intervention may produce a range of effects. These may be indirect, delayed, difficult to predict, and different from the results expected from treating single conditions. The risks for polypharmacy are

high, leading to drug interactions and adverse reactions. Inappropriate care results in preventable complications and costs, in addition to needless suffering. Improved research is needed to understand the disease mechanisms underlying multi-morbidity and to better focus treatments *(384)*. Frailty is often associated with multi-morbidity. Defined in terms of increased weakness and lower overall reserve capacity, frailty produces much greater vulnerability to negative health outcomes from events such as falls or opportunistic infections. Multi-morbidity and frailty create a heavy and constant dependency, which is burdensome for caregivers. With comprehensive and timely geriatric assessment and intervention, it may be possible to reverse presented frailty *(385)*. In complex cases where physical amelioration is not possible, care must focus on appropriately enhancing the person's range and quality of life *(371)*.

A continuum of health services. A comprehensive continuum of services includes health promotion, disease prevention, cure, restoration, management, prevention of decline and palliation. These services are performed by numerous agents involved in the provision of care: self and family; community-based providers and institutions (Fig. 10). Most formal systems of health care have been developed with an emphasis on preventive and curative medical and institutional services to meet the occasional "catastrophic care" requirements of a much younger population (i.e., communicable diseases and injuries). As population health needs evolve in the context of the longevity revolution, the sustainability and effectiveness of health and social services demand a radical shift to achieve a better balance of "care" and "cure", of "palliation" and "prevention". The required change in paradigm depends on two critical components: *(1)* a system focused on

community-based primary health care to both provide care and ensure its coordination over time and across services; and *(2)* a cadre of health care professionals in all areas who are thoroughly trained to understand age-related aspects of health and to respond to changing health needs over the entirety of the life course.

Figure 10. **Dimensions of care**
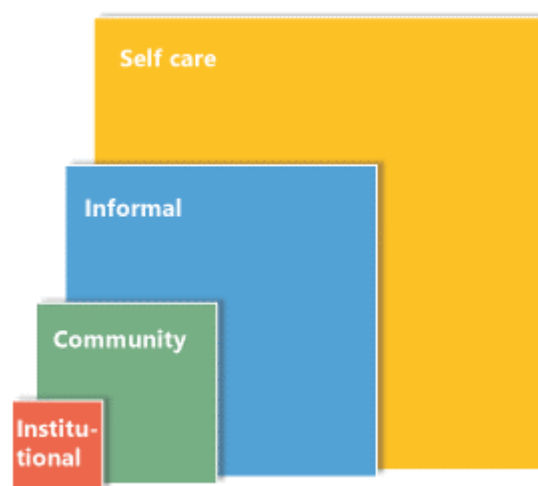
(Source: Kalache 2013 *(21)*)
Note: The size of the boxes represents the volume of care that is given in most societies and it is the inverse of where most financial support is given in most societies.

Health promotion. The Ottawa Charter on Health Promotion defines health promotion as "the process of enabling people to take control over and improve their health" *(16)*. While health promotion empowers individuals, it also assigns a critical responsibility to the public sector to create the necessary conditions and services for health. Health promotion is a shared role, involving home, school, workplace, community and health services, with support from government policies at all levels. Integrating a health perspective in all policy domains – from agriculture to urbanism – is included in health promotion. At an individual level, developing health literacy is key to health empowerment at all ages. Disease and injury prevention broadly includes three

preventive actions: "primary" (e.g., influenza vaccination, removal of falls hazards in the home), "secondary" (e.g., screening to detect diabetes or cancer) and "tertiary" (lifestyle practices and drugs to control diabetes once diagnosed).

Primary health care. As noted earlier, the backbone of all health services is community-based primary health care. General practitioners and other allied health professionals provide the front-line services to prevent disease and screen for early detection to control chronic conditions and to manage impairments. Primary health care is normally the gateway for access to other needed services, the hub for care planning and coordination that takes into account the person's holistic needs and respects the person's goals and values.

Barriers to primary health care, however, are commonly experienced. Consultations that are too brief, with professionals who do not have adequate training in ageing-related health needs, all too often result in misdiagnosis and inappropriate treatment. Long distances to services, unaffordable costs, and long wait times for care in uncomfortable settings are other problems frequently encountered in low- and middle-income regions. A survey of older people in 11 high-income countries conducted by the Commonwealth Fund also reported financial barriers and gaps in access and care *(386)*. To strengthen primary care in order to promote Active Ageing, WHO has advanced evidence-based principles for age-friendly primary care in three areas: *(1)* information, education, communication and training; *(2)* health care management systems; and *(3)* the physical environment *(387)*.

Acute care. Acute-care services are episodic interventions aimed at the cure of disease and the treatment of injury and other life-threatening or potentially disabling conditions. Community-based primary health care, complemented by drug care, specialist services and acute-care hospitals, are the mainstay. While essential for people of all ages, acute-care services are not sufficient to maintain peoples' health nor to provide the ongoing support required to manage their chronic conditions. Health systems were designed to meet the health needs of the population prior to the demographic and epidemiological transitions, and thus tend to treat chronic illness the same way as acute conditions – that is, as single and non-recurrent episodes unrelated to other health needs *(388)*.

"Without change, health care systems will continue to grow increasingly inefficient and ineffective as the prevalence of chronic conditions increases.... Health care expenditures will continue to escalate but improvements in populations' health states will not. As long as the acute care model dominates health care systems, it will effectively undermine health outcomes that could otherwise be accomplished." (388)

In more developed countries, older persons account for more and longer hospital stays than other age groups. There is a poor fit between the hospital environment and older persons with complex health issues. The all-too-frequent result is a multitude of hospitalization-induced problems, such as

infections, falls, confusion, anxiety, delirium and functional decline. Just as "age-friendly" perspectives are re-shaping primary health care and urban environments, a new, age-friendly model of hospital care is also evolving. It is a model that takes into account the perspective of older persons with respect to the physical environment, attitudes and behaviours of staff, administrative policies and procedures and care protocols *(389)*.

Long-term care. Long-term care describes the suite of health and social services aimed at the control of chronic conditions, the prevention of disablement and the preservation of quality of life. Actions include symptom monitoring, medication management, physiotherapy, occupational therapy, pain control, support for self-management, nursing, assistive devices, personal care (bathing, dressing, feeding) and home support (home cleaning and meal preparation). Ideally, these services support ageing-in-place at home and comprise the following elements: communication, continuity, coordination, comprehensiveness and community linkages *(390)*. Long-term care institutions may be required, however, when older persons have heavy dependency and lack adequate support at home. Publicly supported community and institutional care is available in more developed countries, but it is still largely absent in less developed regions.

Support for Unpaid Caregivers. Unpaid caregivers must be acknowledged as the cornerstone of long-term care. The US Centers for Disease Control and Prevention (CDC) cited evidence from the Institute of Medicine that unpaid caregivers provide an estimated 90% of the support and care received by older persons *(391)*. Most unpaid caregivers are spouses, who are themselves older, and daughters and daughters-in-law. Although providing care can be intrinsically

rewarding, it is also often difficult, time-consuming and exhausting. The consequences of long-term unpaid caregiving on physical health, mental health, social networks, employment and financial security are well documented (392,393). For instance, caregivers neglect their own self-care *(394)*. Caregivers of persons with dementia experience poorer health than caregivers of persons without dementia *(395)*. The extent of reliable and sufficient services, both formal and informal, to the care receiver as well as flexible respite alternatives, greatly safeguards the primary caregiver's well-being and enhances her or his ability to care for longer *(396)*. Also helpful are services to support caregivers directly, such as training, support groups and fair financial remuneration.

The responsibility for providing long-term care can neither be borne exclusively by families nor by governments. Smaller, more complex and geographically more dispersed family networks are becoming less able to provide care without additional reinforcement. There is a growing global crisis of what is termed "family insufficiency" in the Rio Declaration on Developing a Culture of Care to Respond to the Longevity Revolution *(180)*. The response to this family insufficiency must be the creation of a "culture of care" that not only includes, but goes beyond, strictly family or public care, and that significantly redresses the gender imbalances in the provision of care. A culture of care must engage employers, businesses, public community structures and services (e.g., housing, transportation), voluntary groups and family members in a broad, intergenerational enterprise with the shared goal of solidarity with both the persons in need of care and the individuals involved in the provision of that care. As highlighted in the *Charter on Gender and Ageing (216)*, creating opportunities and removing barriers

that perpetuate the gender imbalance in caregiving is central to the forging of that new culture of care.

Palliative care. The majority of health-care services drawn upon in an individual's lifetime are delivered in the last year to six months of life *(356)*. A study of Medicare beneficiaries in the United States reveals that, even though more persons are dying at home or in a hospice than in the past, the months preceding death are characterized by more transitions to and from hospital, and an increase in the use of intensive care units in the month preceding death. In addition to being costly to the health system, this pattern of care very likely undermines quality of life *(397)*. A systematic literature review concluded that enrolment in palliative care programmes, whether in hospital, at home or hospice, is more cost effective than standard care, and that cost effectiveness increases with the duration of enrolment *(398)*. In addition to being a more efficient use of health-care resources, appropriate palliative care offers care of optimal quality to persons nearing the end of life.

Palliative care for older persons presents special challenges that need to be considered by all care personnel. There are several possible end-of-life trajectories (399,400). The trajectory of a person dying of cancer usually contains a short period of evident decline in physical functioning (Fig. 11*A*). Persons with chronic heart disease, for example, experience a trajectory of long-term limitations with intermittent serious episodes, which could lead to death or, in the case of survival, to a gradual deterioration in functional capacity (Fig. 11*B*).

Palliative care is an approach that improves the quality of life of patients and their families facing the problem associated with life-threatening illness, through the prevention and relief of suffering by means of early identification and impeccable assessment and treatment of pain and other problems, physical, psychosocial and spiritual. Palliative care:

- provides relief from pain and other distressing symptoms;

- affirms life and regards dying as a normal process;

- intends neither to hasten or postpone death;

- integrates the psychological and spiritual aspects of patient care;

- offers a support system to help patients live as actively as possible until death;

- offers a support system to help the family cope during the patients illness and in their own bereavement;

- uses a team approach to address the needs of patients and their families, including bereavement counselling, if indicated;

- will enhance quality of life, and may also positively influence the course of illness;

- is applicable early in the course of illness, in conjunction with other therapies that are intended to prolong life, such as chemotherapy or radiation therapy, and includes those investigations needed to better understand and manage distressing clinical complications.

(Source: WHO 2015 *(408)*)

Older persons often have multiple and progressive chronic illnesses that lead to death in a less predictable and more complex way than terminal cancer or heart disease alone. This trajectory of prolonged dwindling might end with a death due to a brain failure (e.g., Alzheimer disease) or due to frailty of multiple parts of the body (Fig. 11*C*). A fourth possible trajectory is the one experienced by an individual who dies suddenly without any overt health issues and functional limitations prior to death (Fig. 11*D*). While this end may seem a desired course, only a small proportion of deaths follow this pattern. This conceptual overview of possible end-of-life

trajectories needs to be taken into account when tailoring care to an individual's needs (399,401). Communication difficulties, owing to neurological or sensory losses, make it more challenging to detect and relieve discomfort and pain. There may be few, or no, family and friends to provide support and offer information about the person's preferences and values. Because the majority of people are now increasingly dying at incrementally older ages, palliative care must be positioned as a central component of all health services, drawing on an adequate complement of specialists as well as well-trained general care professionals.

Figure 11. **End-of-life trajectories**
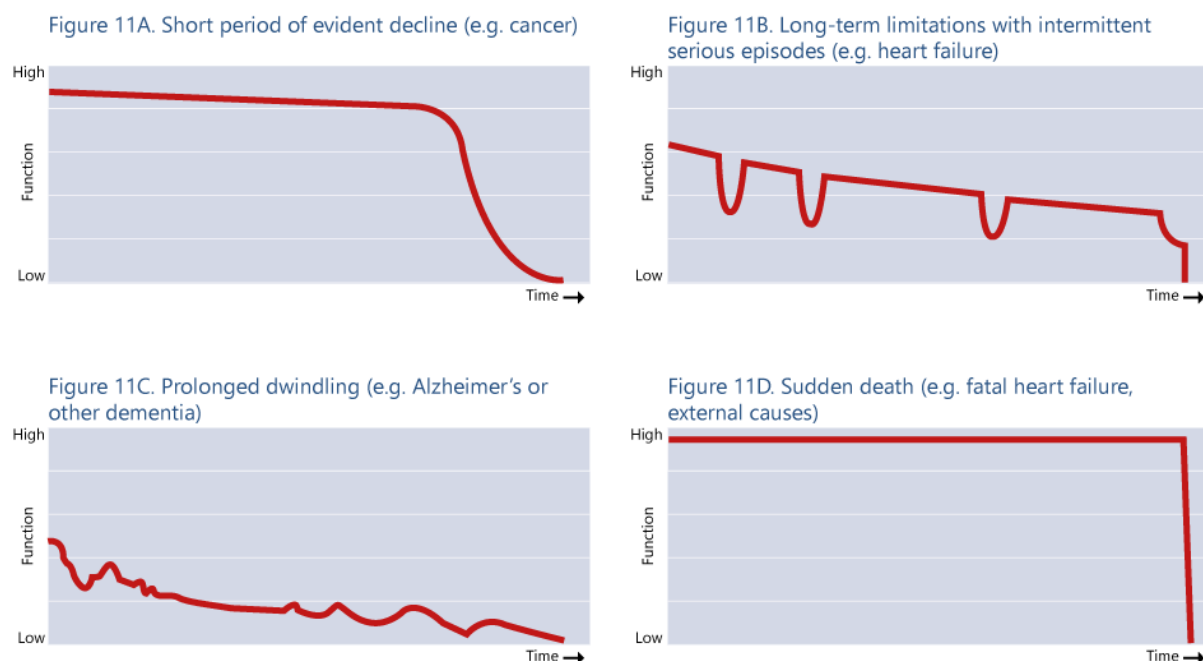
(Source: Adapted from Lynn and Adamson 2003 *(399)* and Murray et al 2005 *(400)*)

SECTION IV:

THE POLICY RESPONSE

THE POLICY RESPONSE

The Longevity Revolution: A Macroeconomic Perspective

The longevity revolution has generated predictions of dire economic and social consequences on the assumption that older persons constitute a growing burden for the rest of society. Recent analyses *(402)*, however, reveal that the longevity revolution is not a macroeconomic catastrophe, but that urgent action is required to discard outdated ideas about the life course and to change policies in order to respond to a new reality. Some broad directions are proposed here.

Expected decreases in the number of persons in the paid work force (15–64 years of age) can be offset by higher labour force participation rates of more women and of more people aged 65 years and older. Family-friendly policies – allowing both parents to balance work and family responsibilities – may encourage couples to have children while maintaining their work force productivity and economic security in older age. Concerns that older workers are less productive can be addressed by an emphasis on ongoing training and skills upgrading. The long-term sustainability of pension funds can be assured by improving the employment prospects of unemployed and underemployed adults of all ages, not by cutting benefits of retirees or those nearing retirement. By offering all workers the unrestricted option to pursue a meaningful occupation with opportunities to learn new skills and to enjoy working conditions compatible with changing functional capacities, working longer can be a positive prospect. At the same time, the option of a dignified and economically secure withdrawal from the work force when choices or capacities change should be a mutual decision, benefiting both workers and society.

Projected increases in the demand for health care and support are manageable through a wide range of approaches that are founded on solid evidence. Addressing inequalities in the social and economic determinants of Active Ageing and adapting physical environments to be more health-promoting and age-friendly will reduce risks for chronic diseases and psychosocial distress. Targeted and ongoing health promotion that includes education for health is needed to improve health literacy at all ages so that people can better care for their own health and the health of their family. Sustainable and high-quality health care for all is achievable with a health system that is anchored in age-friendly primary health care; that provides a comprehensive, coordinated range of ongoing person-centred services for prevention, treatment, rehabilitation and care; and that is delivered by professionals with training in all age-related aspects of health. Providing long-term care systems that do not depend exclusively on families, or spend public resources disproportionately, is feasible by cultivating a culture of care that embraces governments, families, communities, employers, the voluntary sector and businesses. Disability leading to dependency has become a universal concern. As elucidated in the *Rio Declaration on Developing a Culture of Care (175)*, support and care must be recognized as a collective responsibility.

Nations in all regions must embrace the longevity revolution and strengthen all four pillars of Active Ageing – health, participation, lifelong learning and security – from a life-course perspective. Most high-income countries that have had the privilege of becoming rich before becoming old have environments and stable health and social programmes that go some way towards

addressing population-wide needs. Their challenge is to support and enable the new flexible life course in all policy domains – particularly in health, education, industry, human resources and social welfare – and to ensure sustainability for all generations. Active Ageing in all policies must aim for full inclusion, as a matter of societal necessity, and above all, as an issue of human rights.

Middle-income countries with expanding economies are becoming demographically as old as high-income countries, but much more rapidly so. Education, health, income security and social care systems are being put in place, and quality of life is improving for many people. Yet, wide social inequalities remain, living environments are neither healthy nor age-friendly, levels of risk for chronic diseases are very high, and long-term care is virtually non-existent. Channelling the new economic prosperity effectively and equitably is vital to keep pace with the multiple policy challenges generated by the longevity revolution.

Low-income countries are pursuing economic and social development to raise the collective standard of living for all. Although the proportion of older persons within those societies will remain small for the time being in comparison to high- and middle-income regions, they cannot afford to ignore the human consequences of development (i.e., a longer life). Ensuring the protection and promotion of the rights of older people – including their right to appropriate and accessible primary health care, and to food, shelter, the means of earning a livelihood and assurance of basic support when they can no longer work – will enable them to stay healthier and maintain quality of life longer. Engaging older persons as full participants in development, as set out in the *Madrid International Plan of Action on Ageing* (2002), will contribute to their own and their family's

well-being, and to overall economic advancement as well. Older people in developing countries already play vital roles: in their support of other generations (such as grandchildren, AIDS orphans), as custodians of collective experiences and as binders of communities in times of crisis. It has been argued with reference to sub–Saharan Africa – the world's poorest region – that in rural areas, investment in older persons would alleviate poverty and benefit entire communities in a number of ways. First, because the majority of farmers in the region are older persons, investing in their health and enhancing their capacities, resources, tools and knowledge could substantially improve food production. Second, changing practices of older landholders in relation to the control of the land and inheritance rights could increase the engagement of younger generations in agriculture and enterprise *(403)*.

Forging a New Paradigm

The 2002 *Active Ageing Policy Framework* heralded the end of the "old" and rigid life-stage paradigm in which pre-adulthood is dedicated to learning, most adult years to working, and old age to retirement and dependency. This paradigm, then, and more so now, is becoming less reflective of the reality of people's lived experiences, especially in high-income countries. Middle-income regions, too, have begun to feel the changes, and are witnessing extended learning periods and more skill upgrading interspersed throughout working lives. The rigid life-stage model is incongruous in an ageing, globalized and interconnected world. With rapid technological advances and fewer numbers of younger people primed with the newest skills about to enter the work force, learning cannot stop after formal schooling

has ended. The active participation of older persons in all areas of human endeavour is increasingly necessary. Caregiving must be reconfigured as a shared responsibility because there is no realistic, or just, alternative.

The flexible life-course model breaks down artificial divisions between generations, engaging everyone at every age. It implies a total reassessment of age-based entitlements and restrictions and responds much more to individual needs to grow, work, rest, care and to be cared for, throughout the life course.

"How we approach ageing and older people will determine our relations with other generations and the way we, our children and grandchildren age and experience later life." *(21)*

The Policy Response

In a society that integrates generations in fluid transitions over the life course, the role of public policy is to:

- enable opportunities for health, participation and lifelong learning;

- protect people from common risks to health, financial, social and personal security, and from "falling through the cracks" because of personal misfortune;

- empower people by promoting their basic rights across the life course, and especially the rights of older persons to independence, participation, care, self-fulfilment and dignity as expressed in the UN Principles for Older People *(17)*

Rights-based participation. In an Active Ageing perspective, decisions are made with, and not just, for the people who are affected by them. This means involving all generations, with a special effort to listen to those with the least voice: the young, the very old, and in most regions, women, the low-incomed, the marginalized, and minority and immigrant groups. Participation in decision-making is more than "consultation". It must involve identifying and correcting power imbalances so that there is a genuine inclusiveness in the shaping of decisions, the resolving of differences and the achievement of equitable solutions. The primacy of rights is lifelong. It includes identifying and respecting the values and life goals of frail older persons and those nearing the end of life.

Building resilience through inter-sectoral action. The Active Ageing Policy Framework is grounded in the understanding that all the identified determinants must be addressed in order to foster resilient people in resilient communities by enhancing protective factors and minimizing risks. This requires Active Ageing actions at all levels of government and in all policy sectors: health and social welfare, education, employment, industry, transportation, housing, environment, social security, culture, justice, and rural and urban development.

Enhancing awareness and knowledge to mobilize effectively. It is crucial to heighten awareness of the immediate and longer-term implications of the longevity revolution in order to inform and mobilize actions. While data collection and research on age and ageing have improved considerably in the past decade, much more disaggregation of data and much wider dissemination of evidence-based knowledge are required in all regions, and especially in middle- and low-income countries.

Key Policy Recommendations

Active Ageing policy requires comprehensive inter-sectoral action on the four pillars (Fig. 12) and all determinants. The following policy recommendations are designed to hopefully make them relevant for decision-makers at all levels, across all sectors and in all countries. Most are directed to government, but many have relevance to other actors as well – notably, the intergovernmental organizations such as the United Nations, civil society, the private sector, media and older persons themselves (see Fig. 13 and following Tables). Although Active Ageing applies to people at all points of the life course, some recommendations specifically relate to older people. Others are age-mainstreaming recommendations; that is, where ageing needs to be factored into other policy areas, given that ageing must be referenced in a life-course perspective. As cross-cutting determinants, gender and culture need to be taken into consideration in all policy areas when developing specific actions.

Figure 12. **The pillars of Active Ageing**
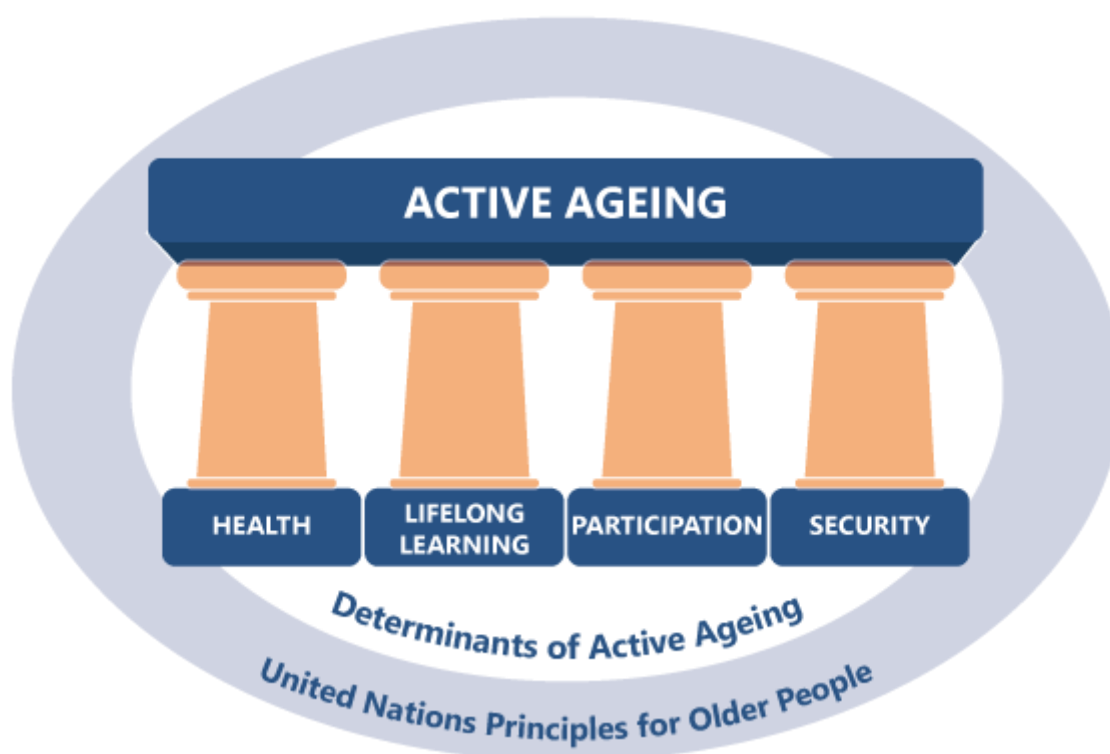
(Source: Adapted from WHO 2002 *(1)*)

Figure 13. **Inter-sectorial action**
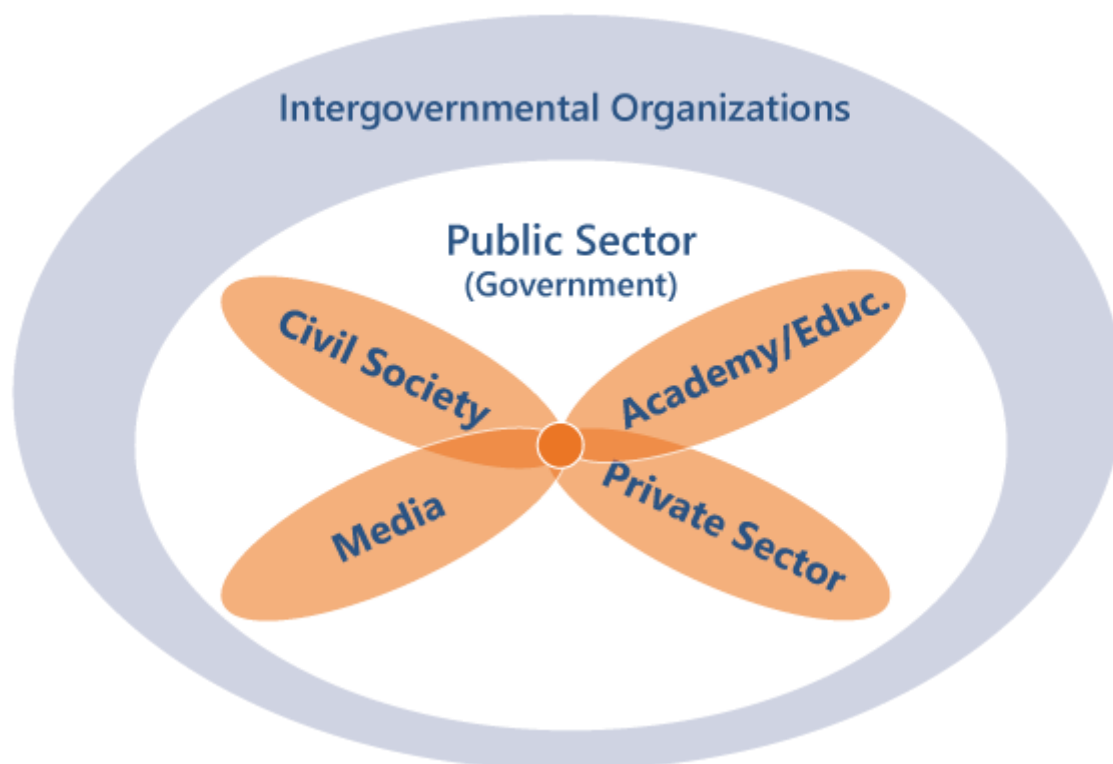
Health. To take full advantage of the longevity revolution, it is essential not only to increase the number of years of life but also to increase the number of years in good health. Risk factors, both environmental and behavioural, need to be reduced. Simultaneously, protective factors need to be increased to ensure that chronic disease and functional decline can be either prevented or postponed (i.e., kept to a minimum). Health promotion, disease prevention, detection and treatment must be vigorously enlisted to support Active Ageing and to maximize the dividends of greater longevity. When people do require care, it should be integrated and personalized with the overall emphasis on the maintenance of the highest possible functional capacity and quality of life.

Table 6. **Health Recommendations**

Health Recommendations	Academy / Educ.	Civil Society	Intergov. Orgs.	Private Sector	Media	Governments
1. **Reduce risk factors associated with major diseases and increase protective factors throughout the life course.**						
1.1 **Economic influences on health**. Reduce socio-economic inequities that contribute to the onset of disease and disability throughout life: absolute poverty, income inequality, low education and literacy, social exclusion. Give priority to improving the health status of deprived, socially excluded groups.						●
1.2 **Age-friendly, clean and healthy environments**. Facilitate universal access to clean air and water; reduce pollution and minimize exposure especially among vulnerable groups; build barrier-free environments to facilitate active mobility, access to healthful green space and to healthy food.				●		●
1.3 **Healthy habits and self-care at all ages.** Promote healthy habits and self-care from a very young age and throughout life, by cultivating health literacy in educational curricula and providing wide and continual access to accurate health information.	●			●	●	●
1.4 **Tobacco control.** Rigorously discourage people from taking up smoking, control tobacco use to avoid passive smoking and support people to quit smoking.		●		●	●	●
1.5 **Alcohol control.** Provide information on safe consumption and implement creative measures to reduce excessive consumption.		●		●	●	●
1.6 **Physical activity.** Provide affordable, accessible and enjoyable opportunities to be physically active throughout all stages of the life course, including for those who have functional limitations.	●	●		●		●
1.7 **Healthy food choices.** Ensure access to affordable, nutritious foods and impartial information about balanced nutrition throughout the life course.	●	●		●	●	●
1.8 **Advice regarding effective preventive practices and interventions.** Develop and disseminate recommendations targeted by age and functional status on the effectiveness of specific disease prevention/health promotion and health interventions in improving health and life expectancy.	●					
1.9 **Psychological resilience.** Foster psychological resilience from early childhood and throughout life via school curricula, and community education that is centred on positive attitudes and	●	●				●

Health Recommendations	Academy / Educ.	Civil Society	Intergov. Orgs.	Private Sector	Media	Governments
behaviours (i.e., cultivate positive emotions, engagement, empathy, satisfying relationships, meaningful pursuits and achievement).						
2. Ensure universal access to quality health services.						
2.1 **Universal access.** Provide universal health service coverage that gives non-discriminatory access to a full range of physical and mental health services, and that promotes good health, prevents and controls physical and mental disease and disability, and preserves quality of life. These services should include:						●
2.1.1 **prevention, detection and effective treatment** – equal and gender-specific access for persons of all ages to affordable, effective and timely screening and treatment;						●
2.1.2 **medications** – essential, safe, affordable, effective and quality medicines as well as person-centred education and follow-up to ensure adherence and avoid drug interactions and adverse reactions;						●
2.1.3 **continuum of care** – access to a community-based continuum of affordable, accessible and high-quality health and social services that address the needs and rights of people as they age and that includes access to comprehensive geriatric assessment and care;						●
2.1.4 **non-discrimination** – protection, promotion and fulfilment of the health needs of each person, without discrimination on the basis of age, gender, race, socio-economic status, culture or sexual orientation/identity;						●
2.1.5 **age-friendly services** – assist health professionals to design and implement age-friendly primary and hospital health care services.						●
2.2 **Professional training.** Provide basic and ongoing geriatric and gerontological training to all health and social service professionals, and paid caregivers/support workers – embedding rights-based and person-centred approaches into training.	●					●
2.3 **Decision-making.** Implement guidelines and protocols to support appropriate, evidence-based decisions involving older persons and those providing services to them.		●		●		●
2.4 **Cost-effective technologies.** Invest in the development and implementation of cost-effective technologies to improve early detection, treatment and/or functional maintenance and quality of life of persons with physical and/or cognitive limitations.	●			●		●

Health Recommendations	Academy / Educ.	Civil Society	Intergov. Orgs.	Private Sector	Media	Governments
3. Pay special attention to specific health issues.						
3.1 **Awareness of mental health problems.** Raise public awareness of mental health problems, including depression, suicidal thoughts and problems associated with dementia, and challenge the social stigmas that hinder help-seeking and treatment.	●	●			●	●
3.2 **Mental health services.** Provide an integrated continuum of mental health services that range from prevention and early intervention to treatment and rehabilitation, and ensure that health professionals are adequately trained to diagnose and appropriately treat mental health conditions in older as well as younger persons.	●		●			●
3.3 **HIV/AIDS and other sexually-transmitted disease (STD) recognition and response.** Include older persons in HIV/AIDS and other STD monitoring by removing age restrictions to data collection and analysis; include older people in HIV/AIDS and STD prevention, care and treatment programmes; and recognize and support the caregivers of persons who are infected or orphaned as a consequence of AIDS.			●			●
3.4 **Infectious disease risks.** Improve primary health care detection of infectious diseases, especially among older persons who are more susceptible; ensure prompt treatment to reduce avoidable mortality; and develop, implement and apply vaccinations that are effective in older age.	●	●		●		●
3.5 **Hearing and vision loss.** Reduce avoidable hearing and vision loss by providing universal access to adequate prevention and screening, as well as affordable treatment, including eyewear and hearing aids.						●
3.6 **Falls prevention.** Screen for individual and environmental falls risk factors and provide multifactorial health promotion, medical treatment, and home environment modifications and falls mitigation measures (e.g., monitoring devices) to reduce risks.			●	●		●
4. Develop a culture of care.						
4.1 **Self-care.** Promote self-care, and support older persons to self-manage their conditions.	●	●		●		●
4.2 **Ageing in place.** Offer a wide, flexible and affordable range of housing options and community services to assist older persons and persons with disabilities to remain at home, including home			●	●		●

Health Recommendations	Academy / Educ.	Civil Society	Intergov. Orgs.	Private Sector	Media	Governments
adaptations, alternative housing options, transportation services, home maintenance, meal services and personal care.						
4.3 **Organization and delivery of care.** Establish systems of support and care with the following best-practice features: comprehensiveness of services; communication with care recipients and families, unpaid caregivers, and among providers; coordination of all services centred on the care recipient; continuity across all settings and over time; and linkages with the community, including ethno-cultural communities.						●
4.4 **Support caregivers.** Provide unpaid caregivers with adequate and flexible support so they can attend to their own physical, professional, financial and psycho-social well-being while providing care to an older person. Promote the position that unpaid caregiving is a choice, not an obligation imposed by gendered social roles, or by lack of alternative care in the community. Promote ways to "share the care" intergenerationally within families and with friend and community networks.		●		●		●
4.5 **Caregiving education and training.** Support the provision of practical, flexible and ongoing education and information by service providers and civil society to assist unpaid caregivers, and provide a high standard of accredited training for paid caregivers.	●					●
4.6 **Working conditions of caregivers.** Provide paid caregivers with adequate working conditions and remuneration, which recognizes the value and complexity of their work and reinforces their dedication to the caring profession.				●		●
4.7 **Frailty and multi-morbidity.** Ensure access to comprehensive geriatric assessment and a care approach built in partnership with the older person to prevent or reverse frailty, preserve quality of life and minimize unnecessary risks.		●		●		●
4.8 **Palliative care.** Ensure "low tech, high touch" person-centred palliative care from the very onset of a life-limiting condition, which is firmly focused on comfort and caring. Prepare and assist those close to the dying person to accompany the individual through this final life journey and beyond.		●		●		●
4.9 **Planning for dependency and care.** Create greater awareness of the importance of anticipating functional decline and potential dependency in older age, including planning for living arrangements, long-term care, and advanced care directives.	●	●				●

Lifelong learning. Lifelong learning supports all other pillars of Active Ageing. Knowledge contributes to health, ensures greater participation in all realms of society and enhances security. In a society in which knowledge becomes more accessible yet mediated by ever-evolving communication technology, knowledge accumulation throughout life is vital.

Table 7. **Lifelong Learning Recommendations**

Lifelong Learning Recommendations	Academy / Educ.	Civil Society	Intergov. Orgs.	Private Sector	Media	Governments
1. Promote innovative opportunities for lifelong learning.						
1.1 **A Culture of lifelong learning.** Provide flexible and accessible literacy, educational, training and retraining opportunities throughout the life course; and accommodate work arrangements to facilitate and foster learning to meet a range of personal and professional needs. Support civil society to provide access and encouragement for learning in non-traditional settings and modalities to reach persons who are socially isolated or excluded.	●	●		●		●
1.2 **Best practices**. Support identification and dissemination of best practices to maximize engagement and the receipt of the greatest benefits from lifelong learning.	●				●	●
2. Improve access to information.						
2.1 **Accessibility.** Ascertain that information is provided in an accessible way so as not to exclude those with reduced functional capacity or lower literacy.	●	●			●	●
2.2 **Technological inclusion.** Reduce the digital divide by ensuring access and training adapted to the specific needs of persons at all ages who are at risk of exclusion.	●			●		●
2.3 **Information about rights**. Ensure that people have full access to comprehensible and reliable information about their rights and the means to claim those rights, especially for those who are more vulnerable.		●			●	●
3. Recognize the crucial role of volunteering to foster lifelong learning.						
3.1 **Training and education for volunteers.** Support civil society organizations in offering training and education for their volunteers and members to enhance their skills and widen their knowledge.						●

Lifelong Learning Recommendations	Academy / Educ.	Civil Society	Intergov. Orgs.	Private Sector	Media	Governments
4. Promote health literacy as a priority and prepare people to care.						
4.1 **Health literacy**. Provide both targeted and general opportunities to enhance health literacy in all settings for persons of all ages. Establish training tools and practice guidelines to ensure that health professionals have the best skill sets to effectively discern their patients' specific needs and to act on them.	●	●		●		●
4.2 **Care.** Provide instruction and modelling of self-care and the care of others, challenging outmoded gender-role stereotypes in particular.		●				●
5. Provide training and education on ageing.						
5.1 **General education on ageing.** Educate persons of all ages to challenge the stereotypes and stigmas of ageing, to understand the ageing process and its determinants, and to respect the rights of older persons.	●	●			●	●
5.2 **Inclusion of ageing into educational curricula.** Support formal community educational settings and civil society to provide education on ageing as a lifelong process, and its differential impact on women and men and on the rights of older persons in educational settings.						●
5.3 **Studying ageing.** Encourage educational institutions to offer sessions on the implications of the longevity revolution on society and all areas of life to students and professionals in various fields, not only the health sector (including journalism, business, engineering, law, design, architecture, etc.).	●					●
6. Promote intergenerational exchange as a means of lifelong learning.						
6.1 **Intergenerational exchange in various settings**. Maximize opportunities for intergenerational exchange within families, communities and workplaces.	●	●		●		●
6.2 **Valuing the knowledge of other generations.** Foster the valuing of skills, experiences, perspectives, memory and accumulated wisdom, and their transmission to other generations.	●	●		●		●

Participation. Ensuring that people can participate in social, economic, cultural, civic, recreational or spiritual activities throughout their lives – including in older age – and according to their needs, preferences, capacities and, most importantly, their rights, leads to more productive and inclusive societies. Opportunities for participation should be provided to include and empower marginalized groups and those who risk exclusion on account of reduced functional capacity.

Table 8. **Participation Recommendations**

Participation Recommendations	Academy / Educ.	Civil Society	Intergov. Orgs.	Private Sector	Media	Governments
1. Improve images of ageing and combat stereotypes and biases.						
1.1 **Positive images**. Promote positive and realistic images of ageing and older people, and challenge stereotypes and biased views that impede participation.		●			●	●
1.2 **Media**. Increase media representation of older women and men, and provide realistic messages on population ageing and its implications.	●				●	
2. Create opportunities for participation.						
2.1 **Fully accessible opportunities for participation for all.** Create opportunities for people with functional capacities across the full range to actively participate of in all spheres of life, including the social, economic, political, civic, recreational, cultural and spiritual spheres.	●	●		●		●
2.2 **Reduce loneliness**. Establish formal and voluntary programmes at the local community level to identify and to reach out to older persons at risk of loneliness and to facilitate their greater social participation.		●				●
3. Enable active involvement in decision-making.						
3.1 **Mechanisms for participation and consultation.** Create mechanisms for participation and consultation of older women and men in decision-making processes at all levels.		●		●		●
3.2 **Inclusion.** Actively involve older people, their families and their caregivers when developing products and services and, in particular, care goals and arrangements.	●	●		●		

Participation Recommendations	Academy / Educ.	Civil Society	Intergov. Orgs.	Private Sector	Media	Governments
4. Foster civic and volunteer engagement throughout the life course.						
4.1 **Opportunities and incentives**. Provide opportunities for civic engagement, including advocacy organizations and community action, that are tailored to individual goals, interests and talents; target groups whose voices are underrepresented in the civic discourse, including those of young adults, minorities, socio-economically disadvantaged persons, and individuals who are socially isolated.		●				●
4.2 **A culture of volunteering.** Mainstream a "culture of volunteering" by encouraging formal or informal volunteer activity as a part of everyone's life at all ages.		●		●		●
4.3 **Older persons' organizations.** Invest in community-based groups organized by older women and men, such as older people's associations and self-help groups.		●		●		●
4.4 **Social inclusion.** Support civil society to establish volunteer programmes that are specifically aimed at strengthening people's connections across generations, gender and cultures, and that encompass digital inclusion.				●		●
5. Re-design work and working environments for longer and more stable labour force participation.						
5.1 **Older workers.** Encourage older persons who want to work to do so by implementing strategies to retain older workers and to facilitate work-to-retirement transitions when continued work is no longer possible or desirable.				●		●
5.2 **End discrimination.** Adopt and implement non-discriminatory policies in recruitment, selection, training and promotion. Prohibit the use of statutory retirement age as a coercive means of expulsion from employment, and install a minimum age of retirement.				●		●
5.3 **Employment opportunities at all ages.** Stimulate the creation of employment opportunities for adults of all ages, especially for those experiencing high rates of unemployment and underemployment.				●		●
5.4 **Flexibility at work.** Allow for flexible workplace practices across the life course, for both women and men, considering that facilitating periods of lifelong learning, caregiving and personal pursuits are investments in human capital.				●		●

Participation Recommendations	Academy / Educ.	Civil Society	Intergov. Orgs.	Private Sector	Media	Governments
5.5 **Healthy workplace.** Promote healthy habits in the workplace and provide opportunities to improve personal health. Introduce and enhance safe and ergonomic work environments.				●		●
6. Cultivate intergenerational solidarity.						
6.1 **Intergenerational solidarity.** Foster intergenerational contact and dialogue; provide education at the earliest ages on values of mutual support and care within families and between generations; reduce the potential for conflict between all generations based on misinformation and age stereotypes; identify challenges facing families (and especially young adults), and support solutions that enhance their opportunities for participation and well-being.	●	●			●	
6.2 **Inclusive decisions.** Ensure intergenerational dialogue by including the voices of both younger and older people when decisions about ageing issues of public concern are taken.		●				●
7. Create age-friendly environments to encourage participation.						
7.1 **Age-friendly design for all ages.** Build age-friendly environments that promote independence and safety and reduce barriers for people of all ages, and those who experience functional limitations in particular.				●		●
7.2 **Transport and mobility**. Improve public transport and mobility so that people of all ages, including those with reduced functional capacities, can move about, both for leisure and to meet essential needs.				●		●
7.3 **Local community services and programmes.** Create and support age-friendly and inclusive local community services to enhance participation, including participation by those who feel excluded because of migration.		●				●

Security. Human security is a basic human right, which enables us to lead lives free of physical, social and financial insecurity. When people are no longer able to support and protect themselves, as is often the case in older age, policies that address security needs and rights become particularly important.

Table 9. **Security Recommendations**

Security Recommendations	Academy / Educ.	Civil Society	Intergov. Orgs.	Private Sector	Media	Governments
1. Protect the right to basic security.						
1.1 Right to physical security, shelter, sanitation, safe water and food. Guarantee protection, safety and dignity for all people, including those in later life, by addressing basic physical security rights and needs across the life course, for both women and men; and create and implement protocols that address special vulnerabilities related to age, gender and functional limitations in emergency and conflict situations.			●			●
1.2 Universal access to basic social security. Ensure that everybody across the life course enjoys access to basic social security, including the right to affordable education, housing, medicine and health services.						●
2. Build age-friendly physical environments as a cornerstone to security.						
2.1 **Protective environments.** Build age-friendly environments and communities that contribute to the security of residents, particularly those who have disabilities or live alone.	●	●		●		●
2.2 **Housing.** Provide a range of affordable housing options that facilitate ageing-in-place, and wide-ranging information to educate people about the advantages of options, including home modifications, alternative housing and/or different living arrangements.				●	●	●
3. Eradicate poverty and guarantee a base income across the entire life course.						
3.1 **Social protection.** Provide and/or enhance the coverage of minimum social protection benefits to avoid periods of impoverishment throughout the life course, which jeopardize later well-being and prevent impoverishment in later life.						●
3.2 **Income-generation innovations to eliminate poverty.** Implement effective mechanisms to eradicate poverty and material deprivation			●			●

Security Recommendations	Academy / Educ.	Civil Society	Intergov. Orgs.	Private Sector	Media	Governments
among older people, especially older women (e.g., micro-credit schemes and cooperatives).						
3.3 **Inequalities.** Develop and/or sustain policies that reduce economic inequalities between women and men and among minority groups.						●
4. Security through decent work and sustainability of pension systems.						
4.1 **Preparing for the future.** Prepare workers of all ages to adopt a long-term perspective on their future working life and to plan accordingly.	●			●		●
4.2 **Decent work.** Legislate satisfactory work labour standards and require employers to ensure decent work, as defined by the International Labour Organization, to their employees of all ages.						●
4.3 **Retirement.** Eliminate compulsory retirement on the basis of age, install a minimum age of retirement, and prohibit workplace practices that coerce older workers to stop working without justification.						●
4.4 **Pension systems.** Ensure that pension systems protect current and future pensioners from poverty; ensure sustainability of pension systems through high employment, and maintain a strong and adaptable system of long-term contribution and a sound investment of retirement funds; and introduce universal non-contributory and employment-related contributory pension systems where they are missing.						●
4.5 **Identify and address factors underlying differences between age groups.** Ensure that discussions and policies that aim to address the needs of all citizens consider the social and economic histories that shape people's lives and fortunes over the life course, and seek to correct current variables that engender inequity at a given time rather than fostering adversarial positions, such as "advantaged" versus "disadvantaged".		●				●
5. Prevent and tackle discrimination, violence and abuse.						
5.1 **Awareness raising.** Raise awareness through various means, including the media, about how, where and to whom elder abuse can occur, and how to seek help.		●			●	●
5.2 **Prevention, identification and reporting.** Create mechanisms to prevent and help identify and report cases of discrimination, violence and abuse, and make them widely known.	●				●	●

Security Recommendations	Academy / Educ.	Civil Society	Intergov. Orgs.	Private Sector	Media	Governments
5.3 **Protection by law.** Ensure that the law adequately protects older persons' rights, including the freedom from discrimination, violence and abuse, and take adequate measures to enforce the law and make it known.						●
5.4 **Treatment.** Develop systems that provide adequate and timely support to those that suffer from discrimination, violence or abuse to minimize short- and long-term harm.	●	●				●

Cross-cutting issues: governance, policy and research/evidence. To achieve comprehensive Active Ageing with action in all four pillars, inter-sectoral collaboration is indispensable. Each sector's policies have an impact across all others. Thus, all sectors must communicate with each other and align their policies. In many instances, it will be necessary to increase the awareness of population ageing, its challenges, options and the likely consequences of actions, before decisions can be taken. Firm and complete data are required to inform the public, influence public opinion, guide policy-makers, develop effective policies, and monitor and evaluate their implementation.

Table 10. **Cross-cutting Issues Recommendations**

Cross-cutting Issues Recommendations	Academy / Educ.	Civil Society	Intergov. Orgs.	Private Sector	Media	Governments
1. Recognize population ageing as an urgent policy issue and act upon it						
1.1 **Urgency for action.** Promote wide recognition of the priority of ageing as a policy issue and awareness of the ways to respond to the longevity revolution for the greatest benefit to all.		●	●			●
1.2 **Windows of opportunity.** Highlight the opportunities and specific windows of opportunity resulting from the longevity revolution, which have to be embraced by local, state and national governments.			●			●
1.3 **Capacity building.** Enhance decision-makers' access to compelling evidence, analysis, options and tested policies and practices to respond to population ageing.		●	●			●
2. Improve governance structures to respond to the longevity revolution						
2.1 **Cross-sectoral action.** Set up cross-governmental committees with representatives from local, state and national governments to integrate policy responses to population ageing.						●
2.2 **Coordination.** Establish a national/state/municipal body that can coordinate and oversee policy on ageing at the respective level, and encourage the process of mainstreaming ageing into other policy areas.						●
2.3 **Active Ageing champion.** Appoint credible champions to mainstream ageing, elevate ageing policy agendas, and increase visibility and awareness of ageing issues.						●
2.4 **Participatory approach and political commitment.** Ensure that policy development takes a bidirectional approach: from the top down and from the bottom up.		●				●

Cross-cutting Issues Recommendations	Academy / Educ.	Civil Society	Intergov. Orgs.	Private Sector	Media	Governments
3. Mainstreaming as a means to ensure nobody is left out						
3.1 **Mainstreaming ageing.** Ensure that ageing and the rights of older persons are addressed in all relevant policies and programmes.		●				●
3.2 **Ageing in conflict and crisis.** Include ageing and the rights and needs of older people in humanitarian responses, assistance in areas of endemic conflict and displacement, environmental and climate change mitigation and adaptation plans, as well as in disaster management and preparedness programmes.		●	●			●
3.3 **Gender and ageing.** Mainstream gender into all ageing policies and vice versa.						●
3.4 **Culture and ageing.** Mainstream cultural considerations into all ageing policies and services.						●
3.5 **Ageing and sexual orientation and identity.** Fully accept the wide diversity inherent within ageing populations. States should give greater focus to research agendas to better understand the issues facing LGBTI elders and support development of LGBTI-sensitive services.		●				●
4. Global action. Ensure that the needs and issues of older persons are explicitly addressed, measured and reported as part of international policy commitments to advance the well-being of all persons of all ages.		●	●			●
5. Invest in data development and analysis and in research for policy development, monitoring and evaluation.						
5.1 **Data disaggregation.** Ensure that population data and research are fully disaggregated by sex and age.						●
5.2 **Research body and funding.** Establish and invest in national and transnational research agencies to identify, support and coordinate research related to Active Ageing.						●
5.3 **Comprehensive and longitudinal data.** Support the development of longitudinal, nationally representative and internationally comparable studies that allow a detailed analysis of the determinants of ageing, resilience and quality of life over time.						●
5.4 **Targets.** Set gender- and age-specific, measurable targets to monitor improvements in all four pillars of Active Ageing.			●			●
5.5 **Monitoring and evaluation.** Set up adequate monitoring mechanisms and indicators, and ensure regular evaluation and reporting.			●			●

Conclusions

Much more is now known about the characteristics and determinants of Active Ageing than in the past. Major international organizations have cast a spotlight on the impacts of the longevity revolution and on required policy directions, including the United Nations and its agencies (in particular, WHO and the United Nations Population Fund [UNFPA], the World Bank, the World Economic Forum, the OECD and the European Commission). These organizations add their weight to the evidence-based advocacy of the international ageing non-governmental organizations; in particular, HelpAge International and the International Federation on Ageing (IFA), as well as expert networks, such as the International Longevity Centre Global Alliance (ILC-GA), the International Association on Gerontology and Geriatrics (IAGG), the International Association of Homes and Services for the Ageing (IAHSA) and the International Network for the Prevention of Elder Abuse (INPEA). There is now a much larger global constituency on ageing issues, and it is exponentially expanding.

There have been some concrete advances. More and better data are emerging from internationally comparable, population-based surveys and longitudinal studies. Certain critical policy measures have been adopted in various regions, notably the introduction of social security policies, the spread of the WHO-initiated Age-Friendly Cities and Communities Network, and the adoption of an Active Ageing Index in a joint initiative by the European Commission and the United Nations Economic Commission for Europe. Elder abuse and dementia are now recognized as global priority issues. International advocacy has been effective in highlighting the requirement to protect and promote the rights of older persons, and has led to promising ongoing initiatives at the United Nations.

Given the magnitude, speed and dynamism of the longevity revolution and its all-encompassing impacts, however, the international response is still worryingly timid. The major challenges and recommendations identified in the *Active Ageing Policy Framework* remain as relevant and prescient in 2015 as they were in 2002. While it is largely incumbent upon governments, at all levels, to lead the necessary policy changes, the onus is on all generations, and all groups in society, to loudly press for much more concerted action. Everyone has a stake in the outcomes. The Active Ageing model continues to present a coherent and a comprehensive framework for strategies at a global, national, local and individual level to respond to the longevity revolution.

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