

Global Agenda Council on Ageing

Shaping the Global Agenda on Ageing

Meeting the Needs of Cognitive Decline



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Welcome



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“

Older adults constitute the only increasing natural resource in the entire world.¹

”

The world's older adult population – estimated to double to 2 billion by 2050 – is a triumph of human development that will generate both economic growth and uncertainty in the decades to come.

Longer lives mandate that we prepare for cognitive changes. The science is clear: many cognitive abilities will improve or stabilize with age, yet the ability to make fact-based decisions declines as brains get older. Although we all experience some sort of age-related cognitive decline, an increasing number of people will also develop Alzheimer's disease and other neurodegenerative diseases that cause dementia. Advancing age is among the chief risk factors for Alzheimer's disease.

Awareness of the cognitive changes that occur with age is especially salient in the context of wealth management. In OECD countries, older adults hold a large percentage of wealth. As wealth accumulates with age, cognitive changes leave older adults at risk of decision-making errors or suffering fraud or exploitation. This arises at the same time as major decisions are made on health, housing, retirement and other life-altering factors.

The World Economic Forum's Global Agenda Council on Ageing focused the majority of its activities on: the intersection of cognition, longevity, technology and financial services. To tackle cognitive decline and its impact on finances, the traditional silos of banking, gerontology, technology, medicine and finance must be discarded. Through the collective efforts of the council, additional activities were also delivered during this mandate aiming to disseminate a positive narrative on the opportunities of ageing societies. These issues demand that unlikely stakeholders unite to address the methods through which they can apply technological advances, best practices and more thoughtful communication to help detect and manage cognitive decline and prevent fraud and malicious loss of personal property.

Executive Summary

This report outlines the activities of the World Economic Forum Global Agenda Council on Ageing from 2014 to 2016. The council examined the intersection of cognition, longevity, technology and financial services. It hosted four symposia to fulfil its mandate of helping detect and mitigate age-related cognitive decline and its effects.

In addition, the Council also:

- Published a white paper, “How 21st-Century Longevity Can Create Markets and Drive Economic Growth” in October 2015, which was launched as part of the WHO World Report on Ageing and Health
- Submitted proposal to the B20 employment task force on reframing ageing as positive driver for societies
- Created the New York City Ageing Alliance dedicated to advancing the ageing agenda
- Debated on ageing at the Annual Meeting 2016, broadcast by Time Magazine
- Developed a concept paper on key principles for collaboration between the Ageing and Demographic Dividend GACs. This was the foundation for the launch of the Intergenerational Design Challenge
- Launched the Nairobi Intergenerational Design Challenge which pinpointed strategic areas of action to harness knowledge and experience from older populations to advance the empowerment, education and employment of youth in developing countries in Africa and Asia. The model used for the Intergenerational Design Challenge has been endorsed by multiple organizations and used in other settings by for example the United Nations Population Fund

This report focuses on the activities around cognition, financial services and technology as these took a large part of the mandate for the Council.

Leaders in financial services, robotics, computer science and engineering from corporations, non-profits, and academia participated in the series between October 2015 and May 2016. The series started in Keio, Japan, before moving to London, United Kingdom; Toronto, Canada; and Philadelphia, USA.

Cross-sector collaboration, economic incentives and technological advances will spur developments in financial gerontology and related areas that protect the economic security of older adults. Connections between financial stability and health mandate the formation of new definitions and fields (see the Appendix for the association between income and life expectancy).

High-Level Recommendations

1. Link healthcare and wealth – “whealthcare”
2. Planning ahead – a life-course approach
3. Cross-stakeholder cooperation for research
4. Promote the development of effective, intuitive and affordable technologies
5. Regulatory and policy reform for longevity

Symposia Series Goals

- Explore the financial consequences of cognitive decline
- Provide insight into the impact of cognitive decline and various dementias on the banking and insurance sectors
- Outline ways that technological innovations can better identify, manage and reduce the potentially deleterious impacts of changes in cognition
- Catalyse partnerships to accelerate research, funding and action

Health and wealth, or “whealth”, demonstrate linkages between a healthy population and maintaining financial well-being. Health managers must be cognizant of the impact of deterioration of brain function on wealth, just as those who manage wealth may be able to recognize risky behaviour and possible health impacts before they proliferate.

This report includes recommendations for action on progressing the ageing agenda. It is intended for members of the council, valued symposium and initiative participants, and all stakeholders in the ageing agenda, particularly in banking, insurance, technologies and research.

The report also includes age-friendly business principles, an initiative of the GAC on Ageing, which lays out the seven principles for employers to align their employment, workplace and workforce practices with current ageing demographics.

Recommendation Areas

- Financial services
- Insurance
- Technology
- Government

Introduction

By 2050, one-fifth of the world's population (2.1 billion people) will be over 60 years of age.² Longer lives and decreased fertility rates are changing the age demographics of the world's populace (see the Appendix for an estimate of the world's ageing proportions by 2050). Worldwide, ageing generates profound opportunities as well as uncertainties. It must be viewed as a public health opportunity and an area ripe for innovation in products, markets, regulations and policy.

Targeted changes in global population ageing can make a positive impact on quality of life in the years that health and medical sciences have added to our lives. Although we are living longer, these added years are rarely spent in good health. Americans are living 10.1 years with chronic disabilities as opposed to 9.4 years two decades ago.³ It is here that health and wealth are vital, as they allow older adults to live their desired lives. Advances in personalized technologies, along with the protection of wealth, will aid efforts to maintain cognition and live healthy lives.

A majority of older adults are enjoying their added years and working longer than before. In the United States, estimates predict that the labour force participation rate among older adults will grow in contrast to declining rates overall.⁴ There are also economic benefits to be realized; senior citizens are responsible for more than \$7.1 trillion in economic activity in the US, providing employment for close to 100 million people.⁵ Additionally, older adults are more likely to volunteer their time and money than any other group, with an estimated \$8 trillion in the next two decades.⁶ These statistics indicate the importance of health maintenance as well as policy revisions in and outside the workplace.

Many older adults will experience cognitive decline, a natural function of ageing. This population will also be given a diagnosis of dementia more than ever before. A recent study of years lived with disability in 188 countries observed an 88.5% increase in prevalence of Alzheimer's disease and other dementia between 1990 and 2013.⁷ The longer one lives, the greater the chances of suffering from cognitive decline.

For a disease such as Alzheimer's, there is a one in nine chance of having the disease at 65 years of age or older. At 80 and older, that chance becomes one in three.⁸ It is worth mentioning, however, that as we become better at detecting dementia, the risk of developing it is declining. In early 2016, the *New England Journal of Medicine* reported that the risk of developing dementia for an adult aged 60 or over declined 20% from 1977 to 2008.⁹ This suggests improvements in cardiovascular health and socio-economic status are, and still can be, a means to promote cognitive health.

With cognitive changes come diminished financial capacities at a time in the life cycle, almost exclusively in wealthier nations, when older adults have the most financial resources. In the US, those over 50 years of age will control about \$14 trillion, or more than 50%, of the nation's GDP by 2032.⁵

Spending by older adults is also crucial to buoy economies. In Japan, spending by households headed by older adults accounted for more than 40% of consumption in 2011, increasing more than 30% from 2000.¹⁰ This number continues to rise, with households comprising those aged 65 or over now controlling nearly half of all consumer spending power.¹¹

Early Financial Warning Signs of Cognitive Decline

- Trouble with routine calculations
- Decreased understanding of financial concepts
- Overlooking investment risk
- Missing key details in documents
- Government

The combination of wealth and deteriorated fluid intelligence leaves older adults at risk of fraud. A 2011 MetLife study found that financial abuse costs older Americans almost \$3 billion a year, though a recent True Link Financial study cites the amount as being more than 10 times greater.^{11,12,13}

These demographic realities and trends are reflected in the recommended guiding principles for age-friendly businesses:

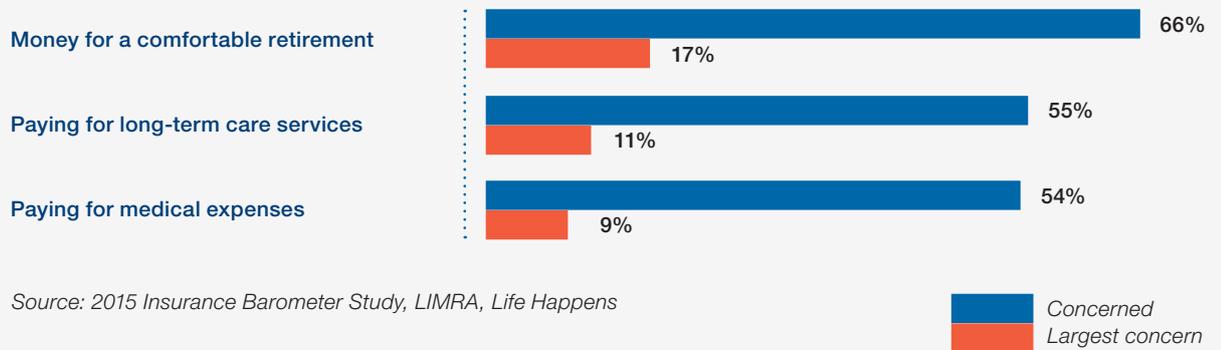
- An age-neutral workplace,
- A supportive working environment,
- An inclusive culture,
- Lifelong learning and participation,
- Financial planning for longer working lives,
- Healthy ageing, and
- Supportive caregiving.

In addition to fraud, older adults can spend significant amounts of money due to poor decisions made across a range of financial products, including mortgages and credit cards.¹⁴ Studies have found a U-shaped pattern in regard to interest rates and fees. The young and the old pay higher rates for borrowed money than their middle-aged counterparts.¹⁵ These issues are significant from the standpoint of money lost and losses in longevity and happiness for older adults. Numerous studies have shown that having enough money in retirement is a key concern for older adults, followed by paying for long-term care and medical expenses. For a happy retirement, the number one factor is having good health.¹⁶

Figure 1: Financial Consumer Concerns¹⁷

Consumer Concern Over Financial Issues

*Percent concerned, very concerned, or extremely concerned
Single largest concern*



The established mutualism between health and wealth are necessary and must be maintained to achieve the goals of older adults. To address the issues presented, adjustments are needed to encourage healthy behaviour and healthy brain ageing, protect accumulated wealth for use when needed, and recognize and mitigate the damaging effects of cognitive decline when it occurs. These opportunities allow for innovation to create better and more effective care models.

Activities of the Global Agenda Council on Ageing

Activities of the Global Agenda Council on Ageing

Symposium Series

The symposia hosted by the Global Agenda Council on Ageing addressed challenges brought about by cognitive decline and examined current best practices and potential solutions. The World Economic Forum is well-suited to lead in this area because its mandate allows it to engage thought leaders across the private, public and non-profit sectors.

The goals for the series were fourfold: Outline trends and knowledge with respect to prevalence and determinants of cognitive decline; explore economic and financial consequences of cognitive decline, particularly in banking and insurance; demonstrate ways innovative technologies can be used to identify, manage and reduce the impact of cognitive decline; and catalyse public-private-partnerships to accelerate research and action.

The Global Agenda Council on Ageing hosted four symposia across three continents:

- **Tokyo:** *Cognitive Decline and Its Economic Consequences*, co-hosted with Keio University
- **London:** *Managing Ageing and Cognitive Impairment: Challenges and Opportunities for Financial Services*, co-hosted with Age UK
- **Toronto:** *Technologies and Evidence for Healthy Ageing and Financial Services*, co-hosted with the International Federation on Ageing and the National Institute on Ageing at Ryerson University
- **Philadelphia:** *Ageing and Cognition: Maintaining Economic Security in Later Life*, co-hosted with the University of Pennsylvania's Healthy Brain Research Center

New York City Aging Alliance (NYCAA)

The NYCAA supplemented the symposia series hosted by the Global Agenda Council on Ageing. The NYCAA network was created to advise the council and to harness the expertise of leaders in New York City. This group comprises leaders from across industries focused on ageing and hosted targeted events in New York City with experts and individuals interested in healthy ageing. Core team members of the NYCAA included:

- Columbia University Mailman School of Public Health
- Mercer
- The Global Coalition on Aging
- The New York Academy of Medicine
- The Vitality Group
- The World Economic Forum

Each event featured a dimension of healthy ageing related to the goals of the council.

Publications with a Spotlight on Ageing

- Global Agenda Council on Ageing: *Global Ageing: Peril or Promise?*
- Gerontological Society of America: *Elder Wealth, Cognition and Abuse* (Public Policy and Aging Report)
- National Academy of Medicine: *Cognitive Aging: Focus on Financial Decision Making*
- World Health Organization: *World Report on Ageing and Health*
- AARP: *Age-Friendly Banking Initiative*
- World Economic Forum: *How 21st Century Longevity Can Create Markets and Drive Economic Growth*

Technological Innovations for Health and Wealth

The Global Agenda Council on Ageing executive briefing, titled *Technological Innovations for Health and Wealth for an Ageing Global Population*, explores technological advances for the promotion and maintenance of health and wealth.

Technologies can detect fraudulent financial activity and allow older adults more flexible and convenient banking. They can also allow insurance policyholders to monitor healthy activities and insurers to identify the interventions with the greatest impact on healthy ageing and longevity. This briefing examines the role of technology and its implications for global population ageing.

Lessons from the Global Agenda Council on Ageing

The Global Agenda Council on Ageing was mandated to develop and disseminate messages on opportunities for ageing societies to businesses and governments; catalyse scalable, multistakeholder actions to improve the lives of older adults; and draw on technologies and partners in innovative sectors to address cognitive decline. Attention was paid to the symposium series because it convened experts from around the world, which led to discussions, learning and publications to achieve the organisation mandate.

Other council publications and meetings reframed ageing as a positive societal element for government and businesses and to improve the lives of older people in megacities. The council has been successful in bringing these issues to the forefront of Forum events such as its Annual Meeting in Davos-Klosters, Switzerland, and the Summit on the Global Agenda in the United Arab Emirates. Through these events and other partnerships and publications, the issue of ageing societies is one that we are more ready for each day.

The symposium series began in Japan, a world leader in healthy ageing and public- and private-sector innovation in population longevity. The Japanese population comprises more than 61,500 centenarians, and numerous government interventions exist to promote and sustain healthy ageing. An estimated one-fifth of Japanese people aged 65 years and older will have dementia in the next decade.

Japan's government has required long-term care to deal with costs because total societal costs of dementia have reached \$120 billion. The societal costs calculated by Japan do not account for the hidden financial, health, emotional and opportunity costs borne by family and informal caregivers of older adults. These costs should be quantified better and caregivers should also be considered. More must be done to advocate for better insurance products, given the lack of understanding of the need for these products as well as the gains in health and alleviating fiscal burden they can promote.

Technologies have the potential to reduce costs of long-term care through enhanced independence and ageing in place. Machine learning and data analytics, as discussed in London and Toronto, offer new ways to augment activities of daily living, not only for those experiencing declines in cognition, but also for all older adults.

Technological advances should also be applied to financial services to address cognitive ageing specifically. This includes better flagging of suspicious transactions, recognition of trouble with personal information and with ATMs, and algorithms to identify high-risk customers.

It is also important to recognize the human element inherent in financial services. A majority of older adults prefer face-to-face interaction. To accommodate this, banks, financial advisory firms and insurance companies are training employees to recognize cognitive decline. Programmes such as Dementia Friends in the UK or Dementia Supporters in Japan utilize a large, untapped human resource to deal with cognitive decline in workplaces and in the community at large.

Regulatory and government support are needed to ensure progress. Current regulations were crafted without longevity and technological advances in mind. Experts from Canada, China, Costa Rica, Japan, the UK, the US and more echo this sentiment. Regulations addressing view-only accounts, advance declarations, and privacy and protective monitoring can be adjusted for maximum benefit.

In addition to modifying regulations, governments should provide incentives for the development of technologies to protect older adults from fraud and allow for better oversight. Finally, governments may wish to publish reports and information on financial literacy and on cognitive decline. Literacy and culture are major themes in this area because financial literacy is low among the general population. This reverberates throughout the lifetime as those with low literacy are less likely to invest in stocks or be savvy with other methods of investment and wealth accumulation. Financial language must be made easier to understand and designed for inclusivity and feedback. A cultural change is needed to promote greater understanding of the way brains age and the risks faced by older adults.

Scotland's Lothian Birth Cohort

Factors positively contributing to healthy brain ageing:

- Physical fitness
- Physical activity
- Bilingualism
- Not smoking
- Low allostatic load
- Higher education level
- Profession/occupation

Recommendations for Action

The Global Agenda Council on Ageing proposes recommendations to promote healthy ageing by populations worldwide and to address the challenges of cognitive decline. The recommendations are designed to utilize the strengths and abilities of current technologies, best practices and evidence from scientific studies and real-world experience. It is clear that financial capacity may be diminished with age and that much can be done to protect the needs and interests of our grandparents, parents and selves in later life.

High-Level Recommendations

1. Link healthcare and wealth – “whealthcare”
2. Planning ahead – a life-course approach
3. Cross- stakeholder cooperation for research
4. Promote the development of effective, intuitive and affordable technologies
5. Regulatory and policy reform for longevity

Link healthcare and wealth – “whealthcare”

Frontline financial professionals need training in defining cognitive ageing and impairment, how to recognize them, and how to communicate effectively with ageing clients.

This vast, largely underutilized group must be able to recognize signs of cognitive decline, use appropriate technologies, such as learning algorithms and passive monitoring, and work to alert one another and physicians of diminished financial capacity and potential abuse. Physicians also have unique opportunities to discuss financial and personal affairs management with patients in the context of a discussion on cognitive decline. Physicians have the capacity to recognize declines in capacity and alert a trusted individual or caregiver.²⁰

Planning ahead – a life-course approach

Within banking institutions, planning ahead for care issues using a life-course approach must be a greater part of financial planning for older adults and their caregivers. The industry should collaborate with gerontologists and non-profit organizations on planning ahead for care issues and age-friendly design. Planners must also exercise a duty of care towards customers.¹

Within the insurance industry, companies must create or incorporate more innovative life- and long-term care insurance models that focus on the maintenance and achievement of optimal cognition, health and wealth over the lifespan. New insurance products are needed for various points in the lifecycle. These include total life, short-term care insurance, illness-specific insurance, catastrophic loss policies and pension support policies.²

Personalized technologies must be leveraged to aid independent living and encourage lifestyle behaviour correlated with healthy brain ageing, including exercise, good nutrition and not smoking. Best-practice behavioural insights should be used to nudge consumers towards the healthiest choices.³

Stakeholder cooperation for greater research

Within banking institutions, more research is needed on the predictors and patterns of abuse and fraud; how and when to intervene; and what best practices are for language, design and service. Open-source learning algorithms for the prediction of problems must be developed.⁴

Within insurance institutions, the shared establishment of cohorts of insurance beneficiaries will lead to a greater understanding of the determinants of healthy ageing, with an emphasis on interventions with the greatest potential for prevention and support.

Technology development

More effective, intuitive and affordable technologies are needed to address the preventability and management of cognitive ageing. Older adult and caregiver training and participation in the design and use of technologies are a vital part of development.

Current technologies include personalized applications, video banking, mobile conversations, contactless payments, check imaging, high-visibility cards, documents on screens and visible hearing aids. Advances are under way in biometrics and voice, fingerprint and facial recognition.

Regulatory and policy reform for longevity

Regulations and policies must be altered so that banks are required to ensure that alerts of suspicious transactions, direct notification of suspicious activities and identification of scammers are ubiquitous. Caregiver oversight of accounts and power of attorney statutes must be reformed for ease of use, with safeguards against fraud and abuse. Third-party account oversight must become the new norm.⁵

Data on fraud and its perpetrators should be reported to appropriate authorities for the aggregation of data with the goal of enhancing pattern recognition and prevention.

Age-friendly business principles

As we live healthier and longer lives, the demographic landscape will become increasingly older in population. These changes will require employers to adopt age-neutral values that enable longer careers and healthier and more active ageing. Proactive changes to employer policies on elderly care support, pensions, and savings for employees can encourage productive work forces, job creation, and economic growth.¹¹

Conclusion

The World Economic Forum set forward a vision of success before embarking on the two-year term. Success has been defined as having a broad set of public and private stakeholders across sectors (particularly in banking, insurance, emerging technologies, employment, travel and tourism) engaged in collaborative actions to address key challenges and opportunities of the ageing agenda.

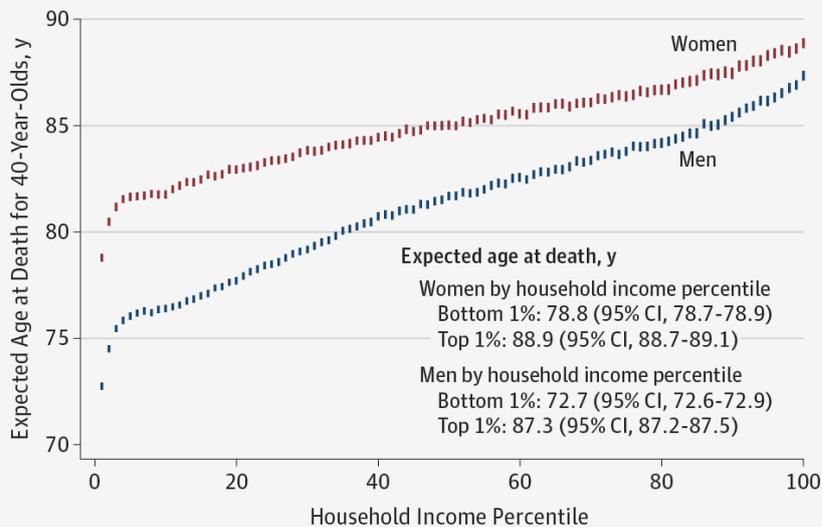
The Global Agenda Council on Ageing publications, meetings and symposia have convened stakeholders and spurred collaborative action. The recommendations will continue this success and have even more consequential, positive economic and health impacts for older adults.

Bringing together myriad, often disconnected, stakeholders will have a positive impact on a multitude of areas. It will take cooperation and dedication as advances are needed in personnel training, technologies, life-planning, regulations and research.

The results are worth the investment, allowing adults to live their desired and healthiest lives. This will not be easy, but the ageing of the world's population and the changes to come mandate that innovations be made to ensure a prosperous and productive later life.

Appendix

Relationship between Wealth and Health (Expected Age at Death)

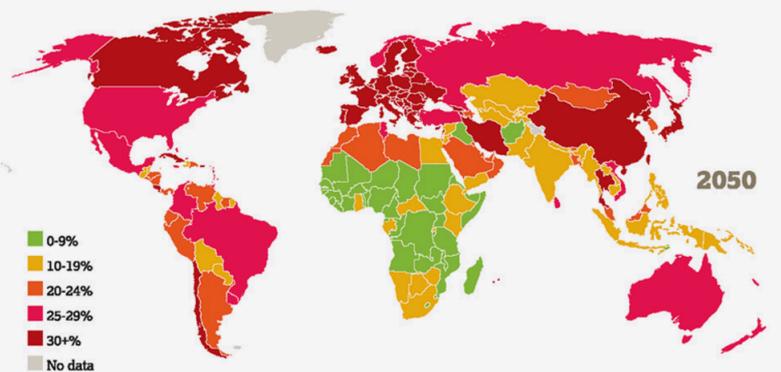


Mean household income
 in thousands, \$^a

Women	24	45	71	112	1.9 million
Men	26	50	77	119	2.0 million

Source: Chetty et al, *The Association between Income and Life Expectancy in the United States, 2001-2014*; JAMA. 2016;315(16):1750-1766. doi:10.1001/jama.2016.4226

Percentage of Older Adults as Part of National Population by 2050



Source: HelpAge Global Watch Index 2015. Available at: <http://www.helpage.org/global-agewatch/population-ageing-data/population-ageing-map/>

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