



**How can new partnerships
close the gap between
healthy aging and
"growing old"?**

Building an engaged aging strategy

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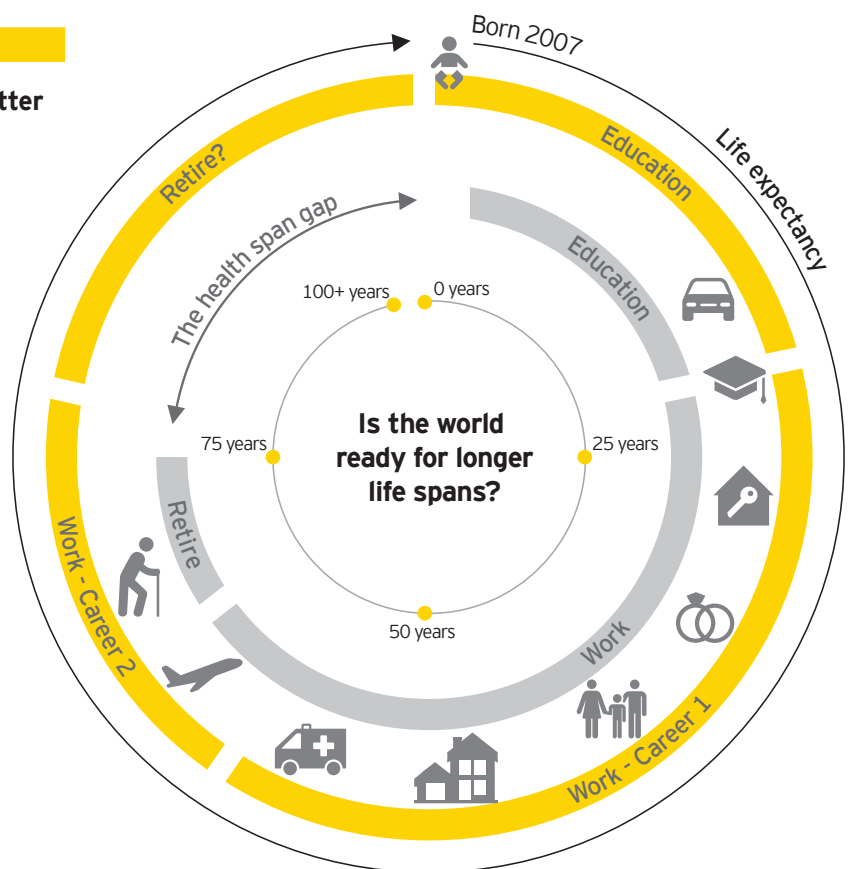
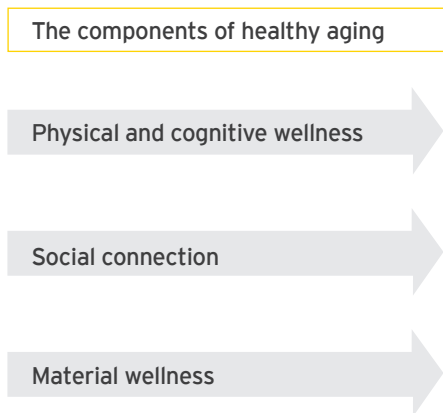
Minimizing the gap between health span and life span could yield obvious, almost universal benefits.



In 1952, speaking at the Boston Globe High School Press Forum, Governor Adlai Stevenson urged the students in the audience to fight for a better future and embrace life. "It is not the years in your life that count. It is the life in your years," he said.

Sixty-five years later that statement still rings true. It is undeniable that we have made major gains in extending the human life span over the past half century. But it is also undeniable that for many, there is not much life in these increased years (see Figure 1).

Figure 1: Living longer, but not necessarily better



Even as average life expectancy has increased, there remains a sizeable gap between life span and health span – the years an individual lives without disease. In Japan, for instance, men on average live 9 years with at least one disease before dying, while women in Japan live 12 years.^{1, 2}

Indeed, the increase in non-communicable diseases, such as Alzheimer’s disease, heart disease, diabetes and osteoarthritis, means that, for many, growing old is too often seen as a period of diminishment, not opportunity (see Figure 2).

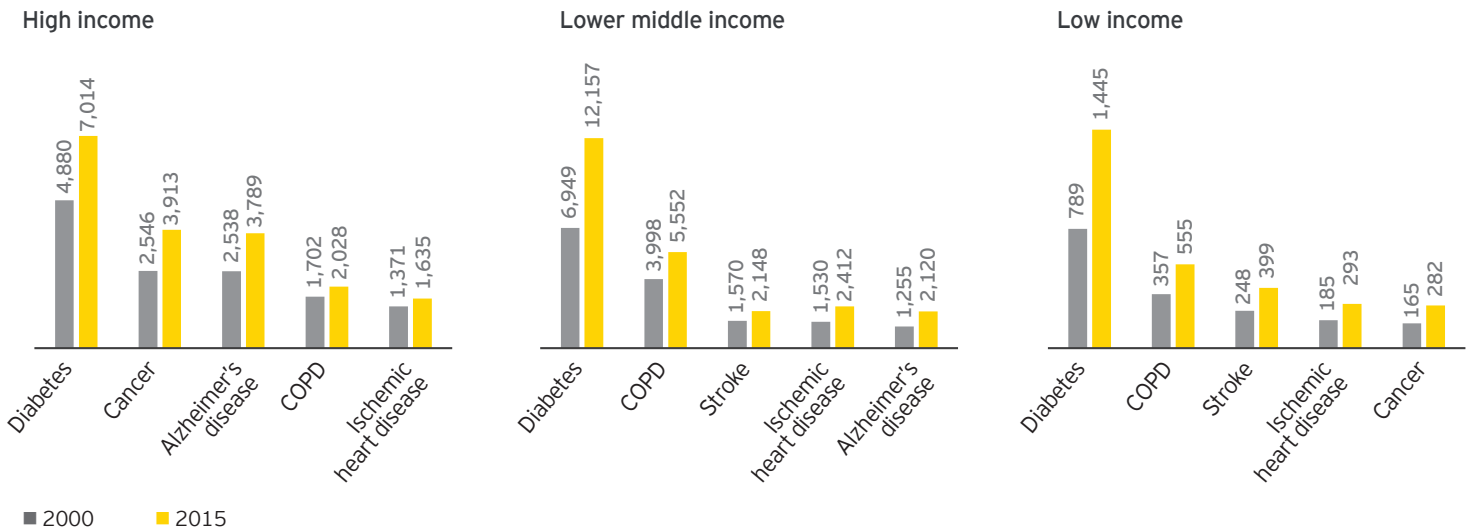
It doesn’t have to be this way. Imagine if the global community focused its efforts on preserving the physical, social and material dimensions that define healthy aging. Aging would still be inevitable. But by shortening or eliminating the

decline that occurs near the end of life, we could maximize the time individuals are physically and mentally vigorous, connected and empowered.

Minimizing this gap between health span and life span could yield obvious, almost universal benefits. For instance, health care costs might decrease, enabling governments to shift dollars now spent on entitlement programs to other important initiatives, including education and infrastructure investments. With a more vibrant work force, businesses might see productivity gains even as they limit liabilities tied to pensions and retirement payments. Most importantly, individuals would have continued purpose while also retaining their health and financial well-being. The so-called “golden years” would be golden indeed.



Figure 2: Years lived with disability (YLD)



Source: EY analysis of WHO Global Health Estimates. All population data in 000's. Indications for each income bracket were five most prevalent in 2000. Diabetes and chronic obstructive pulmonary disease (COPD) were leading causes of disability in all income groups.

The healthy aging ideal

As outlined in two prior installments of EY's *Engaged aging* series, "How will new technologies make age-related diseases a thing of the past?" and "How will consumer engagement power lifelong wellness?" (see ey.com/EngagedAging), a number of forces – technological innovation, improved analytics, behavioral economics and increasing health consumerism – are converging to create new solutions and services that move engaged aging from a theoretical concept to a real business opportunity.

Indeed, data from an EY-sponsored survey of more than 4,600 individuals in the US, UK and Singapore conducted in 2017 found that in contrast to Generation Y, people 65 and older in these regions focus more on managing diseases than maintaining healthy lifestyles.

As such, in the near term, the data suggest there is an opportunity for different stakeholders to combine forces to create "sticky" platform-based services that integrate a range of technologies or offerings applicable to major chronic diseases. Seventy percent of respondents also expect technology will play an important

role in improving their quality of life as they age, including social connectedness. The data suggest there's an opportunity, longer-term, for broader wellness-based programs that aren't solely focused on physical and mental fitness (see Figure 3).³

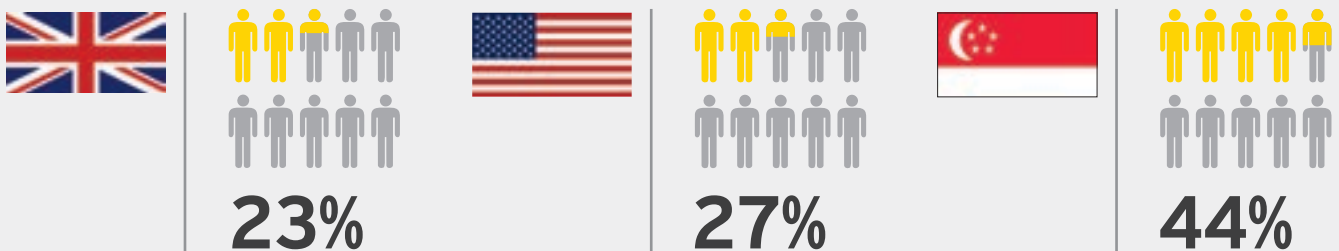
Indeed, technological advances are just one piece in the much larger puzzle of how to transform the current aging trajectory. The simple truth is a hard one: many healthy aging solutions remain accessible only to the well-off, a group that already tends to enjoy healthier aging anyway.

If governments, businesses and individuals want to seize the upside of longevity, we need creative partnerships designed to synchronize the health span with our increased life span. These collaborations must combine leading thinking from the retail, financial and technology industries with the know-how from traditional health and life sciences incumbents and the scale of government organizations. Globally, we need to come together to invest not only in novel solutions, but also in methodologies that allow these solutions to be tested and deployed rapidly around the globe.



Figure 3: EY survey finds individuals are unprepared to age optimally but believe technology will play an important role

Percentage of individuals extremely or very concerned about the impact of aging on life



Taking the first step

Given the complexity of current health problems, there won't be one solution but many. For the greatest impact, these new collaborations must span public and private entities across a variety of industries, while taking a number of factors into account, including:

- ▶ Understanding of individual risk profiles
- ▶ Regional and cultural differences in how healthy aging is defined
- ▶ Local variations in health delivery
- ▶ Varying levels of infrastructure and other resources

New entrants are finding their way to the aging space, some through concierge health or in-home services. Insurance companies and wealth assessment management groups, for instance, are already testing pay-as-you-live programs that encourage individuals to invest in a longer life span. Expanding this pay-as-you-live mentality to the other dimensions of aging will be an important step toward addressing physical and cognitive wellness, as well as social connection needs.

The current emphasis on concierge services makes strategic business sense. Today's regulatory and reimbursement incentives mean those are the models where payment is more likely. To be transformative,

however, these programs must be deployed across populations in ways that are culturally appropriate and best meet local needs. The health needs in Beijing, for instance, will be very different from those in London, which are different again from those in New Delhi or the rural United States. In addition, it is equally important to make these services available to individuals and families with limited resources. That won't happen without the scale and financial power of governments, which must have mechanisms to measure the benefits of such collaborations relative to their costs.

To date, there has been a proliferation of ad hoc point solutions that solve a particular problem but are not easily integrated. The end result, says Stephen Johnston of Aging 2.0, "is too many well-meaning but siloed technologies" that don't integrate seamlessly with each other, and more importantly, into someone's life.

In other words, stitching a mobile app onto an existing service, say food delivery to promote better nutrition, is helpful, but ultimately not revolutionary. That must change – and quickly – if governments, businesses and individuals want to build more proactive and participatory solutions that disrupt aging before it disrupts economic growth.



70%

of the respondents agree that ... "technology will play an important role in improving the quality of life in older age."



40%

don't feel prepared for life in their 60s and beyond.

Criteria most important to aging in a healthy and positive way



55%

Maintaining mental sharpness



53%

Financial security



52%

Regular exercise

Source: EY survey of 4,657 respondents aged 18 years or older conducted in 2017 in US, UK and Singapore.

Moving to the meta-level

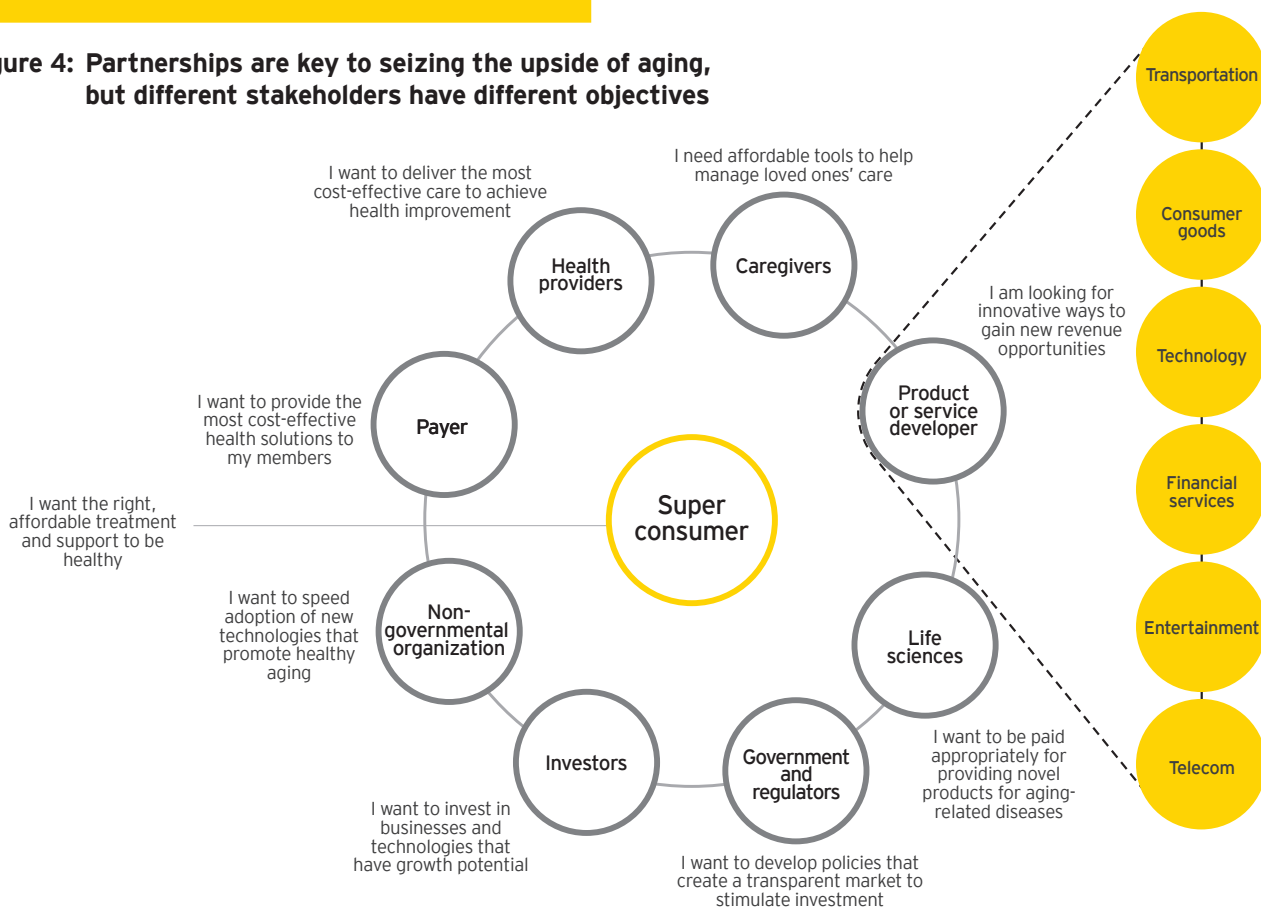
It is time to move to the meta-level, which requires multi-stakeholder engagement across industries (see Figure 4). For that to be successful, there must be a shared vision that is broad enough – and flexible enough – to galvanize a diverse group of stakeholders, bridging differences in vocabularies and, ultimately, outcomes.

Absent the trust and good faith that come from a shared vision, stakeholders' different incentives can create divisions that derail creative partnerships. Such disconnects are all too common in areas outside the aging space. The pricing of curative, next-generation hepatitis C medicines, for instance, has caused a storm despite being a step change in care and value-based assessments that suggest lower overall treatment costs over patients' lifetimes. Instead, payers have faced short-term capital constraints that

make providing the product to everyone unaffordable – at least without deprioritizing other types of care. The temporal misalignment between when drug costs occur and when the benefits are realized puts patients, who just want to be cured, in the middle of two stakeholder groups that are responding to current incentives in entirely rational ways.

Indeed, the debate over hepatitis C drug pricing is a reminder that for many areas of health care, including healthy aging, there is no universal elevator pitch. "Stakeholders are there for different reasons. It's hard to craft a unified message that speaks to all of them," says Dr. Rhoda Au, Director of Neuropsychology for the Framingham Heart Study and a professor at the Boston University Schools of Medicine and Public Health.

Figure 4: Partnerships are key to seizing the upside of aging, but different stakeholders have different objectives



There must be a shared vision that is broad enough – and flexible enough – to galvanize a diverse group of stakeholders, bridging differences in vocabularies and, ultimately, outcomes.

Hard, but not impossible. Unified by a shared vision, different stakeholder groups bring unique skills or resources that, when combined, create new business opportunities. These resources can be grouped as follows:

- ▶ **Innovation/new technology:** A variety of digital and genetic technologies have emerged that allow the cost-effective management of diseases of aging. In the future, innovations will move treatment upstream to the pre-disease state.
- ▶ **Data:** Data will be central to proving the value of new innovations. As data from a variety of sources can be gathered, combined and analyzed in new ways, companies can demonstrate to consumers and other payers the value of a particular innovation relative to its costs.
- ▶ **Capital:** In many cases, the most critical resource is the capital that mitigates the financial risks associated with adopting a new technology. Increasingly, investors interested in financing projects with high social impact can play a role in bridging funding gaps.
- ▶ **Deployment in the marketplace:** It is imperative that partners avoid pilot fatigue. Too often, small experiments are not being scaled as organizations get bogged down repeating what's been done before. As noted above, new solutions will only be transformative if they are deployed broadly.

As different stakeholders connect to identify how they can partner in the healthy aging arena, it's imperative that technology developers make sure that the needs of the consumers – the individuals who will ultimately use those products and services – are top of mind. "There is a real need to go out into the community to educate innovators about the challenges consumers really face," says Chang Liu, ACCESS International's Managing Director for Singapore, Mainland China and Hong Kong. For starters, that means longevity-based solutions must aim to preserve important existing relationships, including the patient-physician bond, while also tapping into new trends that turn individuals into empowered, "super" consumers.



Partnering for lifelong wellness

Novel, cross-industry partnerships in the healthy longevity space require three main elements to build a solid foundation:

Healthy aging metrics

To make healthy aging a reality, there must be a commitment to defining optimal health at the individual level, applying the concepts of precision medicine to wellness to create precision health. Doing so requires the development of healthy aging metrics based on genetic and environmental data, as well as individuals' health goals and decision-making capacity. Pre-competitive consortia that continuously share information – and learn from it – throughout the cycle of care will be critical in advancing the field of precision health.

Since 2012, dozens of open learning networks have been formed to solve common challenges, such as the identification of biomarkers for Alzheimer's disease or improved methods for clinical trial research. It's time for a similar effort in the aging space.

Benchmarks defining healthy aging could galvanize creative partnerships, especially those designed to improve health outcomes for some of the most debilitating and costly non-communicable diseases (e.g., Alzheimer's disease, cardiovascular disease and movement disorders).

Infrastructure investment

The explosion of data, in quantity, type and source, is accelerating. According to IBM, 90% of the data generated globally was created in the last two years.⁴ Much of it is walled off, however. Silos help preserve intellectual property (IP) and, to some extent, improve security. However, they also limit a company's ability to innovate and engage in creative partnerships. Infrastructure that supports data collection and safe and appropriate IP sharing can bridge gaps between stakeholders who aren't traditional partners. For instance, health incumbents and new entrants may have complementary knowledge bases, relationships, technologies, and scaling power. A technology player developing a virtual assistant, for instance, could begin to deliver a range of voice-activated services that simultaneously manage disease and promote wellness if information could flow seamlessly between the various players, which might include a transportation company (e.g., Lyft), entertainment

companies (e.g., Netflix or Amazon's Audible), life sciences companies, and the consumer's doctors and pharmacy.

Financing also is a critical piece of the emerging healthy aging infrastructure. In many cases, developing new solutions will require greater participation from investors interested in opportunities with high social impact. These investors can provide financing via bonds or other outcomes-based financial instruments to help deploy new solutions or technologies in situations where outcomes are still emerging, and, therefore, the risks associated with their use are too high for providers or other groups to shoulder. "This kind of financing can catalyze new solutions that improve the care for high-risk and high-cost patients, many of whom are aging," says Brendan O'Connor, an Impact Manager for Quantified Ventures, which structures health, education and environmental impact investment projects.

To encourage investment from groups such as Goldman Sachs, JPMorgan Chase and Bain Capital, creating the right reimbursement incentives is essential. Indeed, there is a growing need to think flexibly about managing social care and health care in combination, because promoting healthy aging will require upfront investment in a range of services, many of which fall outside traditional care delivery models.

One model many proponents of healthy aging are watching is the Netherlands-based Buurtzorg, an organization that provides holistic community care to older adults via trained nurses and a network of neighborhood resources. After a decade of demonstrating that it lowered costs and improved care for this population, the Dutch home care provider has expanded its services to Sweden, Japan and the United States.⁵

In addition, personal capital also is at issue. Merrill Lynch has partnered with the University of Southern California Leonard Davis School of Gerontology to train their financial planners to incorporate the physical and social aspects of aging into their clients' wealth management plans. This approach, which acknowledges the multidimensional nature of health, enables holistic planning that addresses all aspects of an individual's longevity needs (see "How will we disrupt aging before aging disrupts economic growth?" on ey.com/EngagedAging).

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Government involvement

As Baroness Sally Greengross, a member of the House of Lords and Chief Executive of the International Longevity Centre-UK, stated, healthy longevity requires “resources that are commensurate with the scale of the problem to be addressed.”

Thus, it is essential that governments play a key role in building inclusive ecosystems to promote lifelong wellness. Not only are governments the largest payers in most countries, but they also have the ability to scale successful projects to levels that have real-world impact. In addition, because their time horizons are longer than typical business cycles, governments can invest in initiatives that benefit the common good but won't yield returns in the next financial quarter.

Public-private partnerships (PPP) are one way that governments can stimulate positive change in the healthy aging space. Indeed, PPPs could provide the stability required to catalyze long-term projects early in their development, when financial risks are too high for the private sector.

Although PPPs are challenging to structure and face obstacles linked to data-sharing and consistent engagement, positive examples in the health space are emerging. For instance, in 2012 the Egyptian Government partnered with an international consortium that included Bareeq Capital, HSBC, Commercial International Bank and other companies to upgrade outdated hospital facilities. The US\$410 million, 20-year partnership helped catalyze the design and construction of two new hospitals and a blood bank.⁶

Also in 2012, a group of California-based payers, providers and employers started a PPP, AIM4Fresno, with the investors Collective Health and Social Finance to demonstrate that comprehensive home-based asthma management could yield financial and social benefits in the Fresno, California area. An analysis of the small number of participants who completed the one-year program showed net savings from reduced health care costs of approximately US\$2,200 per person over 24 months. Based on encouraging results, the project team aims to scale the intervention in conjunction with state and local health plans.⁷

Outside health care, one of the best examples of a PPP remains the US space program, which required government and private sector collaboration to put a man on the moon by the end of the 1960s. As Bruce Broussard, CEO of Humana noted in 2013 when describing the need for other “health moonshots,” the space program involved people in government and industry who “knew full well they could not do this on their own. It could only be achieved by working together.”⁸

And this, in reality, is the way that health care should be framed for governments, as a necessary piece of infrastructure worthy of investment. This shift in perspective puts a lens on healthy aging that plays to governments' strengths and is aligned with their purpose: the public good.

Via thoughtful policies and regulations, governments can help spur innovation, too. This may be another area for pre-competitive collaboration. In many parts of the world, the current environment makes it difficult to invest in preventative solutions. Even as new solutions emerge, costs for payers could increase significantly without a framework for what should be reimbursed. Thus, a rubric for investment in innovation that enables sharing the risk and the reward, especially via PPPs, is required.



Taking the next step

A number of interesting cross-industry collaborations have already emerged in the aging space. Seniors and the chronically ill already take part in a number of high-volume activities such as health care visits and medication adherence that could be improved by solutions jointly developed by technology players and health care providers. Indeed, partnerships between companies such as Lyft and CareMore to provide non-emergency medical transport to customers are not only improving the patient experience but beginning to demonstrate improved health outcomes.⁹ Telecom companies and cable providers, meanwhile, because of their direct access to peoples' homes, could play a more central role in driving the adoption of connection-focused services, a role they are currently playing in Japan (see Figure 5).¹⁰

Other areas where innovative partnerships could play a critical role include holistic medication management and end-of-life care. For

instance, services that seamlessly combine same-day medication delivery with telehealth wellness visits and remote sensors to monitor adherence and health status could significantly advance the quality of care for individuals with chronic diseases, while reducing treatment costs. Building such an integrated service might require participation from a transportation company, a telecommunications provider, a life sciences company and a health care provider to create a platform of care. In this situation, each brings unique skills and a differentiated customer base potentially interested in the offering.

With end-of-life care, there is wide variation in the cost and quality of health services. Opportunities abound for the creative bundling of services and new payment models, which could be used to encourage the kind of frank discussions and proactive decision-making that is difficult in today's fee-for-service environment.

Figure 5: Case studies of how different organizations are partnering to make healthy aging a reality

Initiative	Organization (type)	Analysis
Meals on Wheels of Central Maryland	<ul style="list-style-type: none"> ▶ Bayview Urban Institute (NGO) ▶ Johns Hopkins Bayview Medical Center (academic institution) ▶ Meals on Wheels of Central Maryland (NGO) ▶ Quantified Ventures (venture capital) 	Using a social impact bond ("Pay for Success" model), this team is helping Meals on Wheels expand its service beyond meal delivery to reduce high-cost health care events.
Digital pilot for Watch-Over service	<ul style="list-style-type: none"> ▶ Apple (technology company) ▶ IBM (technology company) ▶ Japan Post (government) 	Japan Post, Apple and IBM provide touch-points to seniors via cloud-connected iPads. Postal workers provide a regular point of contact and assist in connecting individuals to care providers and loved ones.
Hikari One Team SP	<ul style="list-style-type: none"> ▶ Eisai (life sciences company) ▶ NTT East (utility) ▶ NTT IT (technology company) 	Three companies created a cloud service that shares clinical information and patient care goals with the care teams and families of dementia patients. These high-touch services allow seniors to age in place, even as health care needs increase.
Alzheimer's Prevention Initiative	<ul style="list-style-type: none"> ▶ Alzheimer's Association (NGO) ▶ Amgen (life sciences company) ▶ Banner Alzheimer's Institute (NGO) ▶ FBRI (NGO) ▶ GHR Foundation (NGO) ▶ National Institutes of Health (government) ▶ Novartis (life sciences company) 	This international collaborative is conducting the Alzheimer's Prevention Initiative, a study examining the ability to delay or prevent the onset of cognitive decline in healthy adults at high risk of developing Alzheimer's due to their genetic makeup. Participants receive genetic screening and counseling and participate in clinical trials; researchers can share data via a platform.
linkAges	<ul style="list-style-type: none"> ▶ David Druker Center (NGO) ▶ Palo Alto Medical Foundation (provider) 	Designed to help seniors age in place by connecting them to services in their Northern California community. Home utility usage is monitored for health status changes.

Source: EY analysis. Organizations were classified by type: academic institution; government division; non-governmental organization; utility; life sciences company or technology company.

The importance of 'why'

Together with the three preceding pieces of EY's *Engaged Aging* series, (see ey.com/EngagedAging), the issues outlined here represent a clarion call for increased investment in healthy aging for both societies and individuals. As individuals, each one of us is on an aging journey that could include parents, spouses, extended family members and friends. Underpinning our collective experience is the universal desire for joy, dignity and connection while minimizing pain and suffering.

This is the start of our "why."

As Simon Sinek puts it in his 2009 Ted Talk, this "why" relates to a series of larger questions tied to building a shared vision. "What's your purpose? What's your cause? What's your belief? Why does your organization exist? Why do you get out of bed in the morning? And why should anyone care?" he provocatively asks.¹¹

Those answers are important. They define the way we think, act, communicate and as organizations, what issues merit investment, both in money and sweat equity. As a group, it's time to explore future directions for healthy aging's "why." EY invites you and your organizations to be part of the conversation.

This is the fourth installment in EY's Engaged Aging series, which discusses opportunities for seizing the upside of aging. Earlier installments discuss how new technologies promote the pivot from disease management to wellness and the importance of engaging with consumers to promote lasting behavior change. For more, see ey.com/EngagedAging.



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